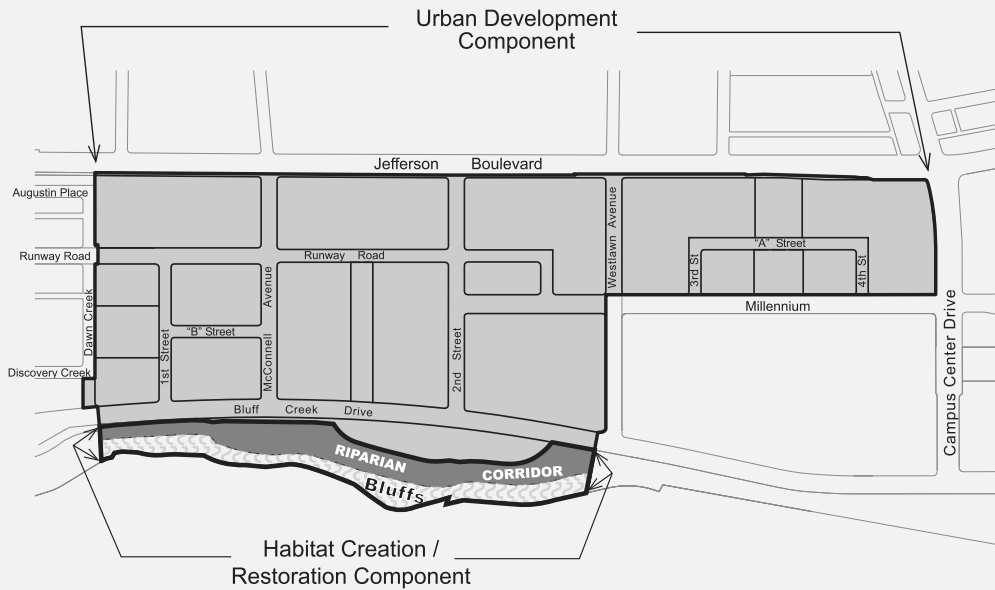


FINAL RECIRCULATED SECTIONS
OF
ENVIRONMENTAL IMPACT REPORT
(Final RS-EIR)

VILLAGE AT PLAYA VISTA



VOLUME II
APPENDICES A to F

**FINAL RECIRCULATED SECTIONS -
ENVIRONMENTAL IMPACT REPORT
(FINAL RS-EIR)**

**VILLAGE AT PLAYA VISTA
APPENDICES**

VOLUME II

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City of Los Angeles
EIR No. ENV-2002-6129-EIR

State Clearinghouse
No. 2002111065

2009

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APPENDIX A:
PUBLIC UTILITIES: WASTEWATER

APPENDIX A.i:
PSOMAS & ASSOCIATES, JUNE 17, 2009

June 17, 2009

Mr. Bruce Lackow
Matrix Environmental
6701 Center Drive, Suite 900
Los Angeles, California 90045

Dear Mr. Lackow:

Per your request, we have reviewed the responses to comments on the Village at Playa Vista RS-DEIR with respect to the sewer collection system's capacity to convey flows during wet weather events.

In the City of Los Angeles, the sewer collection system and storm drain system are separated systems. The vast majority of stormwater is conveyed through the storm drain system, which includes the streets and their curbs, catch basins, underground storm drain pipes and culverts, and major open channels that convey stormwater directly to the ocean.

With respect to wet weather events and sewer lines, some stormwater enters the sewer system through maintenance hole covers (referred to as "inflow"), as well as from elevated groundwater levels that seep into the sewer system through cracks in sewers and maintenance holes (referred to as "infiltration") during storm events. Such additional flow is anticipated for in the sizing of sewers by reserving a portion of the sewer's capacity for stormwater that enters through inflow or infiltration.¹ Peak dry weather flow (PDWF) is the basis for selecting pipe size.² Capacity for stormwater which enters the collection system through inflow and infiltration during Peak Wet Weather Flow (PWWF) is achieved by designing the pipe so that the PDWF does not exceed a given ratio of the pipe's diameter. In large sewers, such as the MIS & other outfall sewers, it is standard practice to use a "depth to diameter" (d/D) ratio of 0.75. This constraint is also reflected in the Los Angeles CEQA Threshold Guide, which states that a sewer's capacity is considered constrained if the depth of the flow is equal to or greater than three-quarters of the sewer's diameter.³ The remaining capacity (a

¹ As noted in Table 1 of our January 23, 2009 "Village at Playa Vista Sewer Research" memorandum and Table II.B-7 of the RS-DEIR, the ¾-depth design flow capacity constraint applies to "gravity" sewers only; force main sewers which convey wastewater under pressure, such as the 36" force main from the Ballona Creek Pump Station to the NCOS, are constructed to be air- and water-tight, such that inflow and infiltration do not occur.

² RS-DEIR, p. II.B-11 & n. 20.

³ City of Los Angeles CEQA Thresholds Guide, page M.2-4

PSOMAS

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June 17, 2009

minimum of one-quarter of the pipe's diameter) would be available for stormwater which enters the collection system during PWWF.

For the sewer collection system serving the Proposed Project, as demonstrated in our January 23, 2009 memorandum titled "Village at Playa Vista Sewer Research", and in Table II.B-7 of the RS-DEIR, all existing sewer collection system infrastructure which would serve the Proposed Project are currently operating, and are projected in 2010 and 2020 to operate, well under their design flow capacities, with more than adequate excess capacities to convey Peak Wet Weather Flows during wet weather events.

If you have any questions, please feel free to contact me at (213) 223-1400 or by e-mail at mcrehan@psomas.com

Thank you.

Sincerely,

PSOMAS



Michael J. Crehan
Principal

cc: Marc Huffman, Playa Capital Company LLC

**APPENDIX A.ii:
STATUS OF REGULATORY STANDARDS FOR EMERGING
CONTAMINANTS (ECs), FLOW SCIENCE, INC.,
JUNE 26, 2009**

Flow Science Incorporated

723 E. Green St., Pasadena, CA 91101

(626) 304-1134 • FAX (626) 304-9427



June 26, 2009

Matrix Environmental
6701 Center Drive, Suite 900
Los Angeles, California 90045

Attention: Bruce Lackow

Subject: Status of regulatory standards for emerging contaminants (ECs)
FSI 084075

Dear Mr. Lackow,

Flow Science Incorporated (Flow Science) was retained by Playa Vista to evaluate impacts resulting from the discharge of treated wastewater from the Hyperion Treatment Plant (HTP) to the Pacific Ocean, and specifically to provide a summary of the status of regulations for emerging contaminants.

Emerging Contaminants (ECs, also known as contaminants of emerging concern or CECs) are chemicals or microorganisms that have been recently recognized for their potential harmful effects to fish and wildlife, but that do not have regulatory standards and are not a part of routine pollution monitoring programs. Concentrations of ECs are not currently regulated in either surface waters or in drinking waters pursuant to the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), or other applicable regulations.

Efforts are currently underway to develop regulatory standards for ECs. The regulatory standards that would apply to ECs in the discharge from the Hyperion Treatment Plant (HTP) would be those intended to protect aquatic life. The development of standards for ECs in drinking water is a separate effort, but may provide useful information regarding standards required to protect aquatic life. Thus, the discussion below focuses on the development of standards to protect aquatic life, but the development of drinking water standards is mentioned briefly where relevant to the development of aquatic life standards.

Several major activities will need to be undertaken as part of the effort to develop standards for ECs to protect aquatic life, including:

- Development of standardized analytical methods to measure ECs in various environmental media (e.g., water, sediment, tissue)
- Determination of ambient concentrations of ECs in various media
- Characterization of sources of EC, and of their fate and transport in the environment



- Characterization of environmental and toxicological effects of ECs, both alone and in combination, on a range of representative species of aquatic life.

As detailed below, both federal and state agencies are undertaking or sponsoring research intended to address these questions and to provide the information necessary to develop standards for ECs to protect aquatic life.

U.S. EPA efforts to establish aquatic life criteria for ECs. Ambient water quality criteria for aquatic life (aquatic life criteria) developed under Section 304(a) of the CWA consist of two concentrations: the Criterion Maximum Concentration (CMC) and the Criterion Continuous Concentration (CCC). The CMC (acute toxicity criterion) is intended to protect against severe acute effects, while the CCC (chronic toxicity criterion) is intended to protect against longer term effects on survival, growth, and reproduction. The CMC and CCC are derived from laboratory toxicity tests using procedures described in the EPA Guidelines (U.S. EPA, 1985).

The U.S. EPA has developed a White Paper (U.S. EPA, 2008) that describes the technical challenges faced by EPA in deriving aquatic life criteria for ECs. The 1985 Guidelines are intended to define “a minimum technical rigor that criteria must have,” but the procedures in the Guidelines will require updating to support the development of aquatic life criteria for ECs. These and other recommendations are provided in the White Paper. The EPA’s White Paper outlines the following major topic areas in the development of aquatic life criteria for ECs:

- The relevance of acute toxicity data and a CMC: Ambient concentrations of many ECs are orders of magnitude lower than those causing lethal effects; the White Paper recommends that when sufficient information is available to demonstrate a negligible risk of acute effects, the chronic criterion (CCC) should be used to derive the aquatic life criteria.
- Defining minimum data requirements in terms of taxonomic coverage: To develop a CCC from chronic toxicity data, the EPA Guidelines (U.S. EPA, 1985) require that acceptable chronic toxicity data be available from at least eight families with a taxonomic distribution fulfilling the minimum data requirements specified in the EPA Guidelines. The White Paper recommends that for ECs that do not have sufficient chronic toxicity data to fulfill the minimum data requirements, there should be an evaluation of whether sufficient information exists to conclude that certain taxa would not be sensitive to a particular EC.
- Defining appropriate chronic toxicity data: The White Paper recommends that the requirements in the EPA Guidelines (U.S. EPA, 1985) for chronic toxicity test data be made more stringent by requiring at least one complete life-cycle test for fish species (life-cycle tests are already required for invertebrates).



- Selecting effect endpoints upon which to base criteria: In addition to the endpoints of survival, growth, and reproduction, the White Paper recommends considering effect(s) endpoints in developing aquatic life criteria for ECs.

The Science Advisory Board to the U.S. EPA recently published a review of the U.S. EPA's White Paper (SAB, 2009). The SAB (2009) review indicated that the White Paper identified the appropriate technical issues to be considered in deriving aquatic life criteria for ECs. Also, the SAB generally supports EPA's proposed approaches for interpreting and/or adapting principles in the 1985 EPA Guidelines to address technical issues discussed in the White Paper. Other than specific concerns about EPA's approaches, the major recommendation SAB (2009) made was that the derivation of aquatic life criteria be more broadly risk-based than the approach in the 1985 Guidelines, and to the extent practicable that the derivation of aquatic life criteria be based on the risk-based approach of U.S. EPA (1998) and SAB (2008). As of May 2009, the EPA is incorporating the recommendations made by SAB (2009) into a planned technical support document on deriving aquatic life criteria for ECs, which is scheduled to be released for public comment later in 2009

[http://yosemite.epa.gov/sab/sabproduct.nsf/E37FB6980DCDD9B585257532005F6F2C/\\$File/EPA-SAB-09-007+Response+05-01-2009.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/E37FB6980DCDD9B585257532005F6F2C/$File/EPA-SAB-09-007+Response+05-01-2009.pdf).

U.S. EPA is also working to develop criteria for ECs in drinking water, as required by the SDWA. The 1996 amendments to the SDWA require the U.S. EPA to publish a contaminant candidate list (CCL) every 5 years to identify potential substances for future regulation. The third CCL is currently under development (<http://www.epa.gov/safewater/ccl/ccl3.html>). It is anticipated that ECs on the CCL will receive greater study in the future.

U.S. Geological Survey (USGS) research efforts. The USGS Toxic Substances Hydrology Program (<http://toxics.usgs.gov/regional/emc/>) is pursuing research in the following five major areas in order to evaluate the potential threat of ECs to environmental and human health:

- **Development of analytical methods:** Methods are being developed to measure ECs and associated degradation products in various environmental media (water, sediment, animal tissue, waste, etc.). To date, methods have been developed for a total of 158 ECs in water and 83 ECs in sediments using current analytical techniques (such as Gas Chromatography, Mass Spectrometry and Liquid Chromatography).
- **Determining environmental occurrence:** Reconnaissance studies at national, regional and local scales are being conducted by the USGS in order to identify the presence of specific ECs and their concentrations in the environment.
- **Characterizing sources and source pathways:** Research is being conducted to characterize sources of ECs (e.g., a variety of animal and human-waste sources) and the pathways of their release to the environment (ranging from rapid and direct discharges of effluent into a water body to the slow leaching of stored waste



- through soils). Work in this area also includes assessing concentrations of ECs in effluent from wastewater treatment plants, examining the persistence of ECs in treated effluent released to the environment.
- **Defining and quantifying environmental transport processes:** Research is being conducted to characterize the biological, chemical, and hydrologic processes that affect partitioning of ECs into various environmental media and the chemical and microbial transformation processes. The potential removal of ECs by wastewater and drinking water treatment processes is also being characterized.
 - **Identifying potential ecologic effects from exposure:** Current information regarding the potential toxicological effects of ECs in ecosystems is inadequate, particularly the effects from long-term, low-level environmental exposures. Research to characterize cause-and-effect relationships includes studies on contaminant uptake by terrestrial and aquatic organisms and endocrine disruption in fish species. Information from these studies is also being used to develop and test hypotheses regarding biological impacts, including uptake routes, modes of action, and biological endpoints.

State Water Resources Control Board's regulation efforts. The recycled water policy approved by the California State Water Resources Control Board in February 2009 (State Board, 2009) aims to increase the use of recycled water from municipal wastewater sources. The recycled water policy acknowledges that the state of knowledge regarding the impact of ECs on human health and environment is incomplete and regulating most ECs will require additional research work and development of analytical test methods. The State Board, in collaboration with the California Department of Public Health (CDPH), asked the Southern California Coastal Water Research Project (SCCWRP, <http://www.sccwrp.org/view.php?id=574>) in 2009 to convene a scientific advisory panel to guide future actions relating to ECs in recycled water. The SCCWRP scientific advisory panel was assigned in May 2009 and will begin meeting in September 2009. Final recommendations from this panel to the State Board and CDPH are expected in 2010. Although this panel is addressing issues related to ECs in recycled water for freshwater uses, it is anticipated that some of the subject areas addressed by the panel (e.g., which ECs should be monitored, and using which analytical methods and detection limits) may be more broadly applicable to the development of regulatory standards for aquatic life.

Regional Water Quality Control Board study efforts. Monitoring of some ECs is required by the LARWQCB by a few wastewater treatment facilities and for direct injection projects (Smith 2008), but monitoring is not widespread or routine. In addition, the LARWQCB is a member agency of the Southern California Coastal Water Research Project (SCCWRP), which is undertaking research related to the analysis and effects of ECs in southern California waters. The LARWQCB has not indicated that it intends to develop standards or implement restrictions on ECs in wastewater in the near future.



As noted above, a number of government agencies are pursuing efforts that relate to potential regulation of ECs in the environment. Independent researchers are also pursuing related efforts and studies; for example, developments in water analysis of ECs are summarized in Richardson (2009). However, the efforts to regulate ECs are still in their infancy for many reasons: ECs occur at relatively low concentrations in the environment, analytical techniques for detection and measurement of ECs in the environment are in the process of being developed, and scientific knowledge on the environmental occurrence, subsequent fate and transport, and ecological effects of ECs is lacking. As stated by U.S. EPA (2008), "if insufficient information exists to achieve a minimum level of confidence in the calculated criterion, then criteria should not be derived." Development of standards or thresholds for ECs at the present time is premature because insufficient scientific data and evidence currently exist to support criteria.

Please contact me if you require additional information.

Sincerely,

A handwritten signature in blue ink that reads "Susan C. Paulsen". The signature is written in a cursive, flowing style.

Susan C. Paulsen, Ph.D., P.E.
Vice President and Senior Scientist



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- Richardson, S.D. (2009), Water Analysis: Emerging Contaminants and Current Issues. *Analytical Chemistry* 2009, 81 (12), pp 4645–4677. Available online at <http://pubs.acs.org/doi/abs/10.1021/ac9008012> (web publication, May 20, 2009).
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- [SAB] Science Advisory Board (2008), Report to the U.S. EPA: Advice to EPA on Advancing the Science and Application of Ecological Risk Assessment in Environmental Decision Making, EPA-SAB-08-002. See <http://yosemite.epa.gov/sab/sabpeople.nsf/WebCommittees/BOARD>.
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- U.S. EPA (1998), Guidelines for Ecological Risk Assessment, EPA/630/R-95/002F, April 1998. See <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=12460>
- U.S. EPA (2008), White Paper on Aquatic Life Criteria for Contaminants of Emerging Concern, OW/ORD Emerging Contaminants Work Group, June 2008. See <http://www.epa.gov/waterscience/criteria/aqlife/cec.html>

**APPENDIX A.iii:
ANALYSIS OF HYPERION TREATMENT PLANT (HTP)
ACUTE TOXICITY RESULTS, FLOW SCIENCE, INC.,
JUNE 29, 2009**

Flow Science Incorporated

723 E. Green St., Pasadena, CA 91101

(626) 304-1134 • FAX (626) 304-9427



June 29, 2009

Matrix Environmental
6701 Center Drive, Suite 900
Los Angeles, California 90045

Attention: Bruce Lackow

Subject: Analysis of Hyperion Treatment Plant (HTP) acute toxicity results
FSI 084075

Dear Mr. Lackow,

Flow Science Incorporated (Flow Science) was retained by Playa Vista to evaluate impacts resulting from the discharge of treated wastewater from the Hyperion Treatment Plant (HTP) to the Pacific Ocean. As part of this analysis, Flow Science reviewed monthly monitoring results from February 2007 through March 2009.

HTP's monthly monitoring results for the period February 2007 through March 2009 indicate an average acute toxicity value of 2.2 TUa (range of 1.1 to 3 TUa); no trends are evident during this period. **Figure 1** presents a summary of the acute toxicity test results for this time period. As shown in Figure 1, the highest acute toxicity value (3 TUa) occurred in March 2008 and exceeded the HTP permit limit for acute toxicity (2.8 TUa). Accelerated testing was conducted by the HTP subsequent to the March 2008 test results. Subsequent tests were below permit limits, and routine monthly sampling resumed in August 2008.

Flow Science conducted a statistical analysis to determine if acute toxicity in the HTP effluent was related to the rate of flow from the HTP. **Figure 2** provides a plot of acute toxicity and the corresponding HTP daily effluent flow rate on the day the acute toxicity sample was collected. The statistical analysis of the acute toxicity and corresponding daily effluent flow indicated a correlation coefficient of -0.1 between these two datasets; a correlation coefficient of -1 (or +1) would indicate a perfect negative (or positive) correlation, and a correlation coefficient of 0 would indicate no correlation. The correlation between the two datasets was not statistically significant (at a confidence level of 95%, $p=0.617>0.05$). **Figure 3** shows a plot of the acute toxicity and corresponding daily effluent flow at HTP and confirms that acute toxicity is unrelated to effluent flow rate for the range of flows observed (275 to 311 million gallons per day, or mgd).

Bruce Lackow/Matrix Environmental
June 29, 2009
Page 2



Please contact me if you require additional information.

Sincerely,

A handwritten signature in blue ink that reads "Susan C. Paulsen". The signature is written in a cursive, flowing style.

Susan C. Paulsen, Ph.D., P.E.
Vice President and Senior Scientist



Figure 1: Acute Toxicity (TUa) at HTP from February 2007 through March 2009.
Data compiled from monthly monitoring reports.

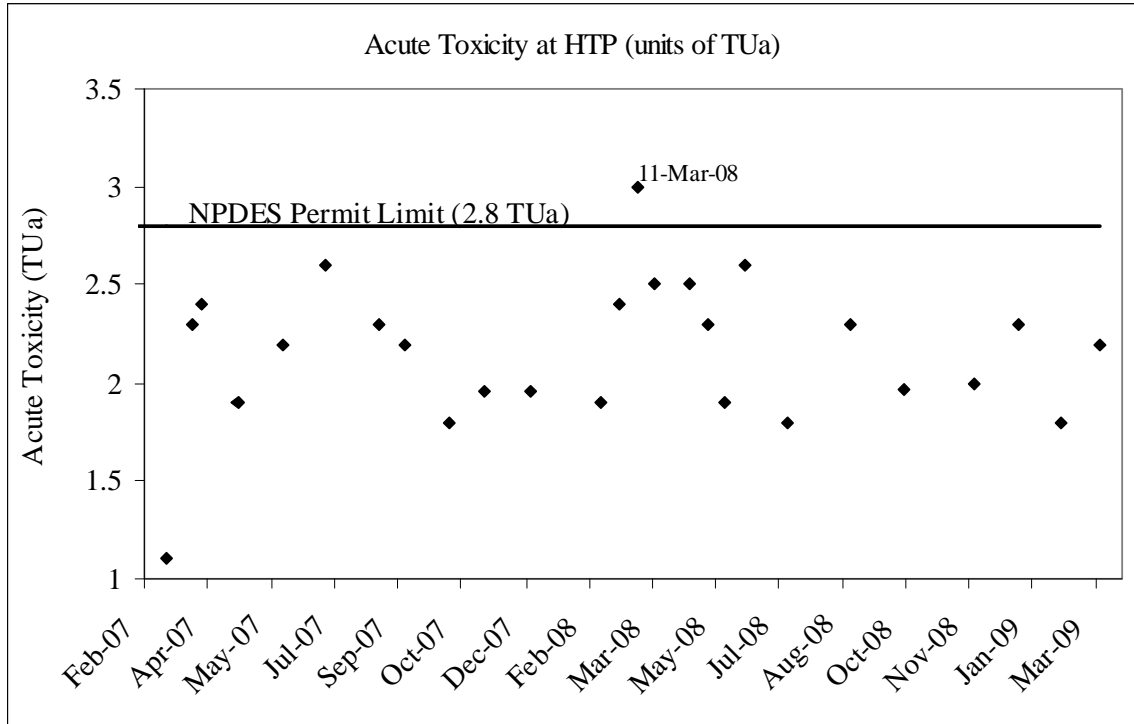




Figure 2: Acute Toxicity (TUa) at HTP and corresponding daily effluent flow (million gallons per day, MGD) at the 5-mile Outfall. Data compiled from monthly monitoring reports from February 2007 through March 2009.

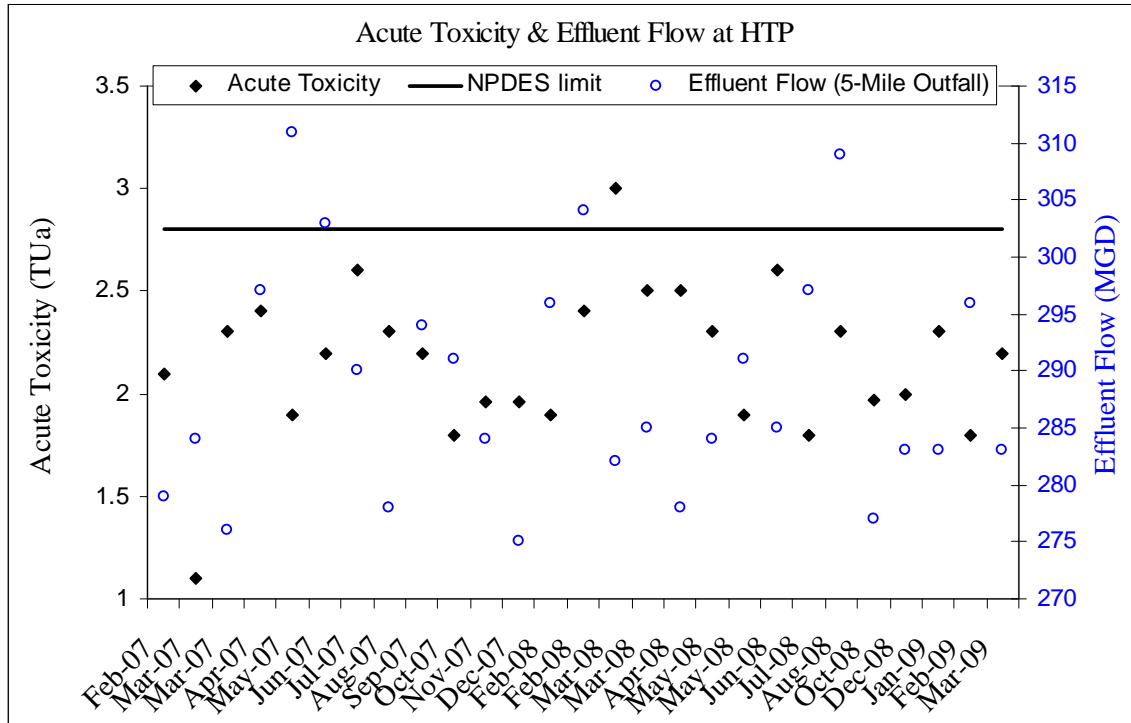
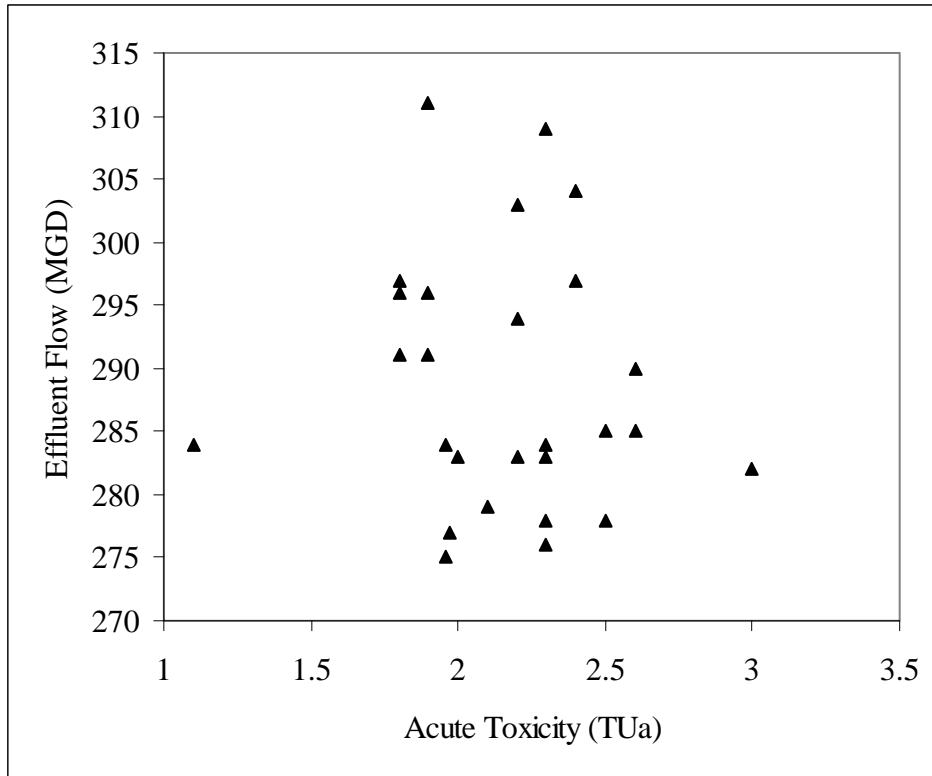


Figure 3: Scatter plot of test results for acute toxicity (TUa) at HTP and daily effluent flow (million gallons per day, MGD) at the 5-mile Outfall. Data compiled from monthly monitoring reports.



**APPENDIX A.iv:
MEMORANDUM IN SUPPORT OF PLAYA VISTA EIR
RESPONSES, CH2MHILL, JULY 10, 2009**

Playa Vista EIR Responses

TO: Bruce Lackow

FROM: Judi Miller 

DATE: July 10, 2009

The following clarifications are offered regarding the analysis of wastewater treatment capacity in the Village at Playa Vista RS-DEIR.

Secondary Clarifier Capacity at Hyperion

It was reported in the IRP that there have been operational limitations in the secondary clarifiers at the Hyperion Treatment Plant that could potentially reduce the operational capacity of this unit process. These limitations are functions of operational process modifications, and do not reflect any inherent inadequacies of the secondary clarifier facilities. Rather, the reduced clarifier capacity at Hyperion is due to process changes in the upstream oxygen reactors in which three of the nine modules have been converted to include anaerobic selectors in the first 20 percent of the reactors.¹ This process modification was intended to improve sludge settling in the secondary clarifiers, but has reduced the amount of filamentous microorganisms in the upstream aeration process to such a large extent that there is not enough remaining to bind with the floc to adequately enhance settling.² As a result, additional settling time is needed in the secondary clarifiers, thereby effectively reducing the available capacity of the tanks.

Even accounting for such current operational limitations, however, the treatment capacity is more than adequate to accommodate existing flows for a number of reasons. Current influent sewage flows at Hyperion (e.g., 310 mgd in December 2008) are significantly lower than even the reduced clarifier capacity (estimated at 345 mgd³). Also, those flows have been showing a decreasing trend. Further, the amount of the flows presently entering Hyperion reflects the fact that 40-mgd of capacity at the upstream Tillman Water Reclamation Plant (Tillman) is currently unavailable due to construction activities.⁴ Once the construction is complete at Tillman, the influent flows to Hyperion will be even lower. Therefore, the clarifier capacity constraints at Hyperion do not represent an urgent situation because there currently is and is projected to be sufficient treatment capacity at Hyperion to accommodate existing and projected flows. However, the City continues to work to identify an optimal solution to maximize Hyperion's operations.

To regain the lost capacity of the secondary clarifiers, and as part of the City's continuous efforts to improve treatment plant operations, studies are currently underway to optimize

¹ Task Order Solicitation (TOS) 15 Hyperion Treatment Plant (HTP) Ultimate Build-out of Secondary Treatment.

² IRP Facilities Plan, Volume 1: Wastewater Management, page 7-32.

³ Task Order Solicitation (TOS) 15 Hyperion Treatment Plant (HTP) Ultimate Build-out of Secondary Treatment

⁴ Personal communication, Fernando Gonzalez, May 13, 2009.

the performance of the clarifiers, thereby increasing the effective capacity and efficiency of this treatment process. As noted in *Task Order Solicitation (TOS) 15 Hyperion Treatment Plant (HTP) Ultimate Build-out of Secondary Treatment*), the City is conducting a testing program to enhance secondary clarifier performance and improve effluent quality, thus maximizing the value of the existing facilities. Some operational adjustments have been tested, including the use of polymer, and other operational as well as structural modifications have been suggested as part of the work being conducted under TOS 15.

If the process optimization testing program does not result in adequate improvements, the adopted IRP and its certified Final EIR included the implementation of 100 mgd of additional secondary clarifier capacity, should it be needed to accommodate future flows, to restore the design capacity of HTP to 450 mgd. These additional clarifiers have been categorized as "proceed if triggered" projects, meaning that they will only be designed and constructed when and if warranted.

The effectiveness of the process optimization studies is currently monitored and will continue to be tracked as one of the factors that would trigger the need for the additional secondary clarifiers. Projects are triggered when the projected flows are expected to reach and exceed the capacity of a given facility, in this case, the secondary clarifiers. Projected wastewater flows, which are primarily a function of population, are compared to the capacity of the facility. When these flows approach the capacity, a project need is triggered and the design and construction is planned so that there is sufficient time to conduct these activities prior to the realization of the projected flow increases. The City's Department of Public Works staff regularly assess plant needs and, once the need for a project is identified (i.e., the project is "triggered"), the staff follow an established process for identifying and initiating projects. This process routinely accounts for the lead time required for planning, design and construction of the projects. Since the secondary clarifiers have been approved through the IRP EIR, no further environmental review or agency approvals should be needed to implement this "go if triggered" project, if or when needed.

Maximum Daily Flow in Relation to Treatment Capacity

Ballona Wetlands Land Trust cites a maximum daily flow of 409 mgd from the *January 2009 Monthly Performance Report* attached by that commentor as Exhibit B-5, and a maximum daily flow of 416 mgd from the *December 2008 Monthly Performance Report* attached by the commentor as Exhibit B-6. These figures represent the maximum instantaneous flow recorded at the plant (in 5-minute increments) during the course of each month. These flows typically occur during periods of high indoor water usage, typically in the early morning and early evening hours, and are not comparable to treatment capacity. Because flows coming into the plant over the rest of the day are substantially lower than these instantaneous maximum values, these flows are readily accommodated by the large tanks in which the wastewater treatment processes occur.

Per industry standards, a comparison of the monthly average of the average flows for each day – the amount of flow that is being treated, on average, over the course of each day during the month – provides a more meaningful assessment of flows in relation to treatment capacity. As indicated in the December 2008 and January 2009 Monthly Reports the monthly averages for December 2008 and January 2009 were 310 mgd and 305 mgd, respectively, and are well within the 450 mgd treatment capacity of the HTP.

Wet Weather Flow Treatment

As discussed in the RS-DEIR, wet weather flows still receive secondary treatment at Hyperion. These flows are larger than the average dry weather flows on which the treatment process design is based. As such, they are retained in the secondary treatment processes for less time than average dry weather flows. However, the characteristics of the wet weather flows treated at the plant differ from those of the average dry weather flows due to the mixing of inflow and infiltration with wastewater, including dilution of the wastewater and lowering of the water temperature. The treatment conditions for wet weather flows is thus different than it is for dry weather flows and the shorter detention time through the process tanks due to the higher wet weather flow rates is not expected to compromise the plant's ability to meet the discharge criteria.

Terminology

In addition to the terms defined in the RS-DEIR, the following terms have been used throughout the discussions of wastewater treatment and warrant description of their use in this context.

TERM	DEFINITION
Dry Weather Flow	Sewage flow in the wastewater collection and treatment system that takes place without any contribution from rainfall
Wet Weather Flow	Sewage flow that includes a contribution of rainwater that enters the wastewater collection system through inflow and infiltration
Maximum Month Flows	Monitored influent flows over a period of time in which daily flows are normally high due to regular rainfall events
Average Daily Flow	Influent sewage flow measured at the plant; can be either dry or wet weather conditions
Instantaneous Maximum Flow	Influent flows recorded in 5-minute increments at Hyperion

APPENDIX B:
CULTURAL RESOURCES: ARCHAEOLOGICAL RESOURCES

**APPENDIX B.i:
GABRIELINO TONGVA INDIANS OF CALIFORNIA RECOVERY
AND REBURIAL PROCEDURES MOST LIKELY DESCENDENT
(MLD) GUIDELINES, 2005**

Gabrielino Tongva Indians of California

Recovery and Reburial Procedures - 2005

There are certain rules and methods developed and revised by the Gabrielino Tongva Indians of California Tribal Council that are required when removing Gabrielino Tongva remains from the earth. Conditions may occur that could alter one or more issues on this list. Consultation with the most likely descendent (MLD) and the Native American Indian monitors assigned to the site can then be scheduled to determine other procedures that may be acceptable to the Tribe.

Excavation:

1. Consultation between the MLD and an archaeological firm with qualified archaeologists must take place when remains are determined, by an osteologist and/or a qualified member of the Coroner's Office, that the remains are Native American Indian prior to any action taken.
2. A 50 foot perimeter for each uncovered burial will be required to safeguard further destruction until the area is examined for additional remains and associated grave goods.
3. In the event blade machines are operating in an adjacent area, a maximum of 1" cuts or less will be permitted in all cultural areas.
4. Additional monitors will be required if more than one area is being excavated at the same time. Each excavated burial will be monitored exclusively.
5. Wooden tools are preferred; electric chisels or other power tools should be avoided.
6. If remains are pedestaled, they will be placed on plywood for removal. If remains cannot be pedestaled due to soil conditions, remains must be carefully placed in cloth bags.
7. Soils adjacent to burials will be saved for reburial in plastic containers.
8. No photography, no digital imaging, no computer enhancing, videotaping nor any other technological method of capturing images of remains is allowed. Only drawings of remains will be permitted to retain the orientation of the ancestors for re-interment purposes exclusively and all drawings must be interred with the remains. If the Coroner photographs (or any type of image gathering) the remains, the photos may not be published or distributed for any purpose and all images must be interred with the remains.

Soil Removal and Handling:

1. 30-40cm of soil surrounding ancestors must be retained for reburial.
2. Soils surrounding ancestors may be dry-screened outside this measurement using 1/16th mesh.
3. Water-screening of soil may be permitted with 1/8 mesh with a Native American Indian monitor present.

Testing:

1. No DNA testing is allowed.
2. No invasive testing is allowed.
3. Macroscopic analysis is permitted.
4. Shell associated with each burial may be used for dating purposes.
5. When remains are unearthed, the 1'x1' test pits will be allowed to determine the extent of the burial area.
6. All windrows within a 50-foot area surrounding the remains must be dry or wet screened.

Storage:

1. Natural Cotton bags and sheeting or cotton drop cloths will be used to store remains until time of re-interment. Deer hides maybe used to cover the bagged and wrapped remains until time of reburial and may become the burial wrapping. Rabbit skins may be used for females.

2. Until the scope of the project is completed, storage of ancestors will be in close proximity to the location of excavation or a protected area must be provided by the landowner or archaeologist.
3. Bone fragments will be bagged in natural cotton.
4. The MLD will have exclusive access to all remains to insure they are being stored and handled in a dignified, respectful and appropriate manner. No one is allowed to view the remains and all associated grave goods without the permission of the MLD. A weekly log will be provided to the MLD listing all personnel who have entered the storage facilities to verify no unnecessary viewing is taking place. A qualified archaeologist must accompany any visitors entering the storage facilities that hold remains and associated grave goods.
5. All associated, patrimonial and religious grave goods are not to be removed from the site for any purpose and must remain in close proximity to the associated remains.

Reburial:

1. If at all possible, remains should stay within the same location or in as close proximity to the removal as possible, preferably within a ½ mile radius of the original gravesite. When no appropriate location can be identified within this radius, a secure location will be valued over distance.
2. If six or more remains are uncovered in or excavated from one area, the re-interment should be in that immediate area.
3. The reburial site should offer the best long-term protection against any additional disturbances.
4. Each reburial requires approximately 4' x 5 ½' when fully articulated and should be at a depth of 6 - 10 feet. The purpose of this depth is to insure difficulty in disturbing the reburial and to allow adequate room for a concrete cap or steel wire mesh buried approximately 4' below the surface of the ground. A backhoe is recommended for excavation of the burial pit.
5. All isolated bone fragments that are uncovered on site will be buried together in an individual burial pit with one or more deer skins, other indigenous animal skins, sea weed or the natural cloth used for all bagged fragments.
6. All associated grave goods and artifacts will be reentered with the ancestors.
7. No drawings or any other images to include all technological methods of image gathering of ancestral remains may be used for publication, for presentations such as video, DVD or PowerPoint, for placement on any Internet sites for any reason. The only purpose for any imaging of remains is for positioning for reburial only.

Costs:

1. The landowner(s) will be responsible for all costs related to the proper storage and reburial of remains excavated on their property to include all burial materials required in this document.
2. Landowner(s) will be financially responsible for providing reburial plots that are acceptable and approved by the MLD.

Revised 035/26/05

APPENDIX B.ii:
U.S. ARMY CORPS OF ENGINEERS, LETTER TO CITY OF
LOS ANGELES, FEBRUARY 16, 2006



DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O. BOX 532711
LOS ANGELES, CALIFORNIA 90053-2325

February 16, 2006

REPLY TO
ATTENTION OF:

Office of the Chief
Regulatory Branch

City of Los Angeles
Department of City Planning
Attn: Gordon Hamilton
200 North Spring Street, 5th Floor
Los Angeles, CA 90012

Dear Mr. Hamilton:

Reference is made to your inquiry dated January 31, 2006 in which you requested additional information concerning two archeological sites in the Playa Vista property (Area D) in Marina del Rey, Los Angeles County, California (Permit Number 90-00426-EV).

As you are aware, the properties designated as LAN-211/H and LAN-62, located within the boundaries of the Village at Playa Vista (VTM No. 60110), are subject to approved Archaeological Treatment Plans (ATPs). This letter confirms that the U.S. Army Corps of Engineers is satisfied that the approved ATPs are being implemented as required by the Programmatic Agreement for the Playa Vista Project (Permit Number 90-00426-EV).

If you have any questions concerning this letter, please contact Aaron O. Allen, Ph.D. of my staff at (805) 585-2148.

Sincerely,

David J. Castanon
Chief, Regulatory Branch

Copies furnished:
Playa Capital Company, LLC

**APPENDIX B.iii:
COMMENTS RELATING TO ANALYSIS OF
ARCHAEOLOGICAL IMPACTS IN THE RECIRCULATED
SECTIONS OF DRAFT ENVIRONMENTAL IMPACT REPORT
(RS-DEIR) FOR THE VILLAGE AT PLAYA VISTA PROJECT
(PROPOSED PROJECT), STATISTICAL RESEARCH, INC.,
JULY 16, 2009**



STATISTICAL RESEARCH, Inc.

ARCHAEOLOGY • ANTHROPOLOGY • HISTORY • HISTORIC ARCHITECTURE

July 16, 2009

Bruce Lackow
Matrix Environmental
6701 Center Drive West, Suite 900
Los Angeles, CA 90045

Re: Comments Relating to Analysis of Archaeological Impacts in the Recirculated Sections of Draft Environmental Impact Report (RS-DEIR) for the Village at Playa Vista Project (Proposed Project)

Dear Mr. Lackow:

The purpose of this letter is to provide additional information regarding several archaeological topics in response to written comments received on the RS-DEIR for the Proposed Project, including:

- Additional information about the human remains discovered at the Playa Vista site (both the Proposed Project and First Phase Project sites);
- Restoration of the burial features previously excavated from the Proposed Project site to their original locations without realigning the Riparian Corridor in the Proposed Project;
- Reinterment of human remains at the Ballona Discovery Center, and characteristics of its design; and
- Available treatment options for new archaeological sites that may be discovered in the future in connection with the development of the Proposed Project.

Statistical Research, Inc. (SRI) has performed cultural resource management services for over 25 years and has provided archaeological services at the Playa Vista site since 1989. I have personally worked on the Playa Vista site since 1994. In 2008, SRI prepared the *Assessment of Preservation in Place of Archaeological Resources (CA-LAN-62 Locus D and CA-LAN-211) in Proposed Village at Playa Vista Project*, which is attached as an Appendix to the RS-DEIR for the Proposed Project. That assessment explained historic site uses and archeological work concerning the Proposed Project, and considered the possibility of returning archaeological resources to the locations in the Proposed Project at which they were found by relocating the existing Riparian Corridor.

A. Archaeological Resources at the Proposed Project Site

The Proposed Project contains two known partially intact archaeological sites that are eligible for listing in the NRHP: LAN-62 Locus D and LAN-211/H. Archaeological sites LAN-1532/H and LAN-2769 are located in the project area but have been recommended as not eligible to the NRHP. The archaeological deposit at LAN-62 Locus D contained three archaeological features,¹ consisting of two areas of concentrated artifacts and one refuse pit. No human burial features or isolated human remains were found at LAN-62 Locus D.

The archaeological deposit at LAN-211/H contained forty-seven non-burial features and three burial features,² for a total of fifty³ archaeological features. The non-burial features contained hearths, fire-affected rock, and artifacts such as stone, animal bone and tools. The three burial features found at LAN-211/H were scattered, and were not contained in a formal burial area. Each burial feature was clearly associated with only one human burial. In addition, some isolated human remains (which may be related to the burials) were found at LAN-211/H in the Proposed Project area.

As part of SRI's archaeological work at LAN-211/H, the completeness of skeletal elements, the level of burial and articulatory integrity,⁴ the level of preservation of the bones when removed from the ground, and the date of each burial⁵ were examined and documented for each of the three burial features encountered at LAN-211/H. All of these burial features showed significant signs of deterioration and consisted mostly of fragmentary remains, as further described below. The first burial feature found at the

¹ An archaeological feature is a non-portable expression of past human behavior.

² A "burial feature" is a spatial area that contains human remains, associated grave goods and soil, as identified by a trained archaeologist in the field. In archaeological practice, a burial feature usually contains the remains of a single individual (a primary individual), which could consist of a well-articulated inhumation, a bundle burial, or a cremation buried in place. In some circumstances, a burial feature may contain more than one individual. Multiple individuals in one burial feature were not encountered at the Proposed Project site, though they were encountered at the LAN-62 Locus A burial area in the First Phase Project, discussed in Section D of this letter report.

³ In reviewing the RS-DEIR and prior SRI reports in order to prepare this letter report, SRI noted an error in the total number of archaeological features found at CA-LAN-211/H. Page 12 of SRI's *Assessment of Preservation in Place of Archaeological Resources (CA-LAN-62 Locus D and CA-LAN-211) in Proposed Village at Playa Vista Project* states that there were 51 total features in CA-LAN-211 (which is repeated on RS-DEIR page II.C-33), while page 17 of SRI's *Preliminary Report on Data Recovery within the Phase 2 Project Area at CA-LAN-62, Locus D, and CA-LAN-211/H, Playa Vista, California* (2006) states that there were 50 total archaeological features in CA-LAN-211/H. The correct total number of features (both burial and non-burial) found in CA-LAN-211/H is 50. Both documents consistently and correctly state that only three burial features were found at CA-LAN-211/H.

⁴ Burial integrity is the level of preservation of a burial feature, and articulatory integrity is the degree to which bones within a burial feature are in their proper location and/or order. Burial and articulatory integrity are measured on a four-point scale: high, medium, low and none.

⁵ In accordance with guidelines provided by the Most Likely Descendant, no invasive testing of human remains (such as radiocarbon dating) was conducted. Dating of human remains was primarily based on soil stratigraphy techniques.

Proposed Project (Feature 27) was located in the northern central portion of LAN-211/H and consisted of a single primary inhumation of an infant. The burial was highly disturbed, consisting of only a few skeletal elements, and poorly preserved. Both the burial and articulatory integrity were low. SRI dates this burial from the Protohistoric (circa A.D. 1500) to the Mission period (circa A.D. 1810). The second burial feature found at the Proposed Project (Feature 33) was located in the northeastern portion of LAN-211/H and consisted of a single primary inhumation of an adult. The remains were very heavily disturbed and incomplete, but human remains in the vicinity could also be associated because of close spatial relationship, skeletal components and demographic profiles. Both burial integrity and articulatory integrity were low, and preservation was poor. This burial is prehistoric in origin and likely dates to the Intermediate through Late Periods, circa 1000 BC – A.D. 1500. The last burial feature found at the Proposed Project (Feature 49) was located in the central portion of the southeastern end of LAN-211/H and consisted of a single primary inhumation of an adult. The remains were disturbed and incomplete, though some of the bones were moderately preserved. Both burial and articulatory integrity were medium. This burial is prehistoric in origin and likely dates to the Intermediate Period, circa 1000 B.C. – A.D. 1000.

B. The Possibility of Restoring the Burial Features Excavated from CA-LAN-211/H to Their Original Locations without Realigning the Riparian Corridor

One issue raised by commentators on the RS-DEIR is the possibility of returning the burial features found in LAN-211/H to their original locations without realigning the Riparian Corridor in the Proposed Project area. As explained below, the original locations of the burial features no longer exist. In addition, it would be detrimental to the human remains and to the archaeological resources that remain intact below the existing Riparian Corridor to return the burials to their prior two dimensional location (though at a different elevation) in or below the Riparian Corridor.

Each of the three burial features found at the Proposed Project was located in a portion of LAN-211/H that now contains the Riparian Corridor. With regard to the depth of the features, Feature 27 was located at 10.83 ft. Above Mean Sea Level (AMSL), Feature 33 was located at 9.51 ft. AMSL, and Feature 49 was located at 10.17 ft. AMSL. Each of these burial features was excavated by SRI, since each was located at an elevation above the planned floor of the Riparian Corridor and needed to be excavated to create the Riparian Corridor. The former location of each burial feature in relation to the current Riparian Corridor elevation is depicted on attached Figure 1. As shown on Figure 1, if one were to try to replace the burials to their exact original locations, they would be in the air above the Riparian Corridor or in surface water in the Riparian Corridor (during storm events). Therefore, restoration of the LAN-211/H burials to their original locations and elevations would require filling in the Riparian Corridor, and either reconstructing the corridor at a shallower depth or relocating it. Options for such a shallower redesign or relocation of the Riparian Corridor are discussed in SRI's *Assessment of Preservation in Place of Archaeological Resources (CA-LAN-62 Locus D and CA-LAN-211) in Proposed Village at Playa Vista Project*, attached as an Appendix to the RS-DEIR.

As shown in Figure 13 of the *Assessment of Preservation in Place of Archaeological Resources (CA-LAN-62 Locus D and CA-LAN-211) in Proposed Village at Playa Vista Project*, the Riparian Corridor must maintain a downward slope from east to west so that water will flow through the Riparian Corridor to the Freshwater Marsh west of Lincoln Blvd. Currently, the elevation of the flow line of the Riparian Corridor at the eastern end is 11.70 ft. AMSL and 4.73 ft. AMSL at the western end. Placing the additional fill required to return the archaeological resources to their original elevations in their original locations (which would require the bottom of the Riparian Corridor to be at an elevation of approximately 11 ft. AMSL at the locations where the burials were encountered) would prevent the flow of water at that point in the Riparian Corridor, which is currently approximately 8.0 ft. AMSL. It should also be noted that reducing the depth of the Riparian Corridor by fill and reburying the archaeological resources under the Riparian Corridor footprint would subject the resources, and the soil surrounding them, to groundwater intrusion.

It should also be noted that, as discussed in SRI's *Assessment of Preservation in Place of Archaeological Resources (CA-LAN-62 Locus D and CA-LAN-211) in Proposed Village at Playa Vista Project*, originally constructing the Riparian Corridor at a shallower depth would not have avoided all impacts to the archaeological resources in LAN-211/H since the archaeological resources were encountered close to the original existing grade in the Riparian Corridor area of LAN-211/H.

Further, returning the burials to their original north/south and east/west locations but at a lower elevation below the Riparian Corridor would damage them and be inconsistent with guidance provided by the Gabrielino-Tongva Most Likely Descendant (MLD) for the Playa Vista project, Mr. Robert Dorame. If the burials were placed below the Riparian Corridor, they would be placed in either wet soil or groundwater, which is extremely close to the bottom of the Riparian Corridor. During SRI's archaeological investigations, we encountered groundwater in some of the trenches and test pits dug at LAN-62 Locus D and LAN-211/H in the Proposed Project site. As described above, the burials found at LAN-211/H were in a very fragile condition when SRI encountered them. Reinterring them at the bottom of or below the Riparian Corridor would expose them to wet soil and groundwater, causing even further deterioration. Human remains deteriorate exponentially more quickly when they are subjected to alternating wet and dry environments (as compared to remaining in an entirely wet or entirely dry environment). Returning dry human remains (which are currently being stored in a secure location at Playa Vista) to wet soil below the Riparian Corridor would likely lead to their complete deterioration (turning the remaining bones to dust) within weeks.

In this regard, the MLD has consistently stated his desire that Native American human remains at Playa Vista be protected from water intrusion. As discussed further in Section C below, at Mr. Dorame's request, the elevation of the reinterment area at the Ballona Discovery Center was set above the highest expected groundwater level, including consideration of seasonal climate conditions (such as rainfall, which can elevate the

groundwater table for a period of time), to ensure that the burials would remain dry.⁶ Given the high groundwater table at Playa Vista, accommodating this concern resulted in the creation of a burial mound at the Ballona Discovery Center, with a deep protective soil cover over the reinterred burials, while also ensuring that the burials remained above the groundwater table.

The methodology established with the MLD for bundling human remains for reinterment at Playa Vista further confirms the importance of avoiding groundwater and wet conditions. The MLD's guidelines for handling Native American human remains call for natural cotton bags to be used during storage of human remains, with deerskin wrappings used for reinterment. Measures such as plastic wrapping that might otherwise protect a burial from wet reinterment conditions are not consistent with the MLD's guidelines, which preclude plastic.

Furthermore, while human remains deteriorate in wet subsurface conditions, SRI's investigation indicates that intact, buried archaeological resources exist to depths of over three meters below the original ground surface. By using various sampling strategies, we identified intact native soils containing prehistoric cultural materials to a depth of at least a meter below the current bottom of the Riparian Corridor in the Proposed Project area (to a depth of approximately two feet AMSL or deeper). Placing the excavated burials from LAN-211/H below the Riparian Corridor in the Proposed Project site would likely disturb the LAN-211/H archaeological site that remains intact below the Riparian Corridor.

C. The Ballona Discovery Center

As noted above, all human remains and associated grave goods excavated in connection with the First Phase Project (but not the Proposed Project) have already been reinterred. SRI worked closely with the MLD, the landowner (Playa Capital Company LLC), the Native American Heritage Commission and City Councilman Bill Rosendahl's Office for much of 2008 to complete that reinterment. The MLD selected a portion of the Ballona Discovery Center immediately adjacent to the Riparian Corridor in the Playa Vista First Phase Project for the reinterment area, and informed me on several occasions of his desire that all Native American human remains found anywhere at Playa Vista, including those found in the Proposed Project area, be reinterred at this location. While the human remains from LAN-211/H have not yet been reinterred, SRI worked with the MLD to design the Ballona Discovery Center reinterment area in a way that would permit honoring the MLD's desire to reinter the human remains from the Proposed Project at the Ballona Discovery Center, if that is to be their ultimate disposition. Specifically, the Ballona Discovery Center's reinterment area was constructed with a "windows to the past" feature, which is essentially a small shaft that permits additional burial bundles to be lowered into the Ballona Discovery Center's reinterment area without disrupting the First Phase burials already reinterred there.

⁶ Similarly, efforts have consistently been made to protect exposed human remains found at Playa Vista from rainfall and stormwater run-off prior to their removal from the field, with techniques such as berming, use of sand-bags and tenting.

The reinterment area itself was designed and constructed to protect the burials from future disturbance and keep them out of groundwater. At Mr. Dorame's request, the bottom of the reinterment area was set at 11.5 feet AMSL, which engineers from Camp Dresser & McKee Inc. confirmed was above both current groundwater and historic high groundwater levels at this location, with a buffer. The elevation is particularly important since deerskin wrappings were used for the reinterment of human remains at the request of the MLD, instead of more moisture resistant materials such as plastic. After deerskin bundles of human remains, associated grave goods and burial and associated soils were placed in the reinterment area, the mound was capped with chain link metal mesh to prevent further disturbance. A soil cap of at least three feet was placed over the metal mesh. The soil cap was planted with native succulent plants, and the area was bermed with a pathway around it to discourage foot traffic over it. In SRI's professional opinion, because of all of these characteristics, the Ballona Discovery Center reinterment area offers a more protective environment for reburial of the human remains found at LAN-211/H than placing them under the bottom of the Riparian Corridor in the Proposed Project area.

In its entirety, the Ballona Discovery Center will encompass a 1.7-acre site in the western portion of the Playa Vista First Phase Project, immediately adjacent to the Riparian Corridor. The Ballona Discovery Center is planned as a "museum without walls," focusing on the natural and cultural history of the Ballona wetlands and its native peoples. In addition to the reinterment area, the Ballona Discovery Center will include an open air gathering place for outdoor performances and educational programs, a "watershed walk" with interpretive elements illustrating the path water travels through the water cycle, and other elements representing and honoring Gabrielino-Tongva culture and links to the natural environment, including a Ki (house) and a Ti'at (plank canoe).

Reinterment of all human remains and associated grave goods, other than those found in LAN-211/H, was completed at the Ballona Discovery Center in December 2008. Along with other representatives from SRI, I attended a ceremonial gathering on December 13, 2008 commemorating completion of the First Phase Project reinterments. Native American ceremonies were conducted privately by the MLD and Mr. Anthony Morales of the Gabrielino-Tongva San Gabriel Band of Mission Indians that morning, with a larger gathering including members of various Gabrielino-Tongva groups, City Councilman Bill Rosendahl, representatives of Playa Capital Company and members of the general public that afternoon.

D. Number of Human Remains Encountered at the Playa Vista Site

One commentor requested additional information concerning the total number of burials found at Playa Vista, including both the First Phase Project and the Proposed Project. SRI has excavated a total of 386 burial features at the Playa Vista project. As discussed in Section A above, only three of these burial features were found at the Proposed Project

site, and 383 of the burial features were from the Playa Vista First Phase Project.⁷ The overwhelming majority of the burial features found at Playa Vista were recovered from a concentrated burial area at LAN-62, Locus A in the western portion of the First Phase Project.

SRI has determined that each of the three burial features found in the Proposed Project site represented a single individual. The situation with respect to the First Phase Project is far more complex, however, because of the concentrated burial area in the far western portion of LAN 62, at Locus A. In the First Phase burial area, burials were very intertwined, with burials dug into prior burials in what appears to be an epidemic context. The First Phase burial area also included concurrent burials, such as a woman and an infant child buried together.⁸

Because of the nature of the First Phase burial area, as well as erosion, decomposition, historic activity and animal disturbance, the exact number of human remains at the Playa Vista site will likely never be known. However, by using the various methodologies discussed below, SRI estimates that the number of individuals ranges from 243 to 396 human individuals in the 386 total burial features excavated by SRI everywhere at Playa Vista (both the Playa Vista First Phase Project and the Proposed Project). Based on data recovery work,⁹ visual inspections and measurements, SRI's osteological team determined that the most reliable method to count human individuals in this setting is by femur. Doing so results in a total of 396 individuals. Another method would be to count complete and partial crania, which would result in 243 individuals in the 386 burial features. Another method would be to count by "primary individuals," or individuals that were the main impetus for creation of a burial feature. Using that method, there were 313 individuals in the 386 burial features found throughout Playa Vista.

⁷ The 383 First Phase burial features included the burials found in the LAN-62 Locus A burial area, as well as scattered burials found at the following locations outside of the Proposed Project: LAN-54/H (three burial features); LAN-193/H (three burial features) and LAN-2768/H (three burial features).

⁸ SRI's Preliminary Report on Data Recovery within the Phase 1 Project Area at CA-LAN-62, Playa Vista, California contains additional information about the burial area found in the First Phase Project area, including discussion of features, archaeological methods, and basic results. This report, and numerous other reports related to Playa Vista archaeology, is on file with the California Historic Resources Information Center (CHRIS). The final report, which will discuss archaeological resources found at the entire Playa Vista site (both the First Phase Project and the Proposed Project) is still being prepared. It will be submitted to the CHRIS when completed.

⁹ Data recovery generally includes the documentation, recordation, and removal of archaeological resources prior to any development or other undertaking at the subject site that would compromise the integrity of the archaeological site. Data recovery may also extend to the subsequent analysis and interpretation of the retrieved information from the archaeological resources and the curation of those resources (other than human remains and associated grave goods, which are reinterred). The purpose of data recovery is to retrieve the scientifically valuable information within an archaeological site in order to help place the site in its historic context.

E. Treatment Options for Potential Discoveries at Unknown Archaeological Sites at the Proposed Project

The Riparian Corridor has been completed, and portions of the two known, NRHP-eligible archaeological areas in the Proposed Project site—LAN-62 Locus D and LAN-211/H—remain preserved in place under fill or were left undisturbed. Additional disturbance of these archaeological sites is unlikely if the Proposed Project proceeds as planned and the Riparian Corridor is not relocated.

It is also unlikely that additional archaeological resources will be encountered at the remaining portions of the Proposed Project site. All excavation and mass grading for the Proposed Project has been completed, and other than LAN-62 Locus D and LAN-211/H (discussed above), no archaeological sites eligible for listing in the National Register have been located in the Proposed Project area. However, despite the unlikely possibility of encountering additional archaeological resources, if a new significant archaeological site were discovered at the Proposed Project, the Programmatic Agreement and the proposed Mitigation Monitoring and Reporting Program (MMRP) for the Proposed Project require that activity be halted. The U.S. Army Corps of Engineers, State Historic Preservation Officer, Advisory Council on Historic Preservation and Department of City Planning are to be notified, so that an Archaeological Treatment Plan can be developed consistent with the Programmatic Agreement. In developing a new Archeological Treatment Plan, avoidance, or preservation in place, would be considered in accordance with federal and state law. The National Historic Preservation Act, which seeks to avoid or mitigate adverse effects on historic properties, recognizes preservation in place as an appropriate treatment option to be considered.¹⁰ The U.S. Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the National Historic Preservation Act also provide that archaeological sites should be maintained in an undisturbed condition when feasible.¹¹ The Programmatic Agreement provides that the formulation of future Archaeological Treatment Plans comply with the applicable federal laws and regulations.¹² Additionally, the California Environmental Quality Act requires public agencies to consider the feasibility of preserving in place archaeological resources.

Feel free to contact me if I can provide any further information.

Sincerely,



Donn R. Grenda, Ph.D., RPA
President

¹⁰ 36 C.F.R. Section 800.1(a)

¹¹ Standard 6, Guideline (a); 63 FR 20496 (April 24, 1998)

¹² Refer to Programmatic Agreement Section 3a

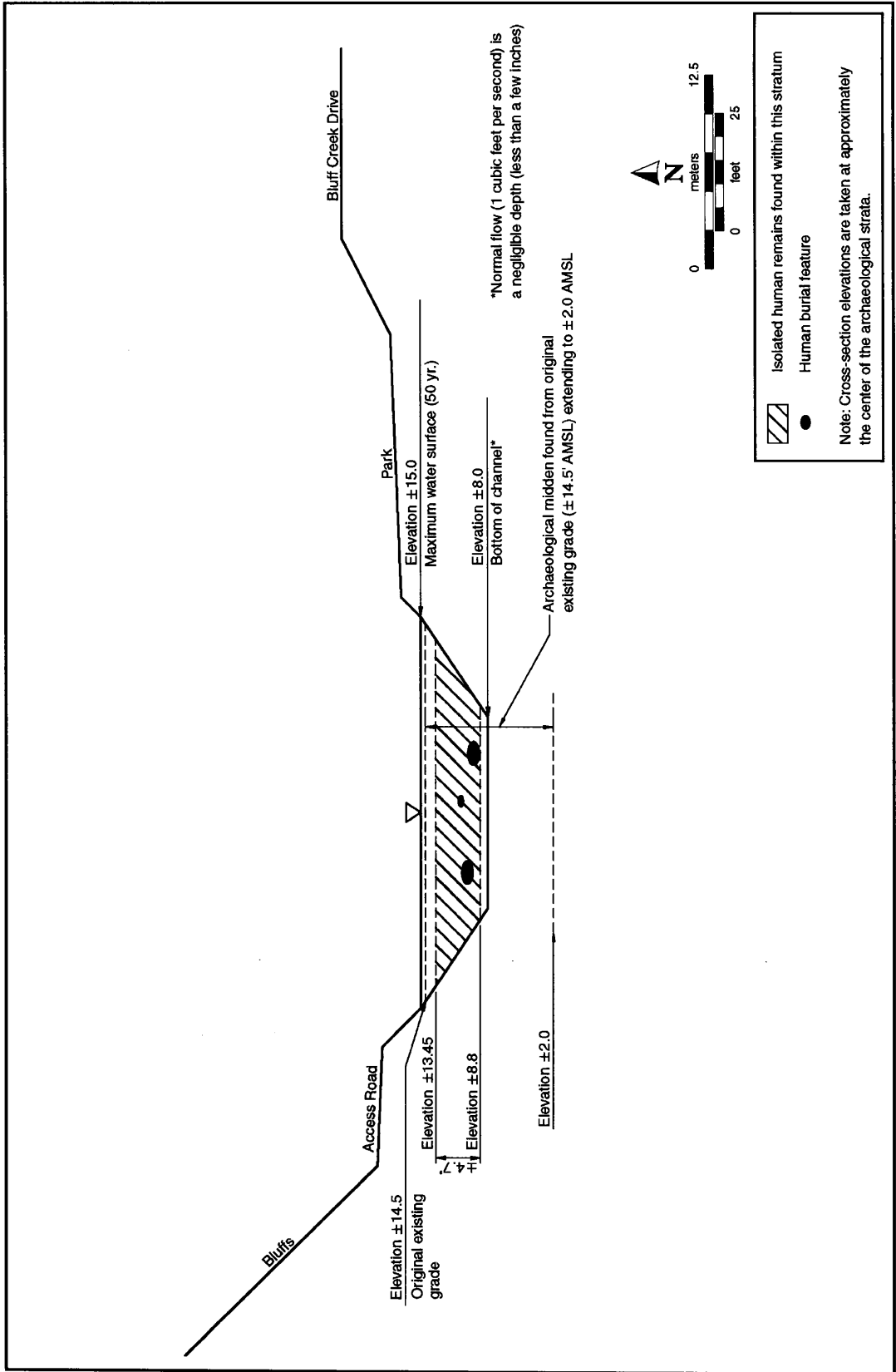
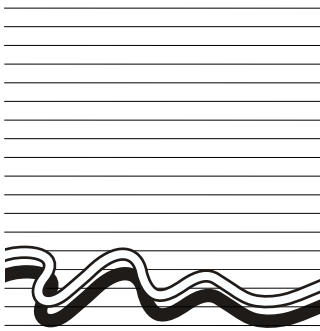


Figure 1. Elevations at which archaeological resources were encountered within Riparian Corridor, typical cross section.

APPENDIX C:
GLOBAL CLIMATE CHANGE

**APPENDIX C.i:
VILLAGE AT PLAYA VISTA – SEA LEVEL RISE, MESTRE
GREVE ASSOCIATES, JULY 1, 2009**



Mestre Greve Associates

July 1, 2009

Mr. Bruce Lackow
Matrix Environmental
6701 Center Drive, Suite 900
Los Angeles, CA 90045

Subject: Village at Playa Vista - Sea Level Rise

Dear Mr. Lackow:

Per your request we have reviewed the potential sea level rise impacts due to greenhouse gas emissions on the Village at Playa Vista project. Recently, the California Climate Change Center (CCCC) released a report (“The Impacts of Sea-Level Rise on the California Coast,” May 2009) that discusses the potential impacts of sea level rise on the California coast. While the maps that accompany the report suggest that much of the Proposed Project site would be at risk from projected sea level rise in the future, it is important to understand the context of the information presented in the maps and the reason why the postulated flooding would not actually occur.

Background on the California Climate Change Center Report

The following points should be kept in mind when considering the CCCC report. The CCCC report represents one view at the extreme end of the range of possible scenarios.

- **The California Climate Change Center (CCCC) is not a state agency nor does the report released by the CCCC represent the views of the State of California or any government agency.** The front cover of the report has a disclaimer. The disclaimer lists the funding agencies for the report, some of which are state agencies. The disclaimer then states that the paper “does not necessarily represent the views of the funding agencies...”¹ The disclaimer later continues with the statement that “This paper is being made available for informational purposes only and has not been approved or disapproved by the funding

¹ Matthew Heberger and others, The Impacts of Sea-Level Rise on the California Coast – Final Paper, California Climate Change Center, May 2009, front cover.

agencies...”² It also states that “This work shall not be used to assess actual coastal hazards...”³

- **The report has not been peer reviewed.** The Executive Summary for the report is getting quite a bit of attention. However, the “Final Paper” of the full report was just released in May 2009, and to date no independent peer reviews have been prepared assessing the methodology or findings of the CCCC report. The credibility of this report will not be established until other experts in this field of study have had the opportunity to comment and conduct additional analysis of the CCCC report’s methodology and findings.
- **The CCCC study represents an extreme worst case.** The study year for the inundation areas is 2100. Looking at greenhouse gas consequences that far in the future requires many assumptions. While it is appropriate to think about climate consequences that far in the future, it needs to be recognized that there is a tremendous amount of uncertainty in the forecasts and that, typically, these forecasts represent an extreme worst case scenario. More specifically, the CCCC report uses an increase in sea level rise of 4.6 feet (1.4 meters) and combines it with a 100-year flood scenario.⁴ The 4.6 feet sea level increase comes from a recently released study by Cayan, D. et. al. (2009) that shows a range for sea level rise of 3.3 to 4.6 feet (1.0 to 1.4 meters).⁵ The CCCC study uses the high end of the forecast range. More significantly it combines the sea level rise data with a 100-year storm surge. The CCCC report uses a storm surge of 4.9 feet (1.5 meters) and cites an earlier report by Cayan, D. et. al. (“Projecting Future Sea Level,” 2006).⁶ Therefore, the inundation exhibits and damage estimates shown in their report represent a 9.5 foot increase in sea level (i.e., 4.6 foot sea level rise plus a 4.9 foot storm surge), an extreme worst case.
- **The CCCC study incorrectly uses the 2006 Cayan report.** The Cayan report states that storm surge “rarely exceeds 1 foot (0.3 meters) in amplitude.”⁷ The Cayan report also makes no mention of a 100-year event. What the Cayan report does state is that “wave-induced surge on a beach can be of the order of the significant breaker height, which can reach 5 or 6 feet (1.5 or 1.8m) during large wave events.”⁸ Therefore, the CCCC report has confused storm surge with large wave events and has incorrectly used the Cayan report. Large wave events occur on a routine basis and only affect the narrow strip of land that is directly along beach. A storm surge is a general rise in the ocean level caused by high

² Matthew Heberger and others, The Impacts of Sea-Level Rise on the California Coast – Final Paper, California Climate Change Center, May 2009, front cover.

³ *Ibid.*, front cover.

⁴ *Ibid.*, pp. 5 and 8.

⁵ *Ibid.*, p. 1 (citing Dan Cayan and others, Climate Change Scenarios and Sea Level Rise Estimates for California 2008 Climate Change Scenarios Assessment, Climate Change Center, 2009).

⁶ *Ibid.*, p. 8.

⁷ Dan Cayan and others, Projecting Future Sea Level – White Paper, California Climate Change Center, March 2006, p. 9.

⁸ *Ibid.*, p. 9.

winds and pressure differentials associated with storms.⁹ Since a storm surge occurs over a several hour period it has a greater potential for inundating areas not directly on the beach. However, in California an extreme storm surge is 1 foot, not the nearly 5 feet used by CCCC.¹⁰

- **The CCCC study estimates for sea level rise are much higher than other projections by noted scientists.** The CCCC report uses a sea level rise of 4.6 feet. The 2006 report by Cayan shows a range of sea level rise projections for different assumptions with the range being 0.3 to 2.4 feet (0.1 to 0.72 meters). (The 2009 Cayan report increased their sea level rise projections.) Most importantly, the Intergovernmental Panel of Climate Change (IPCC) is sponsored by the United Nations and represents the most reliable source for forecasts for global climate change impacts. The IPCC along with Al Gore were awarded the Nobel Peace Prize in December 2007 for their work on global climate change. The reports produced by the IPCC represent a composite of many researchers and the reports go through several cycles of expert reviews before being released. The IPCC report entitled “Climate Change 2007, The Physical Science Basis,” (Contribution of Working Group 1 to the Fourth Assessment Report of the Intergovernmental Panel of Climate Change) represents the IPCC’s most current forecasts for sea level rise. The IPCC examined six economic and global climate change scenarios, and therefore, a range is presented for sea level rise.¹¹ The IPCC shows a range of sea level rise during the 21st century of between 0.59 feet (0.18 meter) to 1.9 feet (0.59 meters).¹² The largest sea level rise projected by the IPCC is 1.9 feet, which is substantially lower than the 4.6 feet used by the CCCC for sea level rise. The only explanation that the CCCC offers for the discrepancy in projections is a statement that “most climate models fail to include ice-melt contributions from the Greenland and Antarctic ice sheets...”¹³ In fact, Table 10.7 of the above referenced IPCC report clearly shows the contribution of the Greenland and Antarctic ice sheets to the overall projections of sea level rise.¹⁴

⁹ Dan Cayan and others, Projecting Future Sea Level – White Paper, California Climate Change Center, March 2006, p. 9.

¹⁰ Ibid., p. 9.

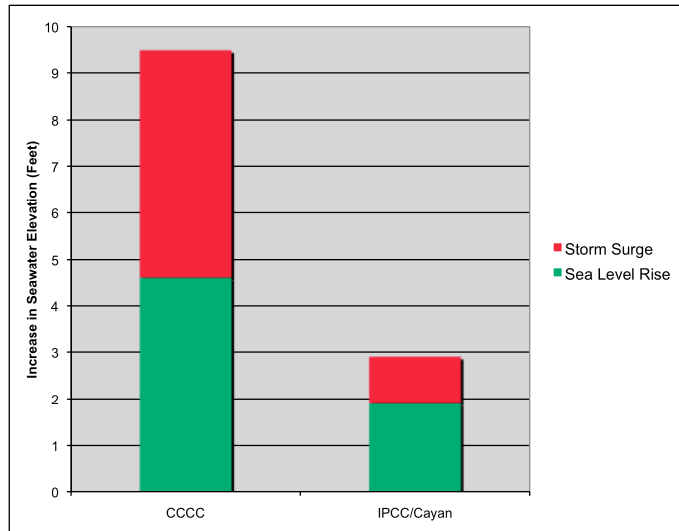
¹¹ Lenny Bernstein and others, Synthesis Report – An Assessment of the Intergovernmental Panel on Climate Change, adopted section by section at IPCC Plenary XXVII, November 2007, pp. 44-45.

¹² Ibid., p. 45.

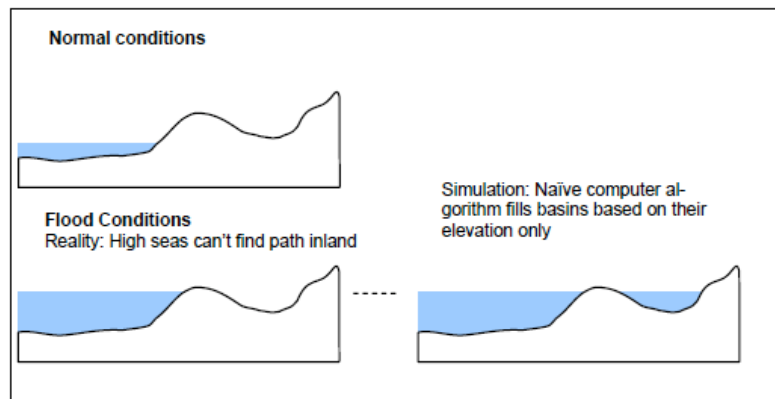
¹³ Matthew Heberger and others, The Impacts of Sea-Level Rise on the California Coast – Final Paper, California Climate Change Center, May 2009, p. 6.

¹⁴ Lenny Bernstein and others, Synthesis Report – An Assessment of the Intergovernmental Panel on Climate Change, adopted section by section at IPCC Plenary XXVII, November 2007, pp. 45.

- Sea level rise will be much lower than the CCCC projection.** If the IPCC worst case sea level rise projection of 1.9 feet were combined with Cayan’s “rare” storm surge of 1 foot, the increase in seawater level would be 2.9 feet. This compares to a total seawater rise of 9.5 feet projected in the CCCC study, which is clearly overstated for the reasons given above. The current elevations at the Proposed Project’s location are in the low to mid 20 foot range. Thus, a seawater rise of 2.9 feet would not impact the Proposed Project. Additionally, since the Proposed Project is 2 miles from the shoreline, any seawater inundation would not come anywhere near to the Proposed Project site.



- The CCCC study acknowledges that it does not include the effects flow blockages.** The CCCC report states that the “automatic, computerized method classifies flooding by depth only. The algorithm using depth alone to determine flooding does not factor in the presence of a flow pathway” for the water.¹⁵ The report goes on to state that some locations “are simply depressions, but they are not really at risk [for flooding] because there is no path for seawater to flow into them.”¹⁶ The exhibit from the CCCC discussion is presented to the right, and depicts the problem when blockages to the flow pathway. The CCCC simulation utilizes the “naïve computer algorithm” which results in showing water inundation in areas where it may not occur. This is especially relevant for the Proposed Project since areas of higher land elevations do exist between the Proposed Project site and the coastline that would block the seawater intrusion.



¹⁵ Matthew Heberger and others, *The Impacts of Sea-Level Rise on the California Coast – Final Paper*, California Climate Change Center, May 2009, p. 19.

¹⁶ *Ibid.*, p. 19.

Features of Playa Vista That Will Prevent Inundation

There are several features of Playa Vista that will prevent seawater inundation. These features are identified below.

- **The Proposed Project is located more than two miles from the shoreline.** The CCCC report projects an inundation of seawater at a height of 9.5 feet above current sea level. However, most of this height (i.e., 4.9 feet) is due to wave action. Wave action would be significant near the shoreline, but would be insignificant at the Proposed Project site. Therefore, the CCCC report’s method functionally doubles the potential sea level rise by the inclusion of wave action, which is improper given the Proposed Project’s location two miles inland.
- **The Proposed Project is separated from the ocean by intervening high ground.** The ocean is in a generally westerly direction from the Proposed Project site. Between the Village at Playa Vista and the ocean in a westerly direction is the First Phase of Playa Vista. The pad elevations in the development range from the low to mid 20 foot elevation above sea level. Similarly, the commercial uses that lie to the north of the Proposed Project are in the low 20 to high 20 foot above sea level elevation range. Along the south side of the Proposed Project is a bluff area, and the top of the bluff is over 100 feet above sea level. These high ground areas between the ocean and the Proposed Project site will stop any seawater inundation. There is no pathway for seawater to reach the site. The CCCC report acknowledges that their projections use “depth alone to determine flooding” and “does not factor in the presence of a flow pathway.” For these reasons, exhibits that accompany the CCCC report are not realistic in showing that the Proposed Project site could be inundated.
- **The Proposed Project would be constructed at an elevation that is higher than projected sea level rise.** The CCCC report also does not acknowledge changes to the topography of the site. From Table 1 of the CCCC report, it appears that the most recent elevation data used in the report was from 2003. The map in the CCCC report uses the elevations of excavated portions of basements of buildings that were under construction on the Playa Vista First Phase site at the time of that particular aerial photo. However, now that construction of these areas has been completed, all elevations in this area are in the low to mid 20 foot above mean sea level elevation, and there is no path for the water to get to these areas. A tract map also has been prepared for the Proposed Project site (“Revised Vesting Tentative Tract No. 60110,” prepared by Psomas), which shows finished floor elevations ranging from 25.5 to 28.0 feet above sea level. This is substantially higher than the 9.5 feet inundation height that CCCC is using in their analysis. With the proposed pad heights, there is no potential for seawater encroaching into this area.

In conclusion, the report from the California Climate Change Center (a non-governmental entity) has not yet been peer reviewed, and is based on a series of worst case projections and

improper assumptions. The maps that accompany the report improperly suggest that much of the Proposed Project site would be at risk from projected sea level rise combined with a 100-year storm surge in the future. Specifically, instead of applying sea level projections from the Nobel Prize winning Intergovernmental Panel of Climate Change (IPCC) (a consortium of acclaimed climate scientists sponsored by the United Nations), which projected sea level rise from 0.59 feet to 1.9 feet in the 21st Century, the report adopts the worst case projections of sea level rise from an unpublished scientific study and then applies the overstated projection of a 4.6 foot sea level to a projected 100-year storm surge of 4.9 feet (an improper methodology), estimating a 9.5 foot increase in sea level rise. Additionally, the CCCC report does not accurately reflect the location and topography of the site. The Proposed Project is two miles inland, and the proposed site elevations are well above even the worst case scenario detailed in the report. Additionally, intervening high ground between the sea and the site would block the sea level rise projected by the report. For these reasons, the CCCC report does not support a conclusion that sea level rise would negatively impact the Proposed Project site, and there is substantial evidence that confirms that no such impact would occur.

If you have any additional questions, please do not hesitate to call.

Sincerely,

Mestre Greve Associates
Division of Landrum & Brown

A handwritten signature in black ink, appearing to read "Fred Greve". The signature is fluid and cursive, with the first name "Fred" and last name "Greve" clearly distinguishable.

Fred Greve, P.E.

**APPENDIX C.ii:
POTENTIAL INFLUENCE OF THE PROPOSED PLAYA VISTA
VILLAGE DEVELOPMENT PROJECT ON THE RATE OF
NATURALLY-OCCURRING METHANE EMISSIONS FROM THE
SITE, CDM, JULY 9, 2009**



555 17th Street, Suite 1100
Denver, Colorado 80202
tel: 303 383-2300
fax: 303 308-3003

July 9, 2009

Mr. Bruce Lackow
Matrix Environmental
6701 Center Drive
Suite 900
Los Angeles, CA 90045

Subject: Potential Influence of the Proposed Playa Vista Village Development Project on the Rate of Naturally-Occurring Methane Emissions from the Site

Dear Mr. Lackow,

This technical memorandum considers the potential for the development of the proposed Village at Playa Vista Project (Proposed Project) to increase the rate at which naturally-occurring methane migrates to the surface of the Proposed Project site and thus alter the rate at which naturally-occurring methane is released into the atmosphere from the Proposed Project site. CDM concludes that the development of the Proposed Project will not measurably impact the overall amount or rate at which naturally-occurring methane is released from the Proposed Project site into the atmosphere. The rationale for this conclusion is presented below.

Naturally-occurring methane is found in the subsurface, and can be formed by the thermal decomposition of buried organic material often associated with the formation of coal and oil (thermogenic source) or by the microbial decomposition of organic materials that occurs under anaerobic conditions (biogenic source). Methane at the Proposed Project site includes: (1) naturally-occurring thermogenic methane that is produced primarily in the deep Pico sand formation beneath the Proposed Project site (approximately 500 to 3,400 feet below ground surface [bgs]); and (2) naturally-occurring biogenic methane that is produced in the shallow anaerobic subsurface environment (primarily 100 feet bgs and shallower).

In accordance with the City of Los Angeles regulations, all future buildings on the Proposed Project site require the installation of a methane mitigation system(s). The methane mitigation systems consist of, among other items, a barrier between the building and the underlying soils (i.e., membrane liner) and a vent system(s) beneath the barrier and/or within the building to serve as a preferential pathway for subsurface soil gases to vent to the



Mr. Bruce Lackow

July 9, 2009

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atmosphere through vent stacks that extend above the building rooflines. The methane mitigation systems are designed to redirect the final stage of methane migration to the atmosphere that would otherwise be released during the natural migration of this gas to the surface. Accordingly, the methane mitigation systems will not significantly influence the rate of methane formation in the subsurface and thus will not impact the overall rate that methane would naturally percolate to the surface and be released to the atmosphere.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink that reads 'Jay V. Accashian'.

Jay V. Accashian
Principal Engineer
Camp Dresser & McKee Inc.

A handwritten signature in blue ink that reads 'Ravi Subramanian'.

Ravi Subramanian, P.E.
Principal Engineer
Camp Dresser & McKee Inc.

**APPENDIX C.iii:
QUANTITATIVE AB 32 CONSISTENCY ASSESSMENT FOR
THE VILLAGE AT PLAYA VISTA DEVELOPMENT, ENVIRON,
AUGUST 26, 2009**

August 26, 2009

Mr. Bruce Lackow
Matrix Environmental
6701 Center Drive, Suite 900
Los Angeles, California 90045

**Re: Quantitative AB 32 Consistency Assessment for the Village at
Playa Vista Development**

Dear Mr. Lackow:

ENVIRON International Corporation (ENVIRON) presents this technical letter report (Report) with respect to the Village at Playa Vista development (Proposed Project). In response to comments received on the Recirculated Sections of the Draft Environmental Impact Report (RS-DEIR), ENVIRON has conducted additional quantitative analyses to assist in the assessment of the Proposed Project's consistency with the goals of Assembly Bill (AB) 32, which is to reduce statewide greenhouse gas (GHG) emissions to 1990 levels by 2020.

Executive Summary

This Report estimates the Proposed Project's GHG emissions by using an analogous analytical approach to that used in the Scoping Plan of December 2008 prepared by the California Air Resources Board (CARB) and applying that methodology to account for the anticipated reduction in GHG emissions attributable to certain sustainability features of the Proposed Project and certain regulatory measures identified in the Scoping Plan. In order to reach the objective of AB 32, CARB's Scoping Plan details GHG emissions reductions from each sector in California that are necessary to reach AB 32's reduction targets. Specifically, reducing GHG emissions to 1990 levels means reducing emissions by approximately 28.4% below "business-as-usual" (BAU) predictions for year 2020.

CARB defines BAU as "the emissions that would be expected to occur in the absence of any GHG reduction actions."¹ CARB calculates BAU by applying California's regulatory framework that existed as of the enactment of AB 32 (i.e., 2006) and projecting to the year 2020 in light of population growth and other factors. Similarly, this Report estimates the Proposed Project's 2020 BAU GHG emissions without the Proposed Project's sustainability features and based on regulatory conditions as of 2006. The Report also estimates the Proposed Project's 2020 GHG emissions inventory accounting for the Proposed Project's sustainability features as well as other GHG regulatory measures discussed in the Scoping Plan.

This Report was prepared to supplement the report prepared by Mestre Greve Associates (MGA) for the Proposed Project (dated December 4, 2008) (MGA report). The MGA report included a GHG emissions inventory for the Proposed Project based on certain assumptions contained in the Original Draft EIR prepared for the Proposed Project. However, given the conservative nature of those assumptions, the emissions inventory calculated in the MGA report did not include the GHG emission reductions associated with the Proposed Project's sustainability features, or calculate the Proposed Project's GHG emission reductions using a methodology analogous to that in the Scoping Plan.

ENVIRON's analysis shows that the Proposed Project's GHG emissions are 29.7% less than the amount of GHG emissions under a BAU scenario. This is a conservative estimate for the

¹ CARB Scoping Plan, pg. F-3.

Proposed Project since the analysis in the Report does not quantitatively account for all of the sustainability features that are expected to further reduce the Proposed Project's GHG emissions inventory. These features include the substantial vegetation planned (including the plants in the Riparian Corridor and at least 800 trees on the Proposed Project site), the installation of onsite solar panels, and many water conservation and efficiency measures. If these were to be included in the analysis, the comparison would show an even greater reduction than that reported.

This Report includes a description of our understanding of the Proposed Project, a discussion on the regulatory setting, an analysis of the Proposed Project GHG emissions inventory, and a quantitative assessment comparing the Proposed Project GHG emissions inventory against the AB 32 emission reduction goals.

Project Understanding

ENVIRON understands that the Proposed Project is proposed to include 2,600 residential dwelling units, 150,000 square feet of retail space, 175,000 square feet office space, and 40,000 square feet of community space. The Proposed Project is located in West Los Angeles, California and is a mixed-use development in an urban area.

Regulatory Setting

The MGA report and the Climate Change section of the RS-DEIR contain detailed discussions of the overall climate change regulatory setting. The regulatory discussion below is an abbreviated summary of regulations to provide background on the analysis completed within this Report.

California Legislation

California has enacted a variety of legislation that relates to climate change, which sets goals for GHG reductions within the state. However, to date, none of this legislation provides definitive direction regarding the treatment of climate change in environmental review documents prepared under the California Environmental Quality Act (CEQA) for individual development projects. The South Coast Air Quality Management District has also continued to develop GHG significance thresholds, but a threshold for mixed-use projects such as the Proposed Project has not been established. The discussion below provides a brief overview of CARB and Office of Planning and Research (OPR) documents and of the primary legislation that relates to climate change and the analysis in this Report.

Assembly Bill 32 (Statewide GHG Reductions)

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill sets a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

The bill requires that statewide GHG emissions be reduced to 1990 levels by 2020. California needs to reduce GHG emissions by approximately 28.4% below BAU predictions for year 2020 GHG emissions to achieve this goal. CARB defines business as usual as "the emissions that would be expected to occur in the absence of any GHG reduction actions."² In summary, CARB calculates "business as usual" by applying the California 2006 regulatory framework and projecting to the year 2020 in light of population growth and other factors. The bill requires

² CARB Scoping Plan, pg. F-3.

CARB to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG reductions. Key AB 32 milestones are as follows:

- June 30, 2007—Identification of discrete early action GHG emissions reduction measures. On June 21, 2007, CARB satisfied this requirement by approving three early action measures. These were later supplemented by adding six other discrete early action measures.
- January 1, 2008—Identification of the 1990 baseline GHG emissions level and approval of a statewide limit equivalent to that level. Adoption of reporting and verification requirements concerning GHG emissions. On December 6, 2007, CARB approved a statewide limit on GHG emissions levels for the year 2020 consistent with the determined 1990 baseline.
- January 1, 2009—Adoption of a scoping plan for achieving GHG emission reductions. On October 15, 2008, CARB issued a "discussion draft" Scoping Plan entitled "Climate Change Draft Scoping Plan: A Framework for Change" (Draft Scoping Plan). CARB adopted the Draft Scoping Plan at its December 11, 2008 meeting.
- January 1, 2010—Adoption and enforcement of regulations to implement the "discrete" actions.
- January 1, 2011—Adoption of GHG emissions limits and reduction measures by regulation.
- January 1, 2012—GHG emissions limits and reduction measures adopted in 2011 become enforceable.

Senate Bill 97 (CEQA Guidelines)

SB 97 requires that OPR prepare guidelines to submit to the California Resources Agency regarding feasible mitigation of GHG emissions or the effects of GHG emissions as required by CEQA.³ The Resources Agency is required to certify and adopt these revisions to the State CEQA Guidelines by January 1, 2010. OPR released a guidance document on June 19, 2008 which discussed treatment of GHG emissions under CEQA, but this document is purely advisory and serves as guidance only. On April 13, 2009, OPR submitted proposed amendments to the state CEQA Guidelines for GHG emissions to the Secretary for Natural Resources.^{4,5,6} On July 3, 2009, the Natural Resources Agency commenced the Administrative Procedure Act rulemaking process for certifying and adopting these amendments.⁷ Public comments will be accepted through August 27, 2009.

There are no specific methodologies for performing an assessment indicated in the proposed amendments. Rather it is left to the lead agency to determine the appropriate methodologies in context of a particular project. There is also no particular threshold of significance or any specific mitigation measures recommended in the proposed CEQA Guidelines amendments.

³ Senate Bill No. 97. CHAPTER 185. An act to add Section 21083.05 to, and to add and repeal Section 21097 of, the Public Resources Code, relating to the California Environmental Quality Act.
http://www.opr.ca.gov/ceqa/pdfs/SB_97_bill_20070824_chaptered.pdf

⁴ See <http://opr.ca.gov/index.php?a=ceqa/index.html>

⁵ See <http://ceres.ca.gov/ceqa/guidelines/>

⁶ See <http://www.arb.ca.gov/cc/localgov/ceqa/ceqa.htm>

⁷ On January 1, 2009 the Resources Agency's name was changed to the California Natural Resources Agency.

Assembly Bill 1493 (Mobile Source Reductions)

AB 1493 (“the Pavley Standard”) required CARB to adopt regulations by January 1, 2005, to reduce GHG emissions from noncommercial passenger vehicles and light-duty trucks of model year 2009 and thereafter. The bill requires the California Climate Action Registry to develop and adopt protocols for the reporting and certification of GHG emissions reductions from mobile sources for use by CARB in granting emission reduction credits. The bill authorizes CARB to grant emission reduction credits for reductions of GHG emissions prior to the date of enforcement of regulations, using model year 2000 as the baseline for reduction.

In 2004, CARB applied to the USEPA for a waiver under the federal Clean Air Act to authorize implementation of these regulations. On June 30, 2009 the USEPA granted the waiver for California for its GHG emission standards for motor vehicles.

Senate Bills 1078 and 107 (Renewables Portfolio Standard)

Established in 2002 under Senate Bill 1078 and accelerated in 2006 under Senate Bill 107, California's Renewables Portfolio Standard (RPS) requires retail suppliers of electric services to increase procurement from eligible renewable energy resources by at least 1% of their retail sales annually, until they reach 20% by 2010.

Greenhouse Gas Emissions Inventory for the Proposed Project

This Report focuses on an evaluation of the vehicular trips (*i.e.*, mobile sources), natural gas consumption and electrical usage components of the Proposed Project's GHG emissions inventory. These categories of the GHG emissions inventory were selected for analysis since they are the dominant emission sources, comprising approximately 99% of the GHG emissions inventory for the Proposed Project. ENVIRON did not seek to refine or otherwise address any other categories of GHG emissions because mobile source and building related emissions are typically the primary factors that most influence the comparative analysis included in this Report.

For this analysis, ENVIRON prepared a GHG emission inventory for the Proposed Project based on specific usage and emission factors for the purposes of comparing the Proposed Project against the goals of AB 32. The comparison requires that we prepare two GHG emissions inventories: 1) one that represents the 2020 BAU GHG emissions inventory for the Proposed Project, and 2) one that represents the Proposed Project, the sustainability features included in the Proposed Project, and the regulatory programs that may impact the GHG emissions inventory.

In contrast, since the MGA report did not account for the sustainability features of the Proposed Project, the MGA report's GHG emission inventory provides a conservative representation of the GHG emission categories estimated for the Proposed Project (which includes the Proposed Project's construction and operational emission sources such as from vehicular trips, natural gas consumption, electrical usage, potable water usage and reclaimed water usage). Further, the MGA report did not attempt to project a 2020 BAU inventory for the Proposed Project. The bases for the MGA report GHG emission inventories are documented within the MGA report.

The following sections discuss the development of a Proposed Project GHG emissions inventory in 2020 (accounting for sustainability features and relevant regulatory programs) and then discuss the comparison of those emissions to a BAU GHG emissions inventory.

GHG Emissions Associated with Residential Buildings

This section describes the methods used to estimate the GHGs associated with activities in residential buildings, which are primarily due to electricity and natural gas usage. GHGs are emitted during the generation of electricity from fossil fuels. Since electricity generation typically

takes place offsite at the power plant, electricity use in a residential unit is considered to result in indirect emissions. Combustion of natural gas emits GHGs directly into the atmosphere and therefore it is considered a direct emission.

Energy use in residential buildings can also be divided into two categories: (1) energy consumed by the built environment and (2) energy consumed by uses that are independent of the construction of the unit, such as plug-in appliances. In California, Title 24 governs energy consumed by the built environment, including the HVAC (heating, ventilating, and air conditioning) system, water heating and some fixed lighting. Non-building or 'plug-in' energy use (e.g., refrigeration, cooking, lighting, etc.) is not governed by Title 24. The energy usages for these two categories are estimated as described below.

The GHG emissions are estimated from the amount of energy use and appropriate emission factors. For this Proposed Project, the electricity usage emission factors were based on the energy production from the Los Angeles Department of Water and Power (LADWP).⁸ Emission factors for the combustion of natural gas are from the California Climate Action Registry (CCAR) General Reporting Protocol.⁹ For these emission sources, the contribution of CH₄ and N₂O represents a negligible amount of CO₂e (carbon dioxide equivalents) and therefore, CH₄ and N₂O are not included in the analysis.¹⁰

Please note that the MGA report calculated the GHG emissions based on the energy use projected in the Original Draft EIR, which was based on emission factors obtained from the South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Handbook (April 1993). The resulting electrical and natural gas consumption projected using the SCAQMD emission factors is substantially higher than what has been estimated based on the 2005 Title 24 regulations and the Proposed Project's sustainability features (which will further reduce energy usage by 15%).

Estimate of Residential Energy Use Intensity

ENVIRON developed CO₂ intensity values (i.e., CO₂ emissions per Dwelling Unit per year) for the residential building type expected using the California Energy Commission's (CEC) 2003 Residential Appliance Saturation Survey (RASS) database.¹¹ The building type representative of the planned residences, which are described as medium- and high-density residential dwelling units, include buildings such as a townhouse, a condominium with two to four units and a condominium with five or more units. Energy use estimates are based on the CEC Forecasting Climate Zone 11. Where data were unavailable specific to the aforementioned building types, the data for all households in Climate Zone 11 were used, and if data were unavailable specific to Climate Zone 11, the data for the aforementioned housing types throughout the state were used.

⁸ The Los Angeles Department of Water and Power (LADWP) specific emission factor for electricity deliveries is 1,228 lbs CO₂/MWh. California Climate Action Registry Database: LADWP 2007 PUP Report. 2008. Although this emission factor accounts for only CO₂, the emissions associated with N₂O and CH₄ contribute to less than 1% of the electricity generation CO₂e emissions. Available at: <https://www.climateregistry.org/CARROT/public/Reports.aspx>

⁹ California Climate Action Registry (CCAR). 2009. General Reporting Protocol. Version 3.1. January. Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

¹⁰ California Climate Action Registry (CCAR). 2009. Table C.2.

¹¹ California Energy Commission (CEC). 2003 Residential Appliance Saturation Survey (RASS). <http://www.energy.ca.gov/appliances/rass/>. This website contains general information regarding RASS and the final report.

The RASS data that were used to estimate GHG emissions for the Project can be found at: <http://websafe.kemainc.com/RASSWEB/DesktopDefault.aspx>.

The energy use intensity values from the RASS database are then adjusted to 2005 Title 24 standards so that the energy usage can be more accurately compared with the AB 32 emissions inventory. Since the RASS dataset is comprised of mostly older buildings, the energy use intensity values are conservatively assumed to represent 2001 Title 24 compliant homes. The CEC has published reports estimating the percentage deductions in energy use resulting from updates to the 2001 Title 24 standards to the 2005 Title 24 standards.^{12, 13} ENVIRON accounted for the impact of the Title 24 updates by deducting the estimated percentage savings from the RASS energy intensity values to estimate the 2005 Title 24 energy intensity.

The RASS study provides annual electricity use for various aspects of heating and cooling systems and domestic hot water (DHW) as well as annual natural gas usage for both the heating and domestic hot water systems per dwelling unit (DU). The RASS study, however, does not have a separate category for hard-wired lighting, which is covered by Title 24. In order to estimate the energy use for hard-wired lighting, ENVIRON assumed that half of the indoor lighting¹⁴ and all outdoor lighting energy use included in the RASS study are hard-wired.¹⁵ The 2005 Title 24 regulated electricity use and natural gas use values are presented in Table 1.

The Proposed Project's Residential and Mixed Use Sustainability Guidelines would exceed the 2005 Title 24 energy efficiency requirements by 15%.¹⁶ Based on this commitment, the estimated Title 24 energy use is reduced 15% from the estimate of minimally compliant 2005 Title 24 residential buildings to project the future Proposed Project energy usage.¹⁷

Major Appliances

The energy use by major household appliances such as refrigerators, clothes washers and dryers, dishwashers and cooking ranges are also estimated using the RASS database. The electricity usage for refrigerators was calculated by summing the product of the energy usage for one refrigerator and its RASS Saturation Value (Sat) and the product of the energy usage for a second refrigerator and its RASS Sat, which takes into account that some units may have more than one refrigerator. For dryers and cooking ranges, which can be either gas or electric, we also applied the RASS Saturation Value to reflect the typical split between gas or electric within the Forecasting Climate Zone. Table 2 summarizes the estimated major appliance energy use.

The Proposed Project has committed to requiring Energy Star appliances for all major appliances rated by Energy Star in newly built residences.¹⁸ This includes refrigerators, dishwashers and clothes washers. There is no Energy Star rating for dryers at this time since there is no considerable difference in energy use between different dryer models. Energy Star ratings also are not available for cooking ranges. The average energy improvement for Energy Star rated appliances over standard appliances as reported in

¹² California Energy Commission. 2003. Impact Analysis: 2005 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Available at:

http://www.energy.ca.gov/title24/2005standards/archive/rulemaking/documents/2003-07-11_400-03-014.PDF

¹³ California Energy Commission. 2007. Impact Analysis: 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Available at:

http://www.energy.ca.gov/title24/2008standards/rulemaking/documents/2007-11-07_IMPACT_ANALYSIS.PDF

¹⁴ Note that the other half of this lighting energy usage is accounted for in plug-in lighting.

¹⁵ Based on approximated design which includes hard-wired lighting in bathrooms, kitchen, and corridors.

¹⁶ See Table II.D-9 (Page II.D-41) of the Village at Playa Vista RS-DEIR.

¹⁷ ENVIRON made a simplifying assumption that annual energy use and total daily valuation energy (that provided by the RASS study) scale linearly with each other.

¹⁸ See Table II.D-9 (Page II.D-42) of the Village at Playa Vista RS-DEIR.

Energy Star Annual Report was used to determine the percent reduction in energy use from major appliances and is also shown in Table 2.

Plug-in Energy Use

The additional energy use from loads such as plug-in lighting, office equipment, plug-in cooking equipment and electronics are also estimated using the RASS database where the database provides relevant usage figures. Since the RASS database does not have a separate category for plug-in lighting, ENVIRON estimated that half of the indoor lighting was plug-in lighting.¹⁹ The electricity usage for miscellaneous energy loads (e.g. home entertainment devices, computers and small kitchen appliances) were determined by summing the products of the energy usages for those appliances and their associated Saturation Values from the RASS study, and including the remaining 40% of the miscellaneous category that is not attributed to lighting. ENVIRON has conservatively assumed that the residents will not be using Energy Star Plug-In lighting and thus the energy usage from this area is not reduced for the Proposed Project GHG emissions inventory. Table 2 summarizes the estimated plug-in energy use for each residence type.

The estimated residential plug-in energy-use values are likely overestimates. The estimates are based upon currently available technologies, which are likely less energy-efficient than future equipment models. Conversely, future residents may have more small plug-ins (e.g. MP3 players, cell phones and miscellaneous equipment) that could somewhat offset the savings from more energy-efficient equipment. However, because refrigerators, lighting and large appliances contribute to the bulk of the electricity load, and these types of equipment will likely improve in energy efficiency in the future, the estimates presented here are still likely overly conservative.

Estimation of Annual Greenhouse Gas Emissions from Residential Buildings

Table 3 summarizes the energy use from the Proposed Project for each category discussed above (Title 24, Major Appliances, Plug-ins). Table 3 also shows the difference in energy use expected for a minimally compliant 2005 Title 24 scenario (BAU) and the Proposed Project scenario including the improvement over 2005 Title 24 and the use of Energy Star major appliances.

The electricity and natural gas emission factors used to generate CO₂ intensity values (*i.e.*, CO₂ emissions per dwelling unit) are shown in Table 4. The electricity emission factors include one representing the current power mix for LADWP, and one accounting for reductions expected from the RPS. The RPS is expected to reduce the GHG emissions associated with electricity generation as renewable energy sources with lower GHG emissions account for a greater percentage of the electricity generation in the state of California. Calculations showing the adjustments from the RPS are shown in Attachment A. The onsite combustion of natural gas is not covered by the RPS.²⁰

The emissions per dwelling unit for the Proposed Project are shown in Table 5. The table shows the difference in emissions for the 2005 Title 24 scenario and the Proposed Project scenario (including 15% reductions in energy usage from 2005 Title 24, Energy Star Appliances, and improvements due to the RPS).

The total emissions for the Proposed Project for the two scenarios listed for Table 5 are shown in Table 6. The Proposed Project BAU total CO₂e emissions are estimated to be 7,571 tonnes per year without improvements over 2005 Title 24. When the 15%

¹⁹ Based on a conservative assumption by the Applicant.

²⁰ See Attachment A.

improvement over 2005 Title 24, Energy Star appliances, and the 20% RPS improvements are considered, annual CO₂ emissions would be reduced to 6,220 tonnes per year.

GHG Emissions Associated with Non-Residential Buildings

This section describes the methods used to estimate the GHG emissions associated with activities in non-residential buildings such as office, retail, and community serving space. Similar to the residential buildings, GHGs are emitted as a result of activities in non-residential buildings for which electricity and natural gas are used as energy sources. The energy use in non-residential buildings is also divided into energy consumed by the built environment (*i.e.*, those governed by Title 24)²¹ and energy consumed by uses that are independent of the construction of the building such as plug-in appliances (refrigeration, cooking, office equipment, etc.).

The energy usage for non-residential buildings is estimated based on specific databases as discussed below, but the same emission factors are used for the non-residential buildings as those used for the residential buildings. The resulting electricity use quantities were similarly converted to GHG emissions by multiplying by the appropriate emission factors obtained by incorporating information on local electricity production.²² Natural gas quantities were converted to GHG emissions by multiplying by the emission factor from CCAR.²³ The following sections describe the methodologies employed to estimate GHG emissions from non-residential buildings.

As discussed in the residential section above, please note that the MGA report calculated the GHG emissions based on the energy use projected in the Original Draft EIR, which was based on emission factors obtained from the SCAQMD CEQA Air Quality Handbook (April 1993). The resulting electrical and natural gas consumption projected using the SCAQMD emission factors is substantially higher than what has been estimated based on the 2005 Title 24 regulations and the Proposed Project's sustainability features (which will further reduce energy usage by 15%).

Estimate of Non-residential Energy Use Intensity

ENVIRON developed CO₂ intensity values (CO₂ emissions per sqft per year) for building types using data from the California Commercial End-Use Survey (CEUS).²⁴ The overall electricity use for the building types was calculated based on data provided by the CEC.²⁵ The building types and subcategories are shown in Table 7, which also provides the scheme used to relate Project building types to CEUS building types. For this analysis, energy use was based upon buildings in California Forecasting Climate Zone 8 for Southern California Edison (SCE). The Proposed Project is expected to obtain electricity from LADWP and natural gas from Southern California Gas Company (SCGC) within Forecasting Climate Zone 11. However, CEUS data for Climate Zone 11 are not

²¹ Title 24, Part 6, of the California Code of Regulations: California's Energy Efficiency Standards for Residential and Nonresidential Buildings. <http://www.energy.ca.gov/title24/>

²² The Los Angeles Department of Water and Power specific emission factor for electricity deliveries is 1,228 lbs CO₂/MWh. From the California Climate Action Registry Database. Los Angeles Department of Water and Power PUP Report. 2007.

²³ California Climate Action Registry (CCAR). 2009. General Reporting Protocol. Version 3.1. January. Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

²⁴ California Energy Commission (CEC). California Commercial End-Use Survey Results. Data available from Itron Inc. at <http://capabilities.itron.com/CeusWeb/Chart.aspx>

²⁵ Workbooks for "SCE – FCZ8" downloaded from <http://capabilities.itron.com/CeusWeb/Chart.aspx> for all building categories. Accessed 8/2009.

available. It was assumed that energy use data for Climate Zone 8 would be similar to Climate Zone 11 due to the geographic proximity of the two Climate Zones.²⁶

The CEUS data is based on a survey conducted in 2002 of existing buildings. Each building type has a characteristic electricity and natural gas use per square foot of building space. Electricity use per square foot (electricity intensity) for each building sample was extracted from the CEUS data. Similarly, the natural gas use per square foot (natural gas intensity) for each building sample was also used.

Similar to the residential analysis, the CEUS data was adjusted to 2005 Title 24 standards. The CEC discusses average savings for improvements from 2002 to 2005 ("Impact Analysis for 2005 Energy Efficiency Standards"). ENVIRON used these CEC average savings percentages to account for reductions in energy use due to updates to Title 24. The average reductions in 2005 are 7.7% for electricity and 3.2% for natural gas. This methodology results in a reduction of energy use for all building types for the 2005 Title 24 scenario, or BAU.

Table 8 lists the breakdown of electricity use among several end uses for electricity in various non-residential building types including the Title 24-regulated electricity use (cooling, space heating, water heating, lighting, ventilation) and the non-built electricity use (office equipment, refrigeration, cooking, etc.). Table 9 lists the percentage breakdown of end uses for natural gas in various non-residential building types including the Title 24-regulated natural gas use and the natural gas use not associated with heating and cooling (primarily from cooking). The end use data provide an estimate of the percent of the total energy use comprised by Title 24 regulated (built environment) and plug-in electricity in each building type. The emission factors used to generate CO₂ intensity values are shown in Table 10.

Estimation of Annual Greenhouse Gas Emissions from Non-residential Buildings

As with residential buildings, the Residential and Mixed-Use Sustainable Performance Guidelines which would be implemented by the Proposed Project for all new non-residential buildings would exceed 2005 Title 24 standards by 15%.²⁷ Based on this commitment, the estimated Title 24 energy use is reduced 15% as shown in Table 12. Since appliances in the non-residential building category are generally not supplied with the non-residential building, no energy reductions were applied to the non-Title 24 energy use.

Table 11 shows the annual CO₂ emissions for each of the main building categories [office, retail, miscellaneous (which represents community serving)] for the Proposed Project BAU scenario. The CO₂ intensity values (CO₂ emissions per sqft building area) were generated by multiplying the emission factors presented in Table 10 with the energy use data in Table 11. The Proposed Project BAU total CO₂e emissions associated with non-residential buildings is 3,150 tonnes CO₂e per year. With a 15% improvement over 2005 Title 24 and the application of the 20% RPS, the Proposed Project total CO₂e emissions is 2,529 tonnes CO₂e per year, as shown in Table 12. A summary of the emissions for both scenarios is shown in Table 13.

²⁶ Itron, 2006. California Commercial End-Use Survey Results. Prepared for the California Energy Commission (CEC). March. Figure 2-1. <http://www.energy.ca.gov/2006publications/CEC-400-2006-005/CEC-400-2006-005.PDF>

²⁷ ENVIRON made a simplifying assumption that annual energy use and total daily valuation energy (that provided by the CEUS study) scale linearly with each other.

GHG Emissions Associated with Mobile Sources

This section estimates GHG emissions from mobile sources. The mobile source emissions considered for the Proposed Project will be from the typical daily operation of motor vehicles by residents and employees and patrons of retail, office and community serving uses. ENVIRON based the GHG emissions inventory on EMFAC2007 and traffic patterns, trip lengths, internal trips and trip rates from the Playa Vista Transportation Model provided by Raju Associates.²⁸ With this information, ENVIRON developed a GHG emissions inventory for mobile sources for the BAU scenario and for the Proposed Project accounting for sustainability features and relevant regulatory requirements.

Please note that the MGA report calculated the GHG emissions based on conservative assumptions regarding the trips generated and default assumptions regarding the vehicle fleet mix. The resulting vehicle miles traveled and emissions projected based on these assumptions are substantially higher than what has been estimated considering the Proposed Project's sustainability features, which include a reduction in the trips generated, the use of alternative modes of transit, and a more probable vehicle fleet mix.

Estimating Vehicle Miles Traveled for Mobile Sources

The first step towards estimating GHG emissions for mobile sources is to estimate the vehicle miles traveled (VMT) generated by the Village Project. The VMT is based on the number of trips generated by the Project and the trip lengths for these trips. The following section describes how these variables were estimated based on the available data.

The number of trips generated by the Project was provided by Raju Associates. The Raju Associates data reports the number of "trip ends" generated by the Proposed Project, which is equal to the number of times a trip starts or ends within the Proposed Project. The MGA report conservatively assumed that the number of trips was equal to the number of trip ends. However, this assumption does not account for the fact that the mixed-use nature of the Proposed Project leads to trips which both start and end within the boundaries of the Proposed Project site. In that case, two trip ends constitutes a single trip (i.e., an internal trip). Of the 24,220 trip ends projected for the Proposed Project, 3,502 would be internal trip ends, or 1,751 internal trips. Thus, the actual number of trips for the Proposed Project is 22,469, as shown in Table 14.

The trip ends data provided by Raju Associates can also be used to estimate the number of trips for the BAU scenario, which can be considered to be a development of equal size in Los Angeles, but not as a single mixed-use development. In this case the internal trips associated with the Proposed Project would not be internal trips, and thus each trip end would be equal to a trip. The number of trips generated for the BAU scenario is estimated to be 24,220 trips, assuming all trip ends as reported by Raju Associates are trips.

The average external trip length as reported by Raju Associates is assumed to represent the trip length for the mobile source emissions BAU and Proposed Project scenario. Note that the Proposed Project trip length estimated by Raju Associates is comparable to that assumed by EMFAC for Los Angeles County.²⁹

²⁸ See Attachment C.

²⁹ Note that EMFAC is the model used by CARB in the AB 32 Scoping Plan.

The emission factors are estimated using EMFAC2007 in the Burden Mode for a 2020 year scenario for Los Angeles County. This burden run takes into account the expected fleet mix in Los Angeles County in the year 2020 (EMFAC2007 results can be found in Attachment B). EMFAC2007 provides county-specific projections of county-wide VMT, trips and emissions for light-duty, medium-duty and heavy-duty vehicles. Running, idling and starting emission factors for CH₄ and CO₂ were derived from EMFAC2007 output results for two categories, light-duty and medium- and heavy-duty vehicle categories, which are used for both the BAU and Proposed Project scenario. The running emission factor (g/mile) is calculated by dividing the county-wide running emissions by the county-wide VMT for each vehicle category. The idling and starting emission factors (g/trip) are calculated by dividing the county-wide idling and starting emissions, respectively, by the number of county-wide trips for each category. Calculations are shown in Attachment B and values are presented in Table 15.

The BAU VMT is calculated by multiplying the number of trips for each vehicle category by the assumed trip length. The average trip length for both vehicle categories at the Village Project was assumed to be the same, the average external trip length estimated by Raju Associates. The split between the light-duty vehicles and medium- and heavy-duty vehicles was derived based on a general assumption of likely vehicle type use. It was assumed that only commercial-based non-commuter type trips at the Proposed Project would be medium- and heavy-duty type vehicles. Based on URBEMIS methodology, ENVIRON assumed that 1% of all trips associated with retail land use are from commercial-based non-commuter trips. Raju Associates estimates that 6,193 daily trips are associated with retail land use (Attachment C). Thus, the number of commercial-based non-commuter trips is approximately equal to 62 trips per day (1% of 6,193 daily trips per day), which we assume to be all medium- and heavy-duty vehicles. The remainder of daily trips (22,407), which are residential based, commuters to office work, shoppers and workers to retail areas and visitors to community serving areas, were assumed to be light-duty vehicles. Multiplying the number of daily number of trips by the trip length for each vehicle category provides the daily VMT for each category. ENVIRON also included an adjustment to account for reduced VMT and number of trips during the weekend since number of trips on weekends (and therefore VMT) is typically lower than weekday trips. The adjustment is made based on a report by Sonoma Technologies that shows that weekend traffic is typically 80% of weekday capacity.³⁰ The annual VMT is then estimated based on the daily VMT for weekdays and weekends.

The Proposed Project also results in reductions in the estimated number of trips generated due to public transportation infrastructure and shuttle buses provided by the Proposed Project. Raju Associates estimates that this will reduce the number of daily auto trip ends by 3,750. This is equivalent to a reduction of 17% of daily trips for light-duty vehicles (see Table 14). The reduction in VMT due to the transit trip credits are assumed to apply only to the weekday trips and is shown in Table 15.

³⁰ Sullivan, D.C., et al., 2004. Collection and Analysis of Weekend/Weekday Emissions Activity Data in the South Coast Air Basin. Sonoma Technologies prepared for CARB. May.

Estimating Greenhouse Gas Emissions for Mobile Sources

The CO₂ emissions from mobile sources were calculated with the trip rates, trip lengths and emission factors for running and starting emissions from EMFAC2007 as follows:

$$\text{CO}_2 \text{ emissions} = \text{VMT} * \text{EF}_{\text{running}}$$

Where:

VMT	=	vehicle miles traveled
EF _{running}	=	emission factor for running emissions (g/mile)

The CO₂ calculation involves the following assumptions:

- EMFAC emission factors from the year 2020 were used for EF_{running} based on the Los Angeles County fleet mix and specific assumptions for the Proposed Project.

Startup emissions are CO₂ emitted from starting a vehicle and are calculated as follows:

$$\text{CO}_2 \text{ emissions} = \text{trips} * \text{EF}_{\text{startup}}$$

Where:

Trips	=	trips made by vehicles
EF _{startup}	=	emission factor for startup (g/trip)

Startup emissions were calculated using the following assumptions:

- The number of starts is equal to the number of trips made annually.
- The breakdown in vehicles was EMFAC fleet mix for Los Angeles County in 2020 and specific assumptions for the Proposed Project.

Idling emissions are CO₂ emitted during the idling of vehicles (typically medium- and heavy-duty vehicles) and are calculated as follows:

$$\text{CO}_2 \text{ emissions} = \text{trips} * \text{EF}_{\text{idling}}$$

Where:

Trips	=	trips made by vehicles
EF _{idling}	=	emission factor for idling (g/trip)

Idling emissions were calculated using the following assumptions:

- The number of idle events is equal to the number of trips made annually.
- The breakdown in vehicles was EMFAC fleet mix for Los Angeles County in 2020 and specific assumptions for the Proposed Project.

NO₂, CH₄ and HFCs³¹ are also emitted from mobile sources. The USEPA recommends assuming that CH₄, N₂O and HFCs account for 5% of mobile source GHG emissions, taking into account their global warming potential (GWP).³² GWP indicates, on a pound for pound basis, how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO₂. CO₂ emissions for mobile sources were adjusted to account for non-CO₂ GHGs to estimate the total CO₂e emissions.

The estimated emissions for mobile sources are shown in Table 15. The BAU total CO₂e emissions are 21,895 tonnes CO₂e per year. The Proposed Project total emissions, accounting for the Proposed Project's sustainability measures and the Pavley Standard, are 14,168 tonnes CO₂e per year.

Assessment of the Proposed Project's GHG Emissions Inventory

This section discusses the Proposed Project's consistency with the GHG emission reduction goals of AB 32. ENVIRON has evaluated the Proposed Project's GHG emissions taking into account the GHG emission reductions attributable to the Project's sustainability measures and regulations promulgated to comply with AB 32. ENVIRON has also evaluated the Proposed Project's GHG emissions if it would be built today without the sustainability measures and regulations (i.e., BAU). These two emission inventories are the bases for comparison against the reduction goals set for 2020 by AB 32, consistent with the approach used by CARB in its Scoping Plan. As described above, CARB used a BAU scenario to estimate the required 28.4% reduction in statewide emissions.

The Proposed Project exceeds AB 32's goal of 28.4% below BAU overall as a result of the sustainability features incorporated into the Proposed Project and the regulations promulgated to comply with AB 32. Residential and non-residential areas in the Proposed Project are expected to be more energy efficient than the current building stock in California. Furthermore, the Proposed Project is expected to result in reduced VMT due to specific sustainability features such as the Proposed Project's mixed use, urban in-fill design. The emission savings combined for the Proposed Project represent a 29.7% reduction from a BAU scenario taking into consideration the Proposed Project's sustainability features and changes in emission factors due to implementation of the 2010 RPS for 20% renewables and the Pavley regulation mandating higher fuel efficiency standards for light-duty vehicles (see Table 16).

Equivalency

The BAU comparison was qualitatively evaluated for the Equivalency Program scenarios. The Proposed Project includes an Equivalency Program in which a maximum of 125,000 square feet of office development may be exchanged for all retail (56,832 square feet), all assisted living (200 units) or a mix of retail and assisted living. Based on the MGA report, the potential trips generated under the equivalency scenarios represent a slight decrease from the Proposed Project, and building energy usage for the equivalency scenarios may increase by up to 8% in comparison to the Proposed Project, depending on the scenario. However, the Residential and Mixed-Use Sustainable Performance Guidelines would be implemented under any of these scenarios, exceeding 2005 Title 24 by 15%, and the primary trip reduction benefits due to the public transportation features and proximity to the Playa Vista First Phase development would still be applicable. The regulatory programs (Pavley and RPS) would also still apply to these Equivalency scenarios. These Equivalency scenarios, therefore, would demonstrate a similar reduction in GHG emissions compared to a BAU scenario for each Equivalency scenario.

³¹ HFCs can be emitted from air conditioning systems.

³² USEPA. 2005. *Emission Facts: Greenhouse Gas Emissions from a Typical Passenger Vehicle*. Office of Transportation and Air Quality. February. (<http://www.epa.gov/otaq/climate/420f05004.pdf>)

Concluding Comments

Please note that this analysis is based on the information provided to ENVIRON and the currently accepted methodology for such analyses. To the extent that information relied upon changes, ENVIRON's analyses and results may also change.

Sincerely,



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Senior Manager



Shari Beth Libicki, PhD
Principal, Global Air Quality Practice Leader

ECL:sb

Attachments: Tables

- A – GHG Emissions from the Renewables Portfolio Standard
- B – EMFAC2007 model results
- C – Raju Associates Traffic and Trip Generation Estimates

T A B L E S

Table 1
BAU Energy Use per Residential Dwelling Unit: Title 24-Regulated Heating and Cooling
Village at Playa Vista
Los Angeles, California

Type ¹	Electricity Delivered (kW-hr/DU/year) ²						Natural Gas Delivered (MBTU/DU/yr) ²				
	Heating ³	Cooling	Hard-wired lighting ⁴	RASS Total	% Reduction due to 2005 standards relative to 2001 ^{5,6}	2005 Estimated Total	Heating ³	Domestic Hot Water ⁷	RASS total	% Reduction due to 2005 standards relative to 2001 ^{5,6}	2005 Estimated Total
Town Home	58	69	556	683	19.8%	548	4.6	19.4	24.0	6.7%	22.4
2-4 Unit Condominium	40	61	475	576	19.8%	462	5.0	16.1	21.1	6.7%	19.7
5+ Unit Condominium	91	136	429	656	19.8%	526	3.5	9.9	13.3	6.7%	12.4

Notes:

1. Based on the description of medium- and high-density residential land use, we assumed a mixture of town homes and condominium buildings.
2. Based on the Unit Energy Consumption data from the California Residential Appliance Saturation Survey (RASS), which collected data from over 21,100 households statewide. RASS data tabulated for town homes and apartments in the climate zone in which VPV would be located (Climate Zone 11) were considered in this analysis. Where climate zone- or housing type-specific data were not available, statewide or housing-type averages were employed.
3. Homes can be heated using electricity and/or natural gas. The values shown equal the unit energy consumption multiplied by the saturation factor, which indicates the percentage of homes that report the use of electricity or natural gas for heating.
4. According to RASS, approximately 60% of energy use reported as "miscellaneous" can be attributed to lighting. RASS does not differentiate between hard-wired and plug-in lighting. The values shown here represent 50% of lighting energy use. All outdoor lighting was assumed to be hard-wired.
5. Reductions are taken with the assumption that the RASS estimate reflects heating/cooling/hot water electricity use for homes that are minimally compliant with 2001 Title 24 Standards (this version was the most current at the time of the RASS study). More than 90% of the homes that participated in the survey were constructed before 1997. Because older homes tend to use more energy, the numbers shown here may overestimate actual energy use at a new development such as the Village at Playa Vista.
6. Based on report by California Energy Commission on estimated first-year electricity savings due to 2005 Title 24 standards for single-family and multi-family homes, relative to 2001 Title 24 standards.
7. All domestic hot water systems are assumed to use natural gas.

Abbreviations:

BAU - Business as usual
DU - Dwelling Unit
kW-hr - kilowatt-hour
MBTU - million British thermal units
RASS - Residential Appliance Saturation Survey
VPV - The Village at Playa Vista

Source:

California Energy Commission. 2003. Impact Analysis: 2005 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Available at: http://www.energy.ca.gov/title24/2005standards/archive/rulemaking/documents/2003-07-11_400-03-014.PDF
California Energy Commission. 2007. Impact Analysis: 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Available at: http://www.energy.ca.gov/title24/2008standards/rulemaking/documents/2007-11-07_IMPACT_ANALYSIS.PDF
Kema-Xenergy, Itron, RoperASW. California Statewide Residential Appliance Saturation Study (RASS) Volume 2, Study Results, Final Report. June 2004. 300-00-004.

Table 2
Energy Use per Residential Dwelling Unit: Appliances and Plug-ins
Village at Playa Vista
Los Angeles, California

Type	Type ¹	Electricity Delivered (kW-hr/DU/year) ²									Natural Gas Delivered (MBTU/DU/yr) ²		
		Refrigerator	Clothes Washer	Clothes Dryer ³	Dishwasher	Cooking Range (Electric) ⁴	Total Major Appliances	Plug-in Lighting ⁵	MELs ⁶	Total Plug-in	Clothes Dryer (Gas) ³	Gas Cooking Range ⁴	Total
Standard Appliances	Town Home	850	48	189	38	106	1,231	460	1,239	1,698	0.7	3.9	4.5
	2-4 Unit Condominium	764	23	73	25	78	963	402	1,023	1,425	0.7	3.9	4.5
	5+ Unit Condominium	744	4	93	28	101	971	377	987	1,364	0.7	3.9	4.5
Energy Star Appliances ⁷	Town Home	723	36	189	23	106	1,076	460	1,239	1,698	0.7	3.9	4.5
	2-4 Unit Condominium	649	17	73	15	78	833	402	1,023	1,425	0.7	3.9	4.5
	5+ Unit Condominium	633	3	93	17	101	847	377	987	1,364	0.7	3.9	4.5

Notes:

1. Based on the description of medium- and high-density residential land use, we assumed a mixture of town homes and condominium buildings.
2. Energy use per residential dwelling unit is based on information in RASS report. Numbers may not add up due to rounding.
3. Dryers can use either gas or electric heat. The values shown here represent the saturation for each energy type.
4. Cooking ranges can use electric or gas heat. The values shown here represent the saturation for each energy type.
5. RASS does not differentiate between hard-wired and plug-in lighting. The values shown here represent 50% of lighting energy use.
6. Miscellaneous electric loads (MELs) include such end uses as TVs, personal computers, home office equipment, freezers, and fans. To estimate energy use for these loads, the unit energy consumption values for each end-use was multiplied by the saturation factor, which indicates the percentage of homes that report the end use.
7. Average energy savings above standard products are applied to refrigeration (15%), clothes washers (25%), dishwashers (40%), and lighting (75%) as reported in Energy Star and Other Climate Protection Partnerships 2006 Annual Report Table 10.

Abbreviations:

- BAU - business as usual
- DU - dwelling unit
- kW-hr - kilowatt-hour
- MBTU - million British thermal units
- MEL - miscellaneous electric load

Source:

R. Hendron. Building America Research Benchmark Definition. Technical Report NREL/TP-550-4816. December 2008.
Environmental Protection Agency (USEPA). 2006 Annual Report. Energy Star and Other Climate Protection Partnerships. Available at: <http://www.epa.gov/appdstar/pdf/AR%202006%20Final.pdf>

Table 3
Energy Use per Residential Dwelling Unit
Village at Playa Vista
Los Angeles, California

Title 24 Compliance	Dwelling Type	Electricity Delivered				Natural Gas Delivered		
		Title 24 Systems ^{1,2}	Major Appliances ^{3,5}	Plug-ins ⁴	Total	Heating and Domestic Hot Water ²	Gas Dryers and Oven Ranges ⁵	Total
		[kW-hr / DU / year]				(MBTU natural gas / DU / year)		
Minimally Title 24 Compliant (2005)	Town Home	548	1,231	1,698	3,477	22	5	27
	2-4 Unit Condominium	462	963	1,425	2,850	20	5	24
	5+ Unit Condominium	526	971	1,364	2,861	12	5	17
15% Improvement over Title 24 (2005) and Energy Star Appliances	Town Home	466	1,076	1,698	3,240	19	5	24
	2-4 Unit Condominium	392	833	1,425	2,650	17	5	21
	5+ Unit Condominium	447	847	1,364	2,658	11	5	15

Notes:

1. Title 24 systems include heating, cooling, and domestic hot water.
2. Heating systems can require electricity or natural gas. The values presented in this table represent the distribution based on saturation values of the electricity and/or natural gas use for each equipment type.
3. "Major appliances" includes refrigerators, clothes washers and dryers, dishwashers, and cooking ranges. Numbers may not add up due to rounding.
4. "Plug-ins" refers to electricity use associated with plug-in lighting, plug-in appliances, and miscellaneous electric loads. Numbers may not add up due to rounding.
5. Dryers and ovens may be electric or gas. The values presented in this table represent the saturation values typical of the climate zone for the electricity and/or natural gas use for each equipment type. Reductions for energy use from Title 24 or Energy Star are not taken into account for these appliances. There is no Energy Star rating for dryers at this time since there is no considerable difference in energy use between different dryer models. Energy Star ratings also are not available for cooking ranges.

Abbreviations:

BAU - Business as usual
DU - Dwelling Unit
kW-hr - kilowatt-hour
MBTU - million british thermal units

Table 4
Emission Factors for Different Energy Sources for Buildings
Village at Playa Vista
Los Angeles, California

Energy Source	Source Units	lb CO₂/source unit
Electricity ¹ (w/o RPS)	(kW-hr)	1.228
Electricity ¹ (w/ 20% RPS)	(kW-hr)	1.030
Natural Gas ²	(MBTU)	117.0

Notes:

1. Emission factor for electricity provided by Los Angeles Department of Water and Power, obtained from the California Climate Action Registry Database.
2. Emission factor for natural gas was obtained from California Climate Action Registry Reporting Protocol, Table C7.

Abbreviations:

BAU - Business as usual
kW-hr - kilowatt-hour
lb - pound
MBTU - million british thermal units

Sources:

California Climate Action Registry General Reporting Protocol, Version 3.1 (January 2009). Available at:
http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf
California Climate Action Registry Database: Los Angeles Department of Water and Power 2007 PUP Report. 2008. Available at:
http://www.climateregistry.org/CarrotDocs/16/2007/LADWP_2007_PUP_Report.pdf

Table 5
CO₂ Emissions per Dwelling Unit
Village at Playa Vista
Los Angeles, California

Title 24 ¹ Compliance	Type	Title-24 Systems ¹		Non-Title-24 (Major Appliances, Plug-ins, Dryers and Oven Ranges)		Total		Title-24 Systems	Non-Title-24 (Major Appliances, Plug-ins, Dryers and Oven Ranges)	Total
		CO ₂ Electricity ²	CO ₂ Natural Gas ³	CO ₂ Electricity ²	CO ₂ Natural Gas ³	CO ₂ Electricity ²	CO ₂ Natural Gas ³	CO ₂ Total	CO ₂ Total	CO ₂ Total
		(lbs / DU / year)						(tonnes / DU / year)		
Minimally Title 24 Compliant (2005)	Town Home	673	2,618	3,597	531	4,270	3,149	1.5	1.9	3.4
	2-4 Unit Condominium	567	2,301	2,932	531	3,499	2,832	1.3	1.6	2.9
	5+ Unit Condominium	646	1,456	2,867	531	3,513	1,987	1.0	1.5	2.5
15% Improvement over Title 24 (2005), Energy Star Appliances, and RPS (20%)	Town Home	479	2,225	2,858	531	3,337	2,756	1.2	1.5	2.8
	2-4 Unit Condominium	404	1,956	2,325	531	2,729	2,487	1.1	1.3	2.4
	5+ Unit Condominium	461	1,237	2,277	531	2,738	1,769	0.8	1.3	2.0

Notes:

1. Title 24 - California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code.
2. Converted from kW-hr to lb CO₂ using emission factor from the California Climate Action Registry Database: Los Angeles Department of Water and Power 2007 PUP Report. 2008.
3. Converted from MBTU to lb CO₂ using emission factor from California Climate Action Registry General Reporting Protocol (CCAR GRP).

Abbreviations:

BAU - Business as usual
DU - Dwelling Unit
kW-hr - kilowatt-hour
lb - pound
MEL - Miscellaneous electric load

Sources:

California Climate Action Registry General Reporting Protocol, Version 3.1 (June 2009). Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf
California Climate Action Registry Database: Los Angeles Department of Water and Power 2007 PUP Report. 2008. Available at: http://www.climateregistry.org/CarrotDocs/16/2007/LADWP_2007_PUP_Report.pdf

Table 6
CO₂ Emissions from Electricity and Natural Gas Usage in Residential Dwelling Units
Village at Playa Vista
Los Angeles, California

Title 24 ¹ Compliance	Housing Type	# Dwelling Units ²	Title-24 Systems			Non-Title-24 Systems (Major Appliances, Plugs, Dryers and Oven Ranges)			Total		
			CO ₂ Emission Factor	Total CO ₂ Emissions		CO ₂ Emission Factor	Total CO ₂ Emissions		CO ₂ Emission Factor	Total CO ₂ Emissions	
			(tonne CO ₂ / DU / year)	(tonne CO ₂ / year)		(tonne CO ₂ / DU / year)	(tonne CO ₂ / year)		(tonne CO ₂ / DU / year)	(tonne CO ₂ / year)	
Minimally Title 24 Compliant (2005)	Town Home	867	1.5	1,294	3,248	1.9	1,624	4,322	3.4	2,918	7,571
	2-4 Unit Condominium	867	1.3	1,128		1.6	1,362		2.9	2,490	
	5+ Unit Condominium	867	1.0	827		1.5	1,337		2.5	2,163	
15% Improvement over Title 24 (2005), Energy Star Appliances, and RPS (20%)	Town Home	867	1.2	1,064	2,659	1.5	1,333	3,561	2.8	2,396	6,220
	2-4 Unit Condominium	867	1.1	928		1.3	1,123		2.4	2,051	
	5+ Unit Condominium	867	0.8	668		1.3	1,105		2.0	1,772	

Notes:

- Title 24 - California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code.
- ENVIRON assumed an equal mix of town homes, 2-4 unit apartments, and 5+ unit apartments.

Abbreviations:

BAU - Business as usual
CO₂ - carbon dioxide
DU - Dwelling Units
MEL - Miscellaneous electric loads

Sources:

California Climate Action Registry General Reporting Protocol, Version 3.1 (January 2009). Available at: http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf

Table 7
Categorization of Non-Residential Land Use
The Village at Playa Vista
Playa Vista, City of Los Angeles, California

Building Type¹	CEUS Building Type²	Quantity	Units	Area per Unit [SF/unit]	Total Area¹ [SF]
Office	All Office	175,000	SF	1	175,000
Community-Serving Uses	Miscellaneous	40,000	SF	1	40,000
Retail	Retail	150,000	SF	1	150,000
Grand Total Area					365,000

Notes:

1. Building types and areas were provided by Mestre Greve Associates.
2. ENVIRON selected building types from the California Commercial End-Use Survey (CEUS) that most closely matched the building types specified by Mestre Greve Associates.

Abbreviations:

CEUS - California Commercial End-Use Survey
 SF - square feet

Source:

Mestre Greve Associates. 2008. Climate Change Emissions for the Village at Playa Vista. City of Los Angeles. Prepared for Christopher A. Joseph and Associates. December 4.

Table 8
Electricity End-Use Distribution for Non-Residential Building Types
The Village at Playa Vista
Playa Vista, City of Los Angeles, California

CEUS Building Type	Air Compressors	Cooking	Cooling	Exterior Lighting	Heating	Interior Lighting	Miscellaneous	Motors	Office Equipment	Process	Refrigeration	Ventilation	Water Heating
All Office	0.6%	0.6%	22%	5%	1%	28%	4%	3%	18%	0.4%	2%	14%	1%
Miscellaneous	3%	2%	13%	13%	0.6%	27%	8%	11%	3%	3%	7%	8%	1%
Retail	0.7%	2%	17%	4%	0.2%	48%	3%	2%	4%	1%	7%	11%	0.9%
Included in Title 24 Building Envelope Energy Budget?²	No	No	Yes	No	Yes	No	No	No	No	No	No	Yes	Yes

Notes:

1. Electricity end-use distribution for non-residential buildings types is based on survey data for Southern California Edison (SCE) since specific data were not available for the Los Angeles Department of Water and Power (LADWP). It is assumed that the end-use distribution for SCE will be similar to that for LADWP since both utilities cover the Los Angeles area.
2. Only end uses regulated by Title 24 are included in the Title 24 building envelope energy budget. Hard-wired lighting (exterior lighting and some interior lighting) are part of Title 24, but are not considered part of the building envelope energy budget for this project.

Abbreviations:

CEUS - California Commercial End-Use Survey
LADWP - Los Angeles Department of Water and Power
SCE - Southern California Edison

Source:

California Commercial End-Use Survey. Performed by Itron, under contract to the California Energy Commission. 2006.

Table 9
Natural Gas End-Use Distribution for Non-Residential Building Types
The Village at Playa Vista
Playa Vista, City of Los Angeles, California

CEUS Building Type	Cooking	Cooling	Heating	Miscellaneous	Process	Water Heating
All Office	3%	4%	71%	2%	---	21%
Miscellaneous	6%	---	13%	16%	9%	56%
Retail	45%	---	19%	4%	0.1%	32%
Included in Title 24 Building Envelope Energy Budget?²	No	No	Yes	No	No	Yes

Notes:

1. Natural gas end-use distribution for non-residential buildings types is based on survey data for Southern California Edison (SCE) since specific data were not available for the Southern California Gas Company (SCGC). It is assumed that the end-use distribution for SCE will be similar to that for SCGC since both utilities cover the Los Angeles area.
2. Only end uses regulated by Title 24 are included in the Title 24 building envelope energy budget.

Abbreviations:

CEUS - California Commercial End-Use Survey
SCE - Southern California Edison
SCGC - Southern California Gas Company

Source:

California Commercial End-Use Survey. Performed by Itron, under contract to the California Energy Commission. 2006.

Table 10
Emission Factors by Energy Source
The Village at Playa Vista
Playa Vista, City of Los Angeles, California

Energy Source	Scenario	Unit	Conversion Factor [lb CO ₂ /Unit]	Conversion Factor [tonne CO ₂ /Unit]
Electricity ¹	without RPS ³	kWh	1.228	5.57E-04
	2010 RPS (20%) ³		1.030	4.67E-04
Natural Gas ²	-	kBTU	0.117	5.31E-05

Notes:

1. Emission factor for electricity provided by LADWP for the year 2007, obtained from the California Climate Action Registry Database.
2. Emission factor for natural gas obtained from California Climate Action Registry Reporting Protocol, Table C7.
3. Estimated emission factors for total energy delivered before and after implementation of the Renewables Portfolio Standard.

Abbreviations:

CO₂ - carbon dioxide
kBTU - 1000 British thermal units
kWh - kilowatt-hour
LADWP - Los Angeles Department of Water and Power
lb - pound
RPS - Renewable Portfolio Standard

Sources:

California Climate Action Registry General Reporting Protocol, Version 3.1 (January 2009). Available at:
http://www.climateregistry.org/resources/docs/protocols/grp/GRP_3.1_January2009.pdf
California Climate Action Registry Database: LADWP 2007 PUP Report. 2008. Available at:
http://www.climateregistry.org/CarrotDocs/16/2007/LADWP_2007_PUP_Report.pdf

Table 11
Energy Usage and Resulting GHG Emissions for Non-Residential Building Types, BAU
The Village at Playa Vista
Playa Vista, City of Los Angeles, California

CEUS Building Type	Total Area [SF]	Energy Source	Unit	Business as Usual						
				Usage Rate ¹ [Unit/SF-yr]				CO ₂ e EF ⁵ [tonnes/SF-yr]	CO ₂ e Emissions ⁶ [tonnes/yr]	
				Title 24 ^{2,3}	Non-Title 24 ⁴	Overall		Overall		
All Office	175,000	Electricity	kWh	6.05	+	10.54	=	16.59	9.24E-03	1,617
		Natural Gas	kBTU	9.82	+	0.98	=	10.81	5.73E-04	100
Miscellaneous	40,000	Electricity	kWh	2.08	+	7.80	=	9.87	5.50E-03	220
		Natural Gas	kBTU	14.85	+	6.86	=	21.71	1.15E-03	46
Retail	150,000	Electricity	kWh	3.72	+	10.04	=	13.76	7.66E-03	1,150
		Natural Gas	kBTU	1.04	+	1.05	=	2.10	1.11E-04	17
Grand Total Area	365,000								Electricity Total	2,987
									Natural Gas Total	163
									Overall Total	3,150

Notes:

1. BAU (business as usual) usage rates were taken from the 2006 California Commercial End-Use Survey (CEUS), performed by Itron under contract to the California Energy Commission (CEC). VPV is located in Forecasting Zone 11. ENVIRON used data for Forecasting Zone 8, the closest zone for which survey data were available. Zone 8 is adjacent to Zone 11 and also covers parts of Los Angeles. Thus, it is assumed that energy use patterns are similar in the two energy forecasting zones due to the close geographic proximity.
2. BAU Title 24 usage rates shown in this table have been adjusted to reflect improvements in Title 24 building codes since their introduction in 2002. CEC discusses average savings for improvements from 2002 to 2005 ("Impact Analysis for 2005 Energy Efficiency Standards"). ENVIRON used these CEC average savings percentages, which are, for electricity: 7.7% reduction in 2005; for gas: 3.2% reduction in 2005.
3. Includes only Title 24-regulated building envelope uses of electricity (heating, cooling, ventilation, water heating) and gas (heating, water heating), as discussed in Footnote 2 of Table 8 and Footnote 2 of Table 9.
4. Includes all other uses of electricity (cooking, refrigeration, exterior lighting, interior lighting, office equipment, miscellaneous, process, motors, air compressors) and gas (cooling, cooking, miscellaneous, process) not included in the Title 24-regulated building envelope, as discussed in Footnote 3 above.
5. GHG emission factors (EF) are calculated by multiplying the corresponding usage rates or usages by the conversion factors listed in Table 10
6. GHG emissions are calculated by multiplying the emission factor by the total area.

Abbreviations:

BAU - business-as-usual
CEC - California Energy Commission
CEUS - California Commercial End-Use Survey
CO₂e - carbon dioxide equivalent
EF - emission factor
GHG - greenhouse gas
kBTU - kilo (1000) British thermal units
kWh - kilowatt-hour
RPS - Renewables Portfolio Standard
SF - square feet
tonnes - metric tonnes
VPV - Village at Playa Vista
yr - year

Sources:

California Energy Commission. 2003. Impact Analysis: 2005 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Available at: http://www.energy.ca.gov/title24/2005standards/archive/rulemaking/documents/2003-07-11_400-03-014.PDF

Table 12
Energy Usage and Resulting GHG Emissions for Non-Residential Building Types, Project
The Village at Playa Vista
Playa Vista, City of Los Angeles, California

CEUS Building Type	Total Area [SF]	Energy Source	Unit	15% Improvement over Title 24 (2005) and 2010 RPS (20%)		
				Usage Rate ¹ [Unit/SF-yr]	CO ₂ e EF ² [tonnes/SF-yr]	CO ₂ e Emissions ³ [tonnes/yr]
All Office	175,000	Electricity	kWh	15.68	7.33E-03	1,282
		Natural Gas	kBTU	9.33	4.95E-04	87
Miscellaneous	40,000	Electricity	kWh	9.56	4.47E-03	179
		Natural Gas	kBTU	19.48	1.03E-03	41
Retail	150,000	Electricity	kWh	13.20	6.17E-03	925
		Natural Gas	kBTU	1.94	1.03E-04	15
Grand Total Area	365,000				Electricity Total	2,386
					Natural Gas Total	144
					Grand Total	2,529

Notes:

1. The usage rate with 15% improvement over Title 24 is calculated as the BAU Title 24 usage reduced by 15% plus the BAU non-Title 24 usage.
2. GHG emission factors (EF) are calculated by multiplying the corresponding usage rates or usages by the conversion factors listed in Table 10.
3. GHG emissions are calculated by multiplying the emission factor by the total area.

Abbreviations:

BAU - business as usual
 CEC - California Energy Commission
 CEUS - California Commercial End-Use Survey
 CO₂e - carbon dioxide equivalent
 EF - emission factor
 GHG - greenhouse gas
 kBTU - kilo (1000) British thermal units
 kWh - kilowatt-hour
 RPS - Renewables Portfolio Standard
 SCE - Southern California Edison
 SF - square feet
 tonnes - metric tonnes
 VPV - Village at Playa Vista
 yr - year

Sources:

California Energy Commission. 2003. Impact Analysis: 2005 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Available at: http://www.energy.ca.gov/title24/2005standards/archive/rulemaking/documents/2003-07-11_400-03-014.PDF

Table 13
Summary of GHG Emissions from Non-Residential Building Types
The Village at Playa Vista
Playa Vista, City of Los Angeles, California

Scenario	RPS Scenario	Energy Source	CO ₂ e Emissions [tonnes/yr]	Total CO ₂ e Emissions [tonnes/yr]
Project	2010 (20%)	Electricity	2,386	2,529
		Natural Gas	144	
BAU	None	Electricity	2,987	3,150
		Natural Gas	163	

Abbreviations:

BAU - business as usual
CO₂e - carbon dioxide equivalent
GHG - greenhouse gas
RPS - renewable portfolio standard
yr - year

Table 14
Traffic/Trip Generation Estimates¹
The Village at Playa Vista
Los Angeles, California

Total Village Project Trip Ends	
Office	2,271
Dwelling Units	15,236
Retail (Neighborhood)	6,193
Community Serving	520
Total Trip Ends	24,220
Internal Village Trip Ends %²	14%
Sub-Total Trip Ends	3,502
Transit Trip Credits³ (Trip Ends)	
Regional Buses - 5 for 7.5 hours	1,500
Shuttle Buses - 5 for entire day	3,000
Sub-total Person Trip Ends Credit	4,500
Sub-Total Auto Trip Ends Credit	3,750
Internal Trips ²	1,751
External Trips	20,718
Total Trips⁴	22,469
Transit Trip Credits (Trips)	3,750
Reduction in Trips from Transit ⁵	17%

Notes:

1. Data in this table provided by Raju Associates, except where noted.
2. Internal Village Trip Ends quantifies the number of trip ends associated with internal trips (i.e., within VPV). For internal trips, two trip ends are equivalent to one trip. This represents the reduction in trips due to the mixed-use nature of the Proposed Project.
3. Transit Trip Credits are reductions in the number of baseline trips due to the use of public transportation. Two modes of public transportation taken into account are Regional Buses and Shuttle Buses. The Auto Trip Ends Credit accounts for the number of vehicles reduced and assumes 1.2 people per car and that trips reductions only apply during weekdays.
4. The Total Trips is calculated by applying the number of internal trip ends to the total number of trip ends. For internal trips, two trip ends constitute one trip. For external trips, one trip end constitutes one trip.
5. The Reduction in Trips is calculated by assuming that all Transit Trip Credits are reductions in the number of external trips.

Abbreviations:

PV - Playa Vista
 VPV - The Village at Playa Vista

Reference:

Raju Associates. 2009. Traffic/Trip Generation Estimates for Greenhouse Gas Emissions Analysis. The Village at Playa Vista. Table A. Sent to ENVIRON August 14, 2009.

Table 15
BAU and Project Mobile Source Emissions
The Village at Playa Vista
Los Angeles, California

	Light Duty Vehicles	Medium and Heavy Duty Vehicles
Trip Length (Miles/Trip) ¹	5.52	5.52
% of Trips ²	99.7%	0.28%
Trip Generation (daily) ³	24,220	
Trips (daily)	24,153	67
VMT (daily)	133,326	368
Trips (annual - weekend adjustment) ⁴	8,317,860	22,989
VMT (annual - weekend adjustment) ⁴	45,914,585	126,901
Emission Factors⁵		
Running (g/mile)	436.4	940
Startup (g/trip)	77.0	64.4
Idling (g/trip)	0.0	36.8
BAU Emissions (metric tonne)		
Running	20,039	119.3
Startup	641	1.5
Idling	0	0.8
Total (annual)	20,679	121.6
Total (CO₂)	20,801	
BAU Total (CO₂e)⁶	21,895	
Project Emissions		
Pavley Adjustment⁷		
Running (g/mile)	348	N/A
Transit Credits⁸		
Transit Trip Reduction	17%	N/A
Internal Trips⁹		
Internal Trip Reduction	7%	N/A
Project VMT (annual)		
Transit Trips Reduction (VMT) ¹⁰	5,805,294	N/A
Internal Trips Reduction (VMT) ¹¹	3,319,424	N/A
Project VMT	36,789,867	126,901
Project Emissions w/ Pavley (metric tonne)¹²		
Running	12,804	119.3
Startup	534	1.5
Idling	0	0.8
Total (annual)	13,338	121.6
Total (CO₂)	13,459	
Project Total (CO₂e)⁷	14,168	
Percentage Reduction w/ Pavley	35.3%	

Notes:

1. Average trip length (miles/trip) for vehicle classes provided by Raju Associates. This value represents trip lengths for external project trips.
2. The vehicle mix is estimated based on the breakdown of trip types by land use and the percentage of commercial-based non commute trips. For VPV, we assume that all medium- and heavy-duty vehicle trips occur for retail land use only. Based on URBEMIS methodology, the commercial based worker commute trip percentage for retail land uses is 2% and the commercial-based non commuter trip is one-half this value, or 1%. The number of trip ends associated with retail land use is 6,193 trip ends; therefore, if we conservatively estimate that all commercial-based non-commuter trips are done by medium- and heavy-duty vehicles and that all trip ends associated with retail are from external trips, this would account for 1% x 6,193 trip ends = 62 trips. Thus, 62/22,469 = 0.28% of trips are associated with medium- and heavy-duty vehicles.
3. The total trip ends generated as provided by Raju Associates can also represent the total trips generated if not accounting for the mixed-use nature of the Project (per a phone conversation with Raju Associates Aug 25, 2009).
4. Annual VMT and number of trips are estimated based on the daily VMT and number of trips. Weekend VMT and number of trips are typically lower than weekday VMT and number of trips. Daily trips were adjusted to account for differences between the weekend and the weekday traffic based on a report by Sonoma Technologies. The weekend traffic was assumed to be 80% of weekly capacity.
5. Emission factors for vehicle classes provided by EMFAC for Los Angeles County. Emissions can be broken down to running, startup, and idling emissions. EMFAC results and emission factor derivation can be found in the Attachment A.
6. Total carbon dioxide equivalents (CO₂e) is calculated by taking carbon dioxide emissions and dividing by 95%. The United States Environmental Protection Agency (USEPA) recommends assuming that methane (CH₄), nitrous oxide (N₂O), and hydrofluorocarbons (HFCs) account for 5% of GHG emissions from on-road vehicles, taking into account their global warming potentials.
7. The running emission factor is scaled down due to the required reductions under the Pavley Standard (Pavley). Pavley only applies to light duty passenger cars. The Scaling Factor was derived from expected reduced emission factors from an ARB report on the Pavley Standard.
8. A transit "credit" is derived based on the number of vehicle trips saved based on the use of public transportation. The reduction in the number of vehicle trip ends comes from the transit study (Raju Associates). These trips are assumed to be external trips and therefore, the number of trips is equivalent to the number of trip ends saved. Data shown in Table 13.
9. Internal Village at Playa Vista (VPV) trips. This represents the percentage of trips that are reduced from the estimated trips generated due to the mixed-use nature of the Project (per a phone conversation with Raju Associates Aug 25, 2009).
10. The Transit Credits only apply to weekday travel. Thus, to derive the reduction in annual VMT from the Transit Credit, the BAU VMT was multiplied by reduction in trips (17%) and also by a factor of 5/7 to account for weekdays only.

11. The reduction in VMT due to the mixed-use nature of the Project based on the internal trip reductions.
12. The Project Emissions are based on an additional reduction due to the Paveley Standard.

Abbreviations:

ARB - California Air Resources Board
BAU - business-as-usual
CH4 - methane
g - grams
HFC - hydrofluorocarbons
N/A - not applicable
N2O - nitrous oxide
PV - Playa Vista
USEPA - United States Environmental Protection Agency
VMT - vehicle miles traveled
VPV - The Village at Playa Vista

References:

ARB, 2008. Comparison of Greenhouse Gas Reductions for the United States and Canada under U.S. CAFE Standards and California Air Resources Board Greenhouse Gas Regulations. Table 11.
Mestre Greve Associates, 2008. Climate Change Emissions for the Village at Playa Vista. City of Los Angeles. Prepared for Christopher A. Joseph and Associates. December 4.
Raju Associates, 2009. Traffic/Trip Generation Estimates for Greenhouse Gas Emissions Analysis. The Village at Playa Vista. Table A. Sent to ENVIRON August 14, 2009.
Sonoma Technologies, Inc. 2004. Collection and Analysis of Weekend/Weekday Emissions Activity in the South Coast Air Basin. May

Table 16
Summary of Greenhouse Gas Emissions
The Village at Playa Vista
Los Angeles, California

Source	GHG Emissions
Business as Usual	
Mobile	21,895
Residential ¹	7,571
Non-Residential ¹	3,150
Potable Water Usage ²	56
Recycled Water Usage ²	15
Annualized Total	32,687
Project Emissions (w/ Sustainability Features and Regulatory Measures)³	
Mobile	14,168
Residential ¹	6,220
Non-Residential ¹	2,529
Potable Water Usage ²	56
Recycled Water Usage ²	15
Annualized Total	22,988
Percentage Improvement over BAU	29.7%

Notes:

1. Residential and non-residential building emissions account for electricity and natural gas usage at VPV.
2. Water emissions from the MGA report account for emissions due to energy production associated with water supply. The Project includes water reduction and efficiency measures, but they have not been quantified.
3. Regulatory measures include the Pavely standard for light-duty vehicles and the 2010 (20%) Renewables Portfolio Standard.

Abbreviations:

CO₂ - carbon dioxide
CO₂e - carbon dioxide equivalent
EMFAC - Emission Factors Database
GHG - Greenhouse Gas
MGA - Mestre Greve Associates
URBEMIS - Urban Emissions Model
VPV - Village at Playa Vista

Sources:

Mestre Greve Associates. 2008. Climate Change Emissions for the Village at Playa Vista. City of Los Angeles. Report #08-111 December 4.

ATTACHMENT A

GHG Emissions from the Renewables Portfolio Standard

Attachment A
GHG Emissions from Renewables Portfolio Standard
The Village at Playa Vista
Playa Vista, City of Los Angeles, California

% of Total Energy From Renewables ¹	5%	
% of Total Energy From Non-Renewables	95%	
Total Energy Delivery ¹	29,141,703	MWh
from renewables	1,342,844	MWh
from non-renewables	27,798,859	MWh
CO ₂ Emissions per Total Energy Delivered	1,228	lbs CO ₂ /MWh delivered
Total CO ₂ Emissions ¹	16,230,815	metric tonnes CO ₂
CO ₂ Emissions per Total Non-Renewable Energy ²	1,287	lbs CO ₂ /MWh delivered
Estimated Emission Factors for Total Energy Delivered³		
2010 RPS (20%)	1,030	lbs CO ₂ /MWh delivered

Notes:

1. The renewable energy portfolio, energy values, and CO₂ emissions for Los Angeles Department of Water and Power (LADWP), the power utility that is most likely to provide power to The Village at Playa Vista development. The renewable energy distribution is based on data available from the LADWP PUP Report. Available at:

http://www.climateregistry.org/CarrotDocs/16/2007/LADWP_2007_PUP_Report.pdf

2. The emissions metric presented here is calculated based on the total CO₂ emissions divided by the energy delivered from non-renewable sources.

3. The emission factors for total energy delivered are estimated by multiplying the percentage of energy delivered from non-renewable energy by the CO₂ emissions per total non-renewable energy metric calculated above. An emission factor is presented here for the current 20% RPS goal for 2010. The estimate provided here and the 2007 PUP report issued by Los Angeles Department of Water and Power assume that renewable energy sources do not result in any CO₂ emissions. This is not necessarily true for biogas- and biomass-sourced energy but some consider these sources to be "carbon neutral."

Abbreviations:

CO₂ = carbon dioxide

kWh = kilowatt-hour

lbs = pounds

MWh = Megawatt-hour

PUP = Power/Utility Protocol

RPS = Renewables Portfolio Standard

ATTACHMENT B

EMFAC2007 Model Results

Attachment B

Scen Year: 2020 -- All model years in the range 1966 to 2010 selected
 Season : Annual
 Area : Los Angeles County Average
 I/M Stat : Enhanced Interim (2005) -- Using I/M schedule for area 59 Los Angeles (SC)
 Emissions: Tons Per Day

	Light Duty Passenger Cars				Light Duty Trucks				Light Duty Totals	Medium Duty Trucks				Heavy Duty Trucks					Urban Buses	Motorcycles	Medium and Heavy Totals	All Vehicles	
	Non-cat	Cat	Diesel	Total	Non-cat	Cat	Diesel	Total		Non-cat	Cat	Diesel	Total	Gasoline Trucks Non-cat	Gasoline Trucks Cat	Gasoline Trucks Total	Diesel Trucks	Total HD Trucks					
Vehicles	417	3,834,160	1,911	3,836,490	318	2,001,210	5,335	2,006,860	5,843,350	1,395	786,054	32,707	820,156	91	65,223	65,314	94,269	159,583	4,786	157,224	1,141,749	6,985,100	
VMT/1000	6	123,238	37	123,281	7	69,088	146	69,241	192,622	27	28,163	1,553	29,742	1	1,438	1,439	10,363	11,802	522	1,145	43,211	235,734	
Trips	1,595	23,837,400	9,237	23,848,200	1,226	12,358,100	29,712	12,389,100	36,237,300	7,882	7,647,940	404,798	8,060,620	1,718	758,047	759,765	1,686,240	2,446,000	19,145	314,417	10,840,182	47,077,500	
% of VMT	0.00%	52.28%	0.02%	52.30%	0.00%	29.31%	0.06%	29%	82%	0.01%	11.95%	0.66%	12.62%	0.00%	0.61%	0.61%	4.40%	5.01%	0.22%	0.49%	18%	100%	
% of Trips	0.00%	50.63%	0.02%	50.66%	0.00%	26.25%	0.06%	26%	77%	0.02%	16.25%	0.86%	17.12%	0.00%	1.61%	1.61%	3.58%	5.20%	0.04%	0.67%	23%	100%	
Trip Length (Miles/Trip)	3.8	5.2	4.0	5.2	5.7	5.6	4.9	5.6	5.3	3.4	3.7	3.8	3.7	0.6	1.9	1.9	6.1	4.8	27.3	3.6	4.0	5.0	
Methane Emissions																							
Run Exh	0	1.75	0	1.75	0	1.6	0	1.6	3.35	0.01	0.81	0.01	0.84	0	0.06	0.06	0.19	0.25	0.03	0.27	1.39	4.73	
Idle Exh	0	0	0	0	0	0	0	0	0.00	0	0.01	0	0.01	0	0	0	0.02	0.03	0	0	0.04	0.03	
Start Ex	0	0.22	0	0.22	0	0.17	0	0.17	0.39	0	0.19	0	0.19	0	0.04	0.05	0	0.05	0	0.05	0.29	0.68	
Total Ex	0	1.97	0	1.97	0	1.77	0	1.77	3.74	0.02	1.01	0.01	1.03	0	0.1	0.1	0.21	0.32	0.03	0.32	1.70	5.44	
Diurnal	0	0	0	0	0	0	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0.00	0	
Hot Soak	0	0	0	0	0	0	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0.00	0	
Running	0	0	0	0	0	0	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0.00	0	
Resting	0	0	0	0	0	0	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0.00	0	
Total	0	1.97	0	1.97	0	1.77	0	1.77	3.74	0.02	1.01	0.01	1.03	0	0.1	0.1	0.21	0.32	0.03	0.32	1.70	5.44	
lbs/trip	0.0000	0.00017	0.00000	0.00017	0.00000	0.00029	0.00000	0.00029	0.00029	0.00507	0.00026	0.00005	0.00026	0.00000	0.00026	0.00026	0.00025	0.00026	0.00313	0.00204	0.00023	0.00023	
Running EF (g/mile)										0.0158										Running EF (g/mile)			0.0291
Startup EF (g/trip)										0.0098										Startup EF (g/trip)			0.0242
Idling EF (g/trip)										0.0000										Idling EF (g/trip)			0.0033
Carbon Dioxide Emissions (000)																							
Run Exh	0	54.17	0.01	54.18	0	38.5	0.06	38.56	92.74	0.02	21.52	0.89	22.43	0	1.09	1.09	19.92	21.01	1.17	0.22	44.83	137.57	
Idle Exh	0	0	0	0	0	0	0	0	0	0	0.03	0	0.03	0	0.01	0.01	0.4	0.41	0	0	0.44	0.45	
Start Ex	0	1.86	0	1.86	0	1.22	0	1.22	3.08	0	0.73	0	0.73	0	0.03	0.03	0	0.03	0	0.01	0.77	3.86	
Total Ex	0	56.03	0.01	56.04	0	39.72	0.06	39.78	95.82	0.02	22.28	0.89	23.2	0	1.13	1.13	20.32	21.46	1.17	0.23	46.06	141.88	
lbs/trip	0.000	4.701	2.165	4.700	0.000	6.428	4.039	6.422	6.422	5.075	5.826	4.397	5.756	0.000	2.981	2.975	24.101	17.547	122.225	1.463	6.028	6.028	
Running EF (g/mile)										436										Running EF (g/mile)			940
Startup EF (g/trip)										77.0										Startup EF (g/trip)			64.4
Idling EF (g/trip)										0.0										Idling EF (g/trip)			36.8
Pavley Adjustment																							
Running EF (g/mile)										348													

Notes:
 1. Data from EMFAC Burden run for Los Angeles County.
 2. The running emission factor is scaled down due to the required reductions under the Pavley Standard (Pavley). Pavley only applies to light duty passenger cars. The Scaling Factor was derived from expected reduced emission factors from an ARB report on the Pavley Standard.

References:
 ARB, 2008. Comparison of Greenhouse Gas Reductions for the United States and Canada under U.S. CAFE Standards and California Air Resources Board Greenhouse Gas Regulations. Table 11.

Abbreviations:
 Cat - catalyzed
 EMFAC - Emission FACtors estimation software
 g - gram
 lbs - pounds
 Non-cat - non-catalyzed

ATTACHMENT C

Raju Associates Traffic and Trip Generation Estimates

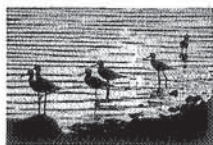
TABLE A
THE VILLAGE AT PLAYA VISTA
TRAFFIC/TRIP GENERATION ESTIMATES FOR GREENHOUSE GAS EMISSIONS ANALYSIS

SL. NO.	PROJECT COMPONENT	TOTAL DAILY TRIP ENDS
0	TOTAL VILLAGE PROJECT (0)	24220
	OFFICE	2271
	DWELLING UNITS	15236
	RETAIL (NEIGHBORHOOD)	6193
	COMMUNITY SERVING	520
1	INTERNAL VILLAGE TRIP ENDS (1)	3502
	INTERNAL VILLAGE TRIPS	1751
	AVG TRIP LENGTH	0.25 MILES
2	INTERNAL PV SITE TRIPS	
	PV1--> PV2	790
	PV2--> PV1	875
	SUB-TOTAL (2)	1665
	AVG TRIP LENGTH	0.5 MILES
3	TRANSIT TRIP CREDITS	
	REGIONAL BUSES -5 FOR 7.5 HRS (3)	1500
	SHUTTLE BUSES - 5 FOR ENTIRE DAY (4)	3000
	SUB-TOTAL PERSON TRIP ENDS CREDIT	4500
	SUB-TOTAL AUTO TRIP ENDS CREDIT (5)	3750
	AVG TRIP LENGTH FOR OVERALL EXTERNAL PROJECT TRIPS	5.52 MILES

- NOTE: 0 Trip Generation Estimates from the Village at Playa Vista DEIR, EIR No. ENV-2002-6129-EIR, page 861 & from Table 4-2 of the Transportation Study
- 1 Daily Trip Ends computed using the average percent peak hour reduction for office and residential times the daily trip ends for these uses, respectively, plus 30% pass-by & internal retail trip ends and all of Community Serving use trip ends
- 2 Daily Trip Ends computed using the expression: (AM peak hour trips*10+PM peak hour trips*10)/2 for the total site trips to/from PV Phase 1 uses on the Playa Vista site
- 3 Daily Person Trip Ends were computed using five 40-seat buses operating for 7.5 hours (during both peak periods). It is recommended that credit associated with this be taken for only the number of commuter weekdays in a year
- 4 Daily Person Trip Ends were computed using five 25-seat buses operating throughout the day in both directions. It is recommended that credit associated with this be taken for only the number of commuter weekdays in a year since shuttles are not planned to operate during weekends.
- 5 Auto Trip Ends are computed using an auto-occupancy factor of 1.2 people per car. That is, Auto trip ends credit = Person trip end credit / 1.2

**APPENDIX D:
OTHER TECHNICAL APPENDICES BEYOND SCOPE OF
RS-DEIR**

**APPENDIX D.i:
COOPER ECOLOGICAL MONITORING INC., LETTER,
JUNE 12, 2009**



Cooper Ecological Monitoring, Inc.

EIN 72-1598095

Daniel S. Cooper, President

5850 W. 3rd St. #167

Los Angeles, CA 90036

(323) 397-3562

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Marc Huffman

Ballona Wetlands Conservancy

6500 Seabluff Dr.

Playa Vista, CA 90064

June 12, 2009

Mr. Huffman,

This letter is in response to a request for information on occurrence, nesting and habitat usage of two species, the osprey *Pandion haliaetus* and the Canada goose *Branta canadensis* at Playa Vista, specifically the undeveloped "Village at Playa Vista" area near the middle of the site. I have been monitoring birds in the Ballona Valley both professionally and otherwise since 2003, and have been monitoring birds at the Playa Vista "Riparian Corridor" and south end of the Freshwater Marsh since August 2008 (for E Read & Associates). I have published analyses of historic and current bird occurrence in the Ballona area^{1,2}, and maintain an annotated bird checklist and annual addenda at my website (www.cooperecological.com).

Osprey

The osprey was unrecorded along the Riparian Corridor during quarterly surveys in fall (5 visits, 31 Aug. - 04 Oct. 2008), winter (4 visits, 02 Dec. 2008 - 01 Jan. 2009), and spring/summer (multiple visits since mid-March 2009). The osprey is observed occasionally at the Ballona Freshwater Marsh (about one or two sightings per year), and I know of one record of a bird seen from the Westchester Bluffs on 18 Sept. 2005 (R. Stone). Thus, while it may be observed at Playa Vista flying overhead or landing to eat fish captured in Ballona Creek or elsewhere, it does not appear to do so regularly, and certainly does not nest anywhere in the Ballona area or the coast of Los Angeles County.

¹ Cooper, D.S. 2008. The use of historical data in the restoration of the avifauna of the Ballona Wetlands, Los Angeles County, California. *Natural Areas Journal* 28:83-90.

² Cooper, D.S. 2006. Annotated checklist of extirpated, reestablished and newly-colonized avian taxa of the Ballona Valley, Los Angeles County, California. *Bull. So. Calif. Acad. Sci.* 105:91-112.

Canada Goose

This goose, like the osprey, appears to be increasing locally as well, nesting at Ballona for the first time only in 2006. In fact, this goose is increasing dramatically in the region, particularly as a nesting species, and may soon reach pest status here as it does elsewhere in the U.S. and Canada. However, to date, no nests of the Canada goose have been detected on the Village at Playa Vista site. This species was detected outside of the Village site during spring/summer surveys in 2009 as a pair with three young goslings on 14 May at the far western end of the Riparian Corridor, just east of Lincoln Blvd. However, the fact that this species had *not* been detected here during the March - April portion of the surveys suggests that they in fact nested at the Ballona Freshwater Marsh (at least two active nests present in May 2009) and simply moved east across Lincoln Blvd. to forage. The species was not detected along the Riparian Corridor (nor on adjacent open land to the north) during quarterly surveys in fall 2008 nor winter 2008-09; however, a flock of 10 birds were found at the south end of Ballona Freshwater Marsh on the 02 Dec. 2008 winter survey, after which they apparently moved on from this location. The species is occasionally seen flying overhead in the Ballona Valley.

Daniel Cooper

June 12, 2009

Daniel S. Cooper
President, Cooper Ecological Monitoring, Inc.

Date

APPENDIX D.ii:
**BIOLOGICAL EFFECTS OF MOSQUITO FISH (*GAMBUSIA*
AFFINIS) ON THE BALLONA WETLANDS SYSTEM, E. READ
AND ASSOCIATES, JUNE 18, 2009**



E Read and Associates, Inc.
Ecological Surveys, Maintenance, and Monitoring

Ballona Wetlands Field Office
211 Culver Blvd., Suite N, Playa del Rey, CA 90293
310-306-3229; marshmistress@msn.com

June 18, 2009

Marc Huffman
Ballona Wetlands Conservancy
6500 Seabluff Dr.
Playa Vista, CA 90094

Mr. Huffman,

This letter responds to your request for information on potential biological effects of mosquito fish (*Gambusia affinis*) on the Ballona wetlands system.

By way of background, mosquito fish are a non-native species which was widely introduced in order to control mosquitoes and entered California in 1922. This freshwater species has been collected in each survey of Area B of the Ballona Wetlands from the past 25 years.¹ Historically, native freshwater fish such as arroyo chub (*Gila orcutti*), which are natural predators of mosquitoes, were believed to have been present at Ballona. However, the arroyo chub has not been seen in any surveys performed at Ballona over the past 25 years,² and is not commonly available or abundant.

The Los Angeles County West Vector & Vector-Borne Disease Control District (LACWVCD) routinely stocks the Ballona Freshwater Wetlands, including the Riparian Corridor and Freshwater Marsh, with mosquito fish in order to control mosquito larvae. I observed mosquito fish in the Freshwater Marsh shortly after construction was completed in 2003. It is my opinion that these fish originated from earlier stocking of the old Teale Channel and other ditches in the Ballona area by the LACWVCD. As stated above, such introduction has been going on for many years, and pre-dates the construction of the Freshwater Marsh, the Riparian Corridor, and the Proposed Village project.

Without the use of mosquito fish, it is likely that greater amounts of pesticides would be applied by the LACWVCD. In addition, there are the following considerations:

(1) A comment has been made about the impacts of mosquito fish on native amphibians, citing studies of Australian frogs (green and golden bell frogs, or other native frogs in Australia) as an example. The species cited in these studies are not native to this area, and there is no evidence that they are found in the Freshwater Wetland System, other portions of the Proposed Project site, or the

¹ Philip Williams and Associates, 2006. Ballona Wetlands Existing Conditions Draft Report, prepared for the California State Coastal Conservancy.

² Id.

general surrounding area. I have seen no evidence that the mosquito fish have had significant negative effects on native amphibians such as the Pacific tree frog (*Pseudacris regilla* = *Hyla regilla*). Pacific tree frogs persist despite the long history of mosquito fish presence at Ballona. This is likely because the frogs, including their tadpoles, have many opportunities for refuge. I have observed Pacific tree frogs in moist and shallow water areas that mosquito fish cannot access. Overall, results of scientific studies have not consistently shown adverse impacts of mosquito fish on native species,³ and those studies which have shown adverse impacts are not necessarily applicable to the Ballona Freshwater Wetlands because the studies provided no natural refuge for the native species to escape predation by mosquito fish. For example, one study was conducted in 12 experimental ponds in southern California, and found that mosquito fish had significant impacts on invertebrates and Pacific tree frogs⁴. However, the ponds were barren, kept free of vegetation and other potential refuges. These types of studies cannot be extrapolated to the Ballona Freshwater Wetlands.

(2) The Ballona Wetlands Conservancy, the entity charged with maintaining and monitoring the Freshwater Marsh and Riparian Corridor, also recognizes the importance of native species (such as swallows and bats) that prey on mosquitoes as a method of providing supplemental biological control of mosquitoes. Nest boxes were installed as a volunteer project to attract American tree swallows, which immediately began nesting at the Freshwater Marsh in 2004. Barn swallows, which nest in the inlets to the Freshwater Marsh, are also abundant and are frequently observed foraging over open water of the Freshwater Marsh and Riparian Corridor. Roosting boxes for bats have been installed at the Freshwater Marsh and Riparian Corridor.

(3) The presence of mosquito fish in the Freshwater Wetlands has attracted a diversity of bird species. I have observed that the fish are a food source for foraging birds, including the endangered California least tern.

(4) A comment has also been made about the potential for the mosquito fish to invade the Ballona saltmarsh. The mosquito fish is a freshwater species, and will not survive in saltwater habitat or impact restoration of the Ballona salt marsh.

In summary, the presence of mosquito fish is outside of the control of Playa Capital Company and the Ballona Wetlands Conservancy, and pre-dates the Proposed Village Project. The fish also reduce the quantity of pesticide that would otherwise be applied for mosquito abatement and increase the diversity of foraging birds.


Edith Read

President, E Read and Associates, Inc.

³ Pyke, G.H., 2008. Plague minnow or mosquito fish? A review of the biology and impacts of introduced *Gambusia* species. *Annu. Rev. Ecol. Evol. Syst.* 39: 171-191.

⁴ Hurlbert, S.H. and M.S. Mulla, 1981. Impacts of mosquitofish (*Gambusia affinis*) predation on plankton communities. *Hydrobiologia* 83: 125-151.

**APPENDIX D.iii:
REPORT REGARDING HEAL THE BAY COMMENT LETTER
ON THE RECIRCULATED SECTIONS – DRAFT
ENVIRONMENTAL IMPACT REPORT (RS-DEIR) VILLAGE
AT PLAYA VISTA, GEOSYNTEC CONSULTANTS,
JULY 7, 2009**

July 7, 2009

Bruce Lackow
Matrix Environmental
6701 Center Drive West, Suite 900
Los Angeles, CA 90045

Subject: Heal the Bay Comment Letter on the Recirculated Sections-Draft Environmental Impact Report (RS-DEIR) Village at Playa Vista

Dear Mr. Lackow:

The purpose of this letter is to provide technical information concerning comments received on the Recirculated Sections-Draft Environmental Impact Report (RS-DEIR) Village at Playa Vista contained in April 30, 2009 letter to David J. Somers, City of Los Angeles, from Kirsten James and W. Susie Santilena of Heal the Bay. Specifically, this letter addresses whether the potential impacts of the Village at Playa Vista project (Proposed Project) should be re-evaluated given the adopted Ballona Creek Estuary Total Maximum Daily Loads (TMDLs) for toxicity and bacteria. These TMDLs were adopted after the Original Final EIR for the Proposed Project was completed.

In particular, we have reviewed and evaluated the following:

- The Los Angeles Regional Water Quality Control Board's 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments Requiring TMDLs, to determine if there are any new pertinent listed segments or constituents as compared to those considered by the Water Quality Section in the Original Final EIR for the Proposed Project. (Section 2 below)
- The 2006 Ballona Creek Estuary Toxic Pollutants TMDL and the 2007 Ballona Creek, Ballona Estuary, and Sepulveda Channel Bacteria TMDL, to determine their applicability to the Proposed Project. (Section 3)
- The Toxics and Bacteria TMDLs for the Ballona Creek Estuary, to determine if the TMDLs address constituents not previously analyzed in the Original Final EIR for the Proposed Project or whether the TMDLs impose water quality standards or other

requirements that would change the analysis in the Original Final EIR of the significance of the Proposed Project's water quality impacts. (Section 4).

1 Overview of the Water Quality Evaluation in the Original Final EIR

The Original Final EIR and the Water Resources Technical Appendix (Appendix F-1 to the Original Draft EIR) provided a detailed analysis of potential impacts on water quality from the Proposed Project. The Proposed Project was evaluated with respect to whether it would satisfy requirements of the following water quality regulations, plans and benchmarks:

- The County of Los Angeles Municipal Separate Stormwater Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit and the State of California General Construction NPDES Permit
- Los Angeles Regional Water Quality Control Board Basin Plan (Basin Plan)
- Current and Proposed TMDLs of 303(d) listed pollutants
- Water Quality Criteria in the California Toxics Rule
- Water quality standards in the California Ocean Plan (Ocean Plan)
- State and Federal Antidegradation Policies
- State Nonpoint Source Program Strategy and Implementation Plan
- Performance Criteria from the United States Army Corps of Engineers (USACE) 404 Permit Process
- Section 13050 of the California Water Code

Since these regulations, plans and benchmarks include both numeric and narrative water quality criteria, the impact assessment included various types of analyses to assess potential impacts of the Proposed Project on water quality. The Original Final EIR concluded that the Proposed Project would have less than significant impacts on downstream water quality. Specifically, the impact assessment concluded on page 510 of the Original Draft EIR that:

“Based on the numerical and narrative impact assessment, the Proposed Project is not expected to create pollution, contamination, or nuisance, as defined in Section 13050 of the CWC [California Water Code], or cause regulatory standards to be violated, as defined in the applicable NPDES Permit (MS4 Permit) or the Basin Plan, for the receiving waterbodies, and is expected to comply with the project-specific Performance Criteria resulting from the USACE 404 Permit and related agency actions.”

As part of the comprehensive approach for assessing potential impacts for the Proposed Project, the Original Final EIR evaluated all of the constituents that are now addressed by the Toxics and Bacteria TMDLs for the Ballona Creek Estuary and the assessment was made with reference to the water quality standards (including numeric targets) that the TMDLs were based upon. Therefore, as described in detail below, the impact assessment and conclusions provided in the Original Final EIR are still valid in light of the Toxics and Bacteria TMDLs.

2 Clean Water Act 303(d) List of Water Quality Limited Segments

The Original Draft EIR provided a summary of the 303(d) listed constituents for the Ballona Creek Estuary, Ballona Wetlands, and Santa Monica Bay (Table 31, Page 406), which are the receiving waters to which the Proposed Project discharges. Table 1 provides a comparison of the 1998, 2002, 2006 and 2008 303(d) lists.

At the date of the Original Draft EIR preparation, the 1998 303(d) list was still in effect and the 2002 303(d) list was pending approval by the U.S. EPA. Both lists were considered in the evaluation of potential Proposed Project impacts in the Original Final EIR. The 2006 list (approved by the U.S. EPA on June 28, 2007) includes a smaller set of constituents and does not contain any constituents that were not on the previous two lists. Therefore, by addressing potential impacts associated with receiving water impairments included on the 1998 and 2002 303(d) lists, the Proposed Project also addresses the impairments included on the 2006 list. As a point of information, the Los Angeles Regional Water Quality Control Board has recently issued the Draft 2008 Los Angeles Region Integrated Report, Clean Water Act Section 305(b) Report and Section 303(d) List of Impaired Waters. This document does not propose changes to the listing status of impairments for Ballona Creek Estuary, Ballona Wetland, or Santa Monica Bay as compared to the 2006 303(d) list.

Table 1. Comparison of 1998, 2002, and 2006/08 303(d) Lists.

Parameter	Ballona Creek Estuary			Ballona Wetland			Santa Monica Bay ^a		
	98	02	06/08 ^b	98	02	06/08 ^b	98	02	06/08 ^b
Year of 303(d) List									
Arochlor (PCB product trade name)	✓								
Arsenic, tissue									
Cadmium, sediment							✓		
Chlordane, tissue (pesticide)	✓	✓	Δ*						
Chlordane, sediment (pesticide)	✓	✓	Δ*				✓	✓	
Copper, sediment							✓		
DDT, tissue (pesticide)							✓	✓	✓
DDT, sediment (pesticide)	✓	✓	Δ*				✓	✓	✓
Debris							✓	✓	Δ ^d
Exotic Vegetation				✓	✓	✓			
Fish Consumption Advisory							✓	✓	✓
Habitat Alterations				✓	✓	✓			
High Coliform Count	✓	✓	Δ				Δ	Δ	Δ
Hydromodification				✓	✓	✓			
Lead, tissue							✓		
Lead, sediment	✓	✓	Δ*				✓		
Mercury, sediment							✓		
Nickel, sediment							✓		
PAHs, sediment (polycyclic aromatic hydrocarbons)	✓	✓	Δ*				✓	✓	
PCBs, sediment and tissue (polychlorinated biphenyls)	✓	✓	Δ*				✓	✓	✓
Reduced Tidal Flushing				✓	✓	✓			
Sediment Toxicity	✓	✓	Δ*				✓	✓	✓
Shellfish Harvesting Advisory	✓	✓	✓						
Silver, tissue							✓		
Trash				✓	✓	Δ			
Zinc, sediment	✓	✓	Δ*				✓		

^a Listing for Santa Monica Bay offshore and near shore.

^b - The recently issued Draft 2008 303(d) list is, with regard to the Ballona Creek Estuary, Ballona Wetland, and Santa Monica Bay, identical to the 2006 303(d) list.

Symbols key:

✓ - Included on 303(d) list Δ* - Addressed with Toxics TMDL

Δ - TMDL has been established Δ^d - TMDL in development

Source: Parameters included in 1998, 2002, 2006 and draft 2008 California 303(d) List. On June 28, 2007 the U.S. Environmental Protection Agency gave final approval to California's 2006 Section 303(d) List of Water Quality Limited Segments.

3 Applicability of the Ballona Creek Estuary Toxics and Bacteria TMDLs to the Proposed Project

As described in the Original Final EIR, once a water body is listed as impaired, TMDLs must be established for the pollutants causing the impairment (33 U.S.C. § 1313(d)(c)). In addition to water column listed impairments, the 303(d) list specifies constituents that are found at high concentrations in the tissue of aquatic organisms and the sediment within the water body. Recently, the 2006 Ballona Creek Estuary Toxic Pollutants TMDL was established to address sediment and tissue toxicity impairments. Additionally, the 2007 Ballona Creek, Ballona Estuary, and Sepulveda Channel Bacteria TMDLs have also been established. After passing through the Freshwater Wetland System, the Proposed Project directly discharges its stormwater primarily into the Ballona Creek Estuary. During large and infrequent storm events, some discharge to the Ballona Wetlands also occurs. The Ballona Wetlands discharges to the Ballona Creek Estuary downstream of the Proposed Project. Note that the Proposed Project does not discharge to the Sepulveda Channel or the non-estuary portion of Ballona Creek, and, therefore, TMDLs for those water bodies are not relevant to the Proposed Project.

4 The Analysis in the Original Final EIR of the Water Quality Criteria and Constituents That Are Included in the Ballona Creek Estuary TMDLs

The Ballona Creek Estuary Toxics TMDL imposes numerical criteria for the following metal constituents in sediment: cadmium, copper, lead, silver and zinc. The TMDL also includes numerical criteria for the following organics in sediment: chlordane, Total DDT, Total PCBs, and Total PAHs. The Ballona Creek Estuary Bacteria TMDL imposes numerical criteria for the water column with an allowed number of annual exceedance days depending on the season and weather conditions (wet, winter dry, and summer dry) and the monitoring frequency (single sample vs. 30-day geometric mean). These TMDLs were not yet established at the time of the Original Final EIR preparation and some of these constituents were not listed as impairments on the applicable or proposed 303(d) lists. However, the Original Draft or Final evaluated and assessed all impairing and TMDL constituents using approaches consistent with the methods (and numerical criteria) used to establish the new TMDLs, as discussed below.

4.1 Water Quality Criteria Evaluated in the Original Final EIR Relevant to the Ballona Creek Estuary TMDLs

As discussed in Section 1 above, the Original Final EIR relied upon numerous water quality criteria when analyzing the potential impacts on water quality from the Proposed Project.

Several of those regulatory frameworks are discussed below, as they are pertinent to the TMDLs for the Ballona Creek Estuary addressed in this letter.

4.1.1 The Basin Plan and Ocean Plan

The Original Draft EIR evaluated potential impacts of the Proposed Project with respect to the numeric and narrative objectives for water quality contained in the Los Angeles Regional Water Quality Control Board Basin Plan (Original Draft EIR Section 3.4.1.2.2, Page 466). This evaluation included a detailed review of potentially toxic and bioaccumulative chemical constituents and pesticides that were identified on the California 1998 and 2002 303(d) lists and/or were later included in the Estuary Toxics TMDL for Ballona Estuary. The Original Final EIR analysis addressed arsenic, cadmium, silver, lead, PCBs, PAHs, DDT, and chlordane, the constituents upon which the current Ballona Creek Estuary Toxics TMDL is based (see discussion of current TMDLs Section 4.2 below). The impacts evaluation in the Original Final EIR concluded that runoff from the Proposed Project would not be a significant source of these constituents, and after accounting for the planned source and treatment control Best Management Practices (BMPs), the Proposed Project's impacts with respect to bioaccumulation and toxicity would be less than significant.

In addition, the Original Final EIR evaluated the Proposed Project's impacts with respect to the Basin Plan water quality objectives for bacteria that are indicators of human pathogens. As specified in the Basin Plan (Chapter 3, page 3-3) as amended by Resolution Nos. 2001-018 and in the California Ocean Plan (Section II.B, page 4), single sample concentrations from waters designated for water contact recreation by humans (REC-1) must not exceed 10,000/100 ml for total coliform, 400/100 ml for fecal coliform, and 104/100 ml for enterococcus.¹ The Original Draft EIR specifically addressed the amended Basin Plan and Ocean Plan objectives for bacteria through an assessment of bacteria in runoff from the Proposed Project in Subsections 3.4.1.2.3-3.4.1.2.6 of Section IV.C.(2), Water Quality on pages 472, 476, 478, and 484 of the Original Draft EIR. Additional discussion is provided in Subsection 3.2.4.6.2.4 of Section 3 of the Water Resources Technical Report (Appendix F-1) in the Original Draft EIR. The Original Final EIR concluded that impacts regarding bacteria would be less than significant.

¹ The Basin Plan may be found at: http://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.shtml. The California Ocean Plan can be found at: http://www.swrcb.ca.gov/water_issues/programs/ocean/.

4.1.2 California Toxics Rule

The California Toxics Rule (CTR) establishes acute and chronic surface water quality standards of surface water bodies that are designated by the Regional Water Quality Control Board (RWQCB) as having beneficial uses protective of aquatic life or human health.

The Original Final EIR presented comparisons of Acute CTR values for salt water for dissolved copper, lead and zinc to predicted concentrations in runoff leaving the Freshwater Marsh and flowing into Ballona Creek Estuary (Original Draft EIR Table 46, Page 482). In all cases, the predicted concentrations were well below the applicable Acute CTR criteria. For other constituents, where most available data were below detection limits, including silver, cadmium PAHs, and legacy pesticides (e.g., chlordane and DDT), a discussion was included on potential impacts and effects of the Proposed Project with its design features (Original Draft EIR Appendix F-1, Section 3.2.4.6.2, Page 3-80). In addition, in the response to comments received from Friends of Ballona Wetlands (Original Final EIR Comment No. 32-8), a detailed discussion of these constituents was presented. For constituents where some detected values were available, a direct comparison of land use concentrations to the water quality criteria was made (with no treatment BMP water quality effects considered). This discussion concluded that, even if runoff from the Proposed Project was not treated by the Freshwater Marsh and other upstream BMPs, the land uses proposed for the Project are not likely to contribute to exceedances of applicable CTR criteria for cadmium or PAHs (Original Final EIR, Response to Comment No. 32-8, Table 32-8, Page 1091).

4.2 The Conclusions in the Original Final EIR Concerning the Proposed Project's Water Quality Impacts Associated with the Constituents Addressed in the Ballona Creek Estuary TMDLs Remain Valid

4.2.1 Ballona Creek Estuary Bacteria TMDL

Water Quality Standards in the Ballona Creek Estuary Bacteria TMDL: The Ballona Creek Estuary Bacteria TMDL establishes load allocations for fecal coliform, enterococcus, and total coliform bacteria, all of which are indicators of human pathogens. The Ballona Creek Estuary Bacteria TMDL includes wet-weather, summer dry-weather, and winter dry-weather load allocations expressed as allowable exceedance days of concentration-based water quality objectives. For the Ballona Estuary, the load allocations are based on the marine REC-1 and

shellfish consumption numeric water quality objectives as defined in the Los Angeles County Basin Plan.

Original Final EIR Impact Assessment with Respect to Bacteria: The Original Final EIR analyzed the Proposed Project's water quality impacts regarding bacteria. The Original Draft EIR (Section 3.1.1.5, Page 450, Section 3.4.1.2.3, Page 472, and Section 3.4.1.2.4, Page 477) considered the (at that time) draft Santa Monica Bay TMDLs for dry and wet weather conditions for bacteria. According to the Los Angeles Regional Water Quality Control Board staff report for the Ballona Creek Estuary Bacteria TMDL, that TMDL is "consistent with that of the Santa Monica Bay Beaches (SMBB) dry- and wet-weather bacteria TMDLs, which were adopted by the Regional Board in 2002, and approved by EPA in June 2003." We have verified that the current Santa Monica Bay and the Ballona Creek Estuary Bacteria TMDLs contain identical water quality criteria as the draft Santa Monica Bay TMDL analyzed in the Original Final EIR.

An assessment of the Proposed Project impacts with respect to bacteria was presented in the Original Draft EIR (Subsections 3.4.1.2.3-3.4.1.2.6 of Section IV.C.(2), Water Quality on pages 472, 476, 478, and 484) and supporting technical report (Subsection 3.2.4.6.2.4 of Appendix F-1 of the Original Draft EIR). This assessment considered compliance with the bacteria criteria in the draft Santa Monica Bay TMDLs, which are the same concentration-based REC-1 standards upon which the Ballona Creek Estuary Bacteria TMDL was based. Further discussion of bacteria and the Original Final EIR finding of less-than-significant impacts with respect to bacteria, for both wet and dry weather, is provided in Original Final EIR Responses to Comment No. 32-8, Page 1094, No. 36-5, Page 1237, and No. 36-28, Page 1267. The original water quality analysis of bacteria for the Proposed Project therefore remains valid.

4.2.2 Ballona Creek Estuary Toxics TMDL

Sediment Criteria in the Ballona Creek Estuary TMDL: As noted above, the Toxics TMDL addresses toxic pollutants in the sediment (as sediment concentrations) of the Ballona Creek Estuary by specifying waste load allocations (i.e., the permissible discharge levels) for MS4 NPDES Permittees (the Los Angeles County Flood Control District, the County of Los Angeles, and 84 incorporated cities within the Los Angeles County Flood Control District, including the City of Los Angeles). In the Toxics TMDL, sediment-based load allocations for cadmium, copper, lead, silver, zinc, chlordane, DDT, PCBs, and PAHs were developed to address these sediment-impairing pollutants included on the 303(d) list.

Original Final EIR Impact Assessment with Respect to Toxics: The Original Final EIR for the Proposed Project concluded that, as a result of source and structural treatment controls, the

Proposed Project will maintain concentrations of sediments (Total Suspended Solids, or TSS) well below water quality benchmarks. Because sediment discharges to the Ballona Creek Estuary will be minimal, so too will any toxics potentially carried to the Estuary by sediments.

The Proposed Project includes significant pollutant source controls, structural treatment controls, and other design features that will reduce sediment discharges. For example, the Proposed Project will utilize filtration controls such as catch basin inserts, stormwater planter boxes and bioretention to reduce the runoff of sediment from streets and landscaped areas. Additionally, many of the constituents addressed in the Toxics TMDL are legacy constituents. DDT, PCBs, and chlordane have been banned and are no longer in use, but they do occasionally remain in sediment. The Proposed Project will “cap” the Project site with development (buildings, parking lots, etc.) and landscaping. This will ensure that the constituents, if present in site soils, do not get transported to the Freshwater Wetlands System or downstream receiving waters, including the Ballona Creek Estuary and Santa Monica Bay.

The primary treatment control of the Proposed Project for reducing sediment discharges to the Ballona Creek Estuary is the Freshwater Wetlands System. Sediment will be captured by the Riparian Corridor and the Freshwater Marsh, which ensures that if any of the TMDL constituent pollutants are attached to suspended sediment, they will be effectively removed prior to discharging to the Ballona Creek Estuary. Sediment toxicity levels are monitored in the Freshwater Wetlands System. If determined to be necessary based upon this sampling or based upon certain depths of sediment being reached, the sediment in the Freshwater Wetlands System will be removed (e.g., dredged). Removal of sediments due to elevated concentrations is not expected to be needed for decades, if ever. It is more likely that sediment accumulation levels would necessitate dredging, though there has been no consistent sediment accumulation or loss in the five years the Freshwater Marsh has been operating. Finally, due to the much higher average flow velocities in the Estuary as compared to the Freshwater Marsh, particularly during storm events, any suspended sediment that does pass through the Freshwater Marsh to the Estuary would be very fine and would not likely settle in the Estuary.

Based on the above, the Original Final EIR impacts evaluation concluded that runoff from the Proposed Project would not be a significant source of toxics, including sediment toxicity, and with consideration of the planned source and treatment control BMPs the Proposed Project impacts with respect to toxicity would be less than significant.

In addition to the analysis provided in the Original Final EIR, it is possible to calculate the maximum average sediment concentrations for certain TMDL constituents based on the Proposed Project’s expected sediment discharges. This methodology also supports the

conclusion that the impacts of the Proposed Project will be less than significant. As summarized in Table 55 on page 494 of the Original Draft EIR, the estimated average total suspended sediment concentration (TSS) to the main body of the Freshwater Marsh from all onsite and offsite areas after the completion of the Proposed Project is 29.4 mg/L. Assuming the estimated average total metals concentrations (TCu = 10.9 ug/L, TPb = 6.6 ug/L, and TZn = 83.3 ug/L) are completely associated with the TSS (a conservative assumption because a fraction of the metals concentrations are dissolved), the maximum possible estimated average sediment concentration discharged to the Freshwater Marsh can be calculated by dividing the metals concentrations by the TSS concentrations (See Table 2 below). As shown in Table 2, the maximum possible average modeled metals concentrations in sediment discharged to the Freshwater Marsh is orders-of-magnitude lower (53 to 212 times lower) than the sediment criteria used to develop the Ballona Creek Estuary Toxics TMDL load allocations. The Freshwater Marsh would also capture much of these sediments prior to discharge to the Estuary. Note that the Toxics TMDL sediment criteria are concentration-based. Consequently, the Proposed Project will not adversely impact the Ballona Creek Estuary Toxics TMDL, as its own discharges are expected to be well below the concentration limits.

Table 2. Estimate of the Maximum Possible Average Sediment Concentration Discharged to the Freshwater Marsh Based on the Modeled Constituents in the Original Final EIR.

Constituent	Units	Ballona Creek Estuary Toxics TMDL	Max Average Sediment Concentration Based on Modeled Metals	Ratio of Toxics TMDL to Max Average Sediment Concentration
Copper	mg/kg	34	0.37	92
Lead	mg/kg	46.7	0.22	212
Zinc	mg/kg	150	2.83	53

The other pollutants listed in the Toxics TMDL (cadmium, silver, chlordane, DDT, PCBs, and PAHs) are not expected to be present at significant concentrations in runoff from the Proposed Project. For example, as noted above and as discussed in Response to Comment No. 32-8 in the Original Final EIR, three of the compounds identified in the Toxics TMDL (DDT, PCBs, and chlordane) have been banned for several decades and will not be used at the Proposed Project. PAHs are still prevalent today, but are not commonly observed from residential land uses (the predominant land use planned for the Proposed Project).

Table 32-8 on Page 1091 of the Response to Comments in the Original Final EIR summarized the number of samples above and below analytical detection limits contained in the Los Angeles County Department of Public Works (LADPW) Stormwater Monitoring Database² for several bioaccumulative and toxic pollutants including cadmium and PAHs. The table also summarized the range of mean values reported by the LADPW and demonstrated that even when enough data were available to compute a mean, the values were all below the applicable CTR criteria even before consideration of the Proposed Projects BMPs. As discussed in Response to Comment No. 32-8 in the Original Final EIR, out of 75 analyses for PAHs for residential properties, 61 did not detect anything with a method detection limit of 0.1 parts per billion (ppb = $\mu\text{g}/\text{kg}$) and all detects, alone or in the aggregate were well below 300 parts per billion, the lowest observable effect level for PAHs reported in the NOAA sediment quality guidelines. The detection rate for silver (<1%, or 3 detects out of 313 samples for all land uses) is even more infrequently detected in untreated urban runoff than PAHs and therefore is not expected to be at detectable concentrations from the Proposed Project, particularly considering the significant treatment BMPs.

5 Summary and Conclusions

The impact assessment conducted in connection with the Original Draft EIR for the Proposed Project and the subsequent discussion and analysis provided in the Response to Comments in the Original Final EIR demonstrated that the Proposed Project would have less than significant impacts with respect to receiving water impairments and urban runoff constituents of concern. That analysis considered numerous water quality standards and constituents, including those forming the basis of the 2006 Toxics and 2007 Bacteria TMDLs for the Ballona Creek Estuary.

Since the Original Final EIR was prepared, the Los Angeles Regional Water Quality Control Board updated in 2006 (adopted in 2007), its Clean Water Act Section 303(d) List of Water Quality Limited Segments Requiring TMDLs. A draft 2008 303(d) list is currently being considered. Neither the adopted 2006 list nor the proposed 2008 list add new constituent pollutants to the 303(d) list. Thus, the Original Final EIR considered all constituent pollutants on the 2006 and 2008 lists.

The constituents in the Toxics and Bacteria TMDLs for the Ballona Creek Estuary were previously analyzed in the Original Final EIR for the Proposed Project. The Original Final EIR

² The database may be found at: http://ladpw.org/wmd/NPDES/wq_data.cfm.

concluded that the Proposed Project would comply with all applicable water quality standards and is not expected to create pollution, contamination or nuisance under the California Water Code. The water quality standards assessment was made with reference to the same water quality standards that are the basis for the Ballona Creek Estuary TMDLs. For these reasons, the impact assessment provided in the Original Final EIR remains valid.

Sincerely,



Eric W. Strecker, P.E.

Principal, Geosyntec Consultants

**APPENDIX D.iv:
REPORT ON PLAYA VISTA WSA, RON GASTELUM,
JULY 7, 2009**

Ronald Gastelum
5038 Range Horse Lane
Rolling Hills Estate, CA 90274

July 7, 2009

Mr. Bruce Lackow
President
Matrix Environmental
6701 Center Drive, Suite 900
Los Angeles, CA 90045

Report on Playa Vista WSA

Dear Mr. Lackow:

I have reviewed the Water Supply Assessment (WSA) for the Village at Playa Vista (Proposed Project) adopted by the Board of Water and Power Commission of the City of Los Angeles, Department of Water and Power (LADWP) on August 25, 2003, which allocated 745 acre feet per year (afy) (746 afy usage-1afy baseline), to the Proposed Project. Based on the factors described in this letter, and my experience in water supply development and management in California (resume attached), I am of the opinion that LADWP has and will continue to have sufficient water resources to meet the allocation in the WSA for the Proposed Project. In reaching my conclusion, I have relied on my knowledge of the State Water Project (SWP), the water supply resources of the Metropolitan Water District of Southern California (MWD), the current operations of the LADWP, and a review of the WSA and LADWP's 2005 Urban Water Management Plan (UWMP).

Water supply for growing urban areas in California has long required a multifaceted approach to manage the inherent vagaries of the natural hydrologic cycles. The City of Los Angeles has been particularly successful over time in developing multiple water resources, and in building and maintaining an efficient water delivery system. A core mission of the LADWP has consistently been to plan and develop sufficient supplies and infrastructure to meet the existing and reasonably foreseeable needs of its current and future residents and businesses.

In the midst of the most current drought and new regulatory challenges to its supplemental water supply from MWD, the City issued a Water Supply Action Plan (Action Plan) in May 2008. While the drought and the regulatory challenges continue, the Action Plan, building on the foundation of LADWP's UWMP, is a clear statement of the City's commitment and capability to meet all existing and expected new water supply demand for the foreseeable future. In specific reference to new demand the Action Plan states on page 1: "The premise of this Water Supply

Plan is that the City will meet all new demand for water-about 100,000 afy-through a combination of water conservation and recycling.”

Although there have been adverse water supply developments since the issuance of the WSA for the Proposed Project, there also have been developments that have had a specific positive impact on the water available to LADWP. A number of the responsible federal, state, regional and local water agencies have taken numerous actions in response to these developments. For example, the City adopted its Action Plan, as discussed above and in the attached Overview. Further, MWD continues to implement various water supply strategies pursuant its Water Surplus and Drought Management Plan (updated as of May 21, 2009) and current Integrated Resources Plan. The MWD May 21st report illustrates that even under the challenges it is facing, the agency is managing to meet demands in accordance with its established conservation, shortage allocation, and operational plans. Further information about MWD’s efforts is provided in the attached Overview.

Importantly, federal, state, regional and local agencies have taken actions to address structural deficiencies in the SWP, which is dependent on being able to move water for export through the Sacramento-San Joaquin Delta (the Delta). The Central Valley has been affected the most by the recent cutbacks in supplies from the SWP. Although Southern California has been significantly impacted as well, the effects have been moderated by the availability of stored water and other supplies. As described in the attached Overview, the response of the State of California and the federal Department of the Interior has been to accelerate statewide conservation, recycling, water storage development, and Delta water conveyance and environmental restoration improvements. Near term relief actions in the Delta, such as planned temporary barriers to separate endangered fish populations from water supply facilities, are expected to be placed in service by early 2010. Assuring a long term reliable water supply remains among the highest governmental priorities with significant financial and other resources dedicated to meeting that goal.

Finally, with respect to the water demand of this Proposed Project and other futures uses reflected in the 2003 WSA, it should be noted that actual water demand is likely to be less than that projected in the WSA for the Proposed Project

1. The 2003 WSA for the Proposed Project over estimates water consumption in at least two important ways. First, the water use is based on a Sewer Generation Rates table that relies on usage data that do not generally reflect the Proposed Project’s plan to incorporate various conservation measures, for example using ultra low-flow toilets and low-flow showerheads, consistent with LADWP’s conservation goals. Second, the Proposed Project is now served by available reclaimed water, which will be used for landscaping and reduce the potable water demand by at least 189 afy.

2. The projected annual growth rate for water usage for the City in 2003 was 1.3 percent. In 2005, the UWMP began assuming a 0.4 percent annual growth rate in recognition of updated forecasts from the Southern California Association of Governments. Less new demand is forecasted than was the case in 2003. It is important to note, as reported in the City's Action Plan, that Los Angeles has added almost 1 million more in population while not increasing water demand.

Based on my over 15 years of experience in the water industry, including 6 years as the head of the MWD, it is my opinion that the LADWP will be able to meet the water demand reflected in the WSA for the Proposed Project.

Please feel free to contact me for any further information that you may need.

Very truly yours,

A handwritten signature in black ink, appearing to read "Ronald R. Gastelum". The signature is stylized with a large initial "R" and a long horizontal stroke at the end.

Ronald R. Gastelum
ECI Inc. and Water Conservation Partners, Inc.

Overview Of Water Supplies Available To LADWP

Water supplies throughout California, particularly in Central California, are under stress. That stress is due to a number of factors such as drought and a reduction in the amount of water delivered through the State Water Project (SWP) attributable to a recent Biological Opinion for the Delta smelt in the Sacramento-San Joaquin Delta (the "Delta"). These challenges, however, have led various water agencies to adopt a number of plans and initiatives that address these matters to ensure the continued reliability and stability of our water supplies. Discussed in this overview are those policies and plans that have been adopted at: 1) the state level (by the California Department of Water Resources or "DWR"); 2) the regional level (by the Metropolitan Water District of Southern California "MWD"); and 3) the local level (by the Los Angeles Department of Water and Power or "LADWP").

At the State level, the reduction in SWP water has been due, in part, to reductions in the amount of water exported through the Delta imposed pursuant to a federal court decision and subsequent Biological Opinion. Those actions placed restrictions on Delta pumping due to the entrainment of Delta smelt in the SWP system pumps. To remedy this situation, DWR recently began the process of preparing the necessary environmental documentation and securing the needed permits for a key project in the Delta that would allow for continued operations of the SWP system while reducing impacts to the smelt. The "Franks Tract-Middle River Corridor Barrier Pilot Project," or as commonly referred to as the "Two Gates Project," involves testing two temporary barriers at different locations to partially isolate Middle River and Old River near Franks Tract. The temporary barriers would be tested in conjunction with preventative flow control actions and possibly modified Delta Cross Channel operations to maintain positive San Joaquin River outflow while reducing smelt and salmon migration to the export pumps. Modeling studies have shown this project could provide equivalent or better protection for the Delta smelt while reducing water supply costs. The completion of the Two Gates Project, combined with adjustments to the operation of the Delta Cross Channel to introduce more water into the western Delta, may practically eliminate the current conflict between the Delta smelt and pumping.

The State is also taking actions to implement a long term solution concerning the Delta. In December 2008 the Delta Vision Task Force appointed by Governor Schwarzenegger recommended the construction of such a dual conveyance system (i.e., through-Delta conveyance and Peripheral Canal), which would allow for the delivery of water through and around the Delta using new water conveyance facilities. Such a system would promote the restoration of the Delta ecosystem while delivering Sacramento River water to the south Delta state and federal pumps. Statewide planning for a dual conveyance system is well underway and the California Resources Agency expects the environmental documentation for the "Bay Delta Conservation Plan" to be completed in 2010. Water users would fund the design and construction of the conveyance system.

The State has taken other measures to address the recent water shortage. On February 27, 2009 Governor Schwarzenegger proclaimed a state of emergency in response to ongoing drought conditions. This proclamation was necessary in order to provide water agencies with the flexibility and funding necessary to move forward with adopting various measures required to provide greater stability of the state's water supplies. For instance, the order requests

that all urban water users immediately increase their water conservation activities in an effort to reduce their individual water use by 20 percent. The order also directs DWR to expedite water transfers by water users and suppliers. Finally, the order provides for the re-operation of major reservoirs in the state to minimize the impacts of drought. The order demonstrates the State's commitment to take immediate action to secure water supplies and enhance water supply reliability for the short and long term.

Further, in response to the Governor's order, DWR prepared California's Drought: Water Conditions & Strategies to Reduce Impacts, Report to the Governor (the "March 2009 DWR Report"). That report introduces several initiatives and activities, including expediting \$108 million for water management projects to assist regions in dealing with drought conditions; partnering with other water management agencies to develop a comprehensive plan to permanently reduce per-capita water use 20 percent by 2020; and subsidizing an effort among various state agencies to finalize dual plumbing standards. Also, pursuant to the March 2009 DWR Report, on April 30, 2009, DWR released its Draft 20x2020 Water Conservation Plan. The 20x2020 Water Conservation Plan provides a road map that maximizes the state's urban water efficiency and conservation opportunities between 2009 and 2020, and beyond. The plan was developed through the collaborative effort of a team of federal and state agencies, including DWR, the State Water Resources Control Board, California Energy Commission, Department of Public Health, California Public Utilities Commission, California Air Resources Board, and the U.S. Bureau of Reclamation.

Both long-term and short-term measures have also been taken on a regional level. MWD has taken aggressive action both in response to the recent cutbacks in SWP water and in response to the Governor's order. It should be noted, however, that even a 40 percent allocation of SWP water would produce about 850,000 acre feet of SWP water for MWD's service area¹, which is still well above MWD's worst case planning threshold established in its 2004 Integrated Resources Plan ("IRP"). In addition to its share of SWP water, MWD continues to invest heavily in water conservation, recycled water, and other measures to reduce imported water demand. It also has agreements with neighboring water agencies that allow it to augment supplies on the SWP and Colorado River systems.

MWD also has comprehensive plans in place to address drought conditions. MWD's current approach to managing water shortages has evolved from its experiences during the droughts of 1976-77 and 1987-92 into the Water Surplus and Drought Management Plan (the "WSDM Plan"). The WSDM Plan, which was adopted by MWD's Board of Directors in April 1999, establishes broad resource management strategies to meet full service demands. The WSDM Plan splits resource actions into two major categories: Surplus Actions and Shortage Actions. The WSDM Plan considers the region to be in surplus only after MWD has met all demands for water, including replenishment deliveries. The Surplus Actions store surplus water, first inside then outside the region. The Shortage Actions of the WSDM Plan are split into three sub-categories: Shortage, Severe Shortage and Extreme Shortage. Each category has associated actions that could be taken as a part of the response to prevailing shortage conditions.

¹ See MWD's Water Surplus and Drought Management Plan on water supply and demand as of May 21, 2009.

Conservation and water efficiency programs are part of MWD's resource management strategy through all categories. Under Shortage conditions, MWD may make withdrawals from storage based on location and ability to access and interrupt groundwater replenishment deliveries. Under Severe Shortage conditions, MWD will call for extraordinary drought conservation, reduce agricultural deliveries, exercise available options for water transfers and seek other water purchases. Under Extreme Shortage conditions, MWD will allocate or reduce water deliveries to its member agencies.

Pursuant to the WSDM Plan, MWD has recently approved the implementation of a more detailed allocation plan that accounts for supply shortages. The adoption of this allocation plan allows MWD to take the necessary action to protect and preserve future supplies, whether that action involves increasing rates, placing limitations on further supplies or imposing penalties on excessive water use. Over time, fluctuations in water supplies can lead to both shortages and surpluses, either of which requires careful planning and a system for effective management. MWD's water allocation plan is an important tool for managing these types of expected events.

Furthermore, pursuant to its IRP process, MWD has enhanced the reliability of its water supplies. One key component of MWD's IRP is the adoption of a planning buffer. The planning buffer provides for the identification of additional supplies, both imported and locally developed, to specifically address uncertainty in future supplies and demands attributable to such factors as the level of population and economic growth, water quality regulations, endangered species affecting sources of supplies, and periodic changes in climate and hydrology. MWD is currently in the process of preparing the next IRP update to evaluate supply reliability, accounting for changed conditions and new trends and managing uncertainties. That update is expected to be completed in 2009 or early 2010.

On the local level, LADWP and the City of Los Angeles are taking numerous actions to ensure a reliable water supply through actions such as increased enforcement and prohibitions of different water uses, and conservation promotion through stricter building codes, rebates, promotion of use of reclaimed water, and education about water conservation and xeric landscaping. On May 17, 2008, the City of Los Angeles and LADWP released a Water Supply Action Plan (Action Plan) entitled "Securing L.A.'s Water Supply," which serves as a blue print for creating sustainable sources of water so Los Angeles can reduce its dependence on imported supplies. The Action Plan is an aggressive multi-pronged approach that includes: investments in state-of-the-art technology; a combination of rebates and incentives; increased enforcement and expansion of the prohibited uses of water, the installation of smart sprinklers, efficient washers and urinals; and long-term measures such as expansion of water recycling and investment in cleaning up the local groundwater supply. The Action Plan also takes into account the realities of climate change and drought.

By employing such water management strategies as water conservation and water recycling, the Action Plan concludes that the City will meet all of its water demands, including demand for water due to projected population growth. The City has had a successful track record in this regard. As noted in the Action Plan, since the early 1980s, the City has invested millions of dollars in conservation measures, particularly the installation of low-flow toilets and shower heads. As a result of these efforts, L.A.'s water demand remains about the same as it was

25 years ago, despite a population increase of 1 million people. Based on the track record and the strategies set forth in the Action Plan, the City has determined that by 2019, half of the City's new water demand will be satisfied by recycled water supplies, and by 2030 the other half will be met through increased conservation efforts.

The Action Plan also specifically addresses current and future SWP supply shortages. LADWP estimates that the Federal Court decision on Delta smelt will limit MWD exports of their anticipated SWP supply by up to 30 percent. The Action Plan concludes, however, that MWD's actions will ensure continued reliability of its water deliveries. The Action Plan states that "[d]espite concerns about ongoing water shortages and higher costs, MWD has upheld its pledge to plan for emergencies and natural disasters throughout the region by storing millions of acre-feet of water in various surface and groundwater storage accounts and emergency reserves."² In total, this reserve of water supplies buffers the severity of a potential shortage. Furthermore, by focusing on demand reduction, implementation of the Action Plan will ensure that long-term dependence on MWD will not be exacerbated by potential future shortages.

In sum, despite the challenges facing the state's water supplies, State, regional and local agencies have been proactive in addressing those challenges and ensuring water supplies remain sufficient to support current and future demands. By reducing reliance on imported water and employing aggressive conservation strategies, agencies such as DWR, MWD and LADWP can ensure the continued reliability of our water supply regardless of the challenge, whether that challenge is due to climate change, drought, or SWP cutbacks. For decades these agencies have developed and refined their water supply plans to address and account for these very types of events. As recently noted by LADWP in the WSA approved for the Village at Westfield Topanga project, the current decrease in water supplies is consistent with historical multiple-dry-year water cycles accounted for in its 2005 UWMP. As a result of this comprehensive planning effort, substantial progress has already been made in reducing statewide water demands and increasing supplies through conservation, groundwater storage and the construction of new infrastructure projects. Based on all of these factors, LADWP's water supply demands should continue to be met both in the short-term and the long-term.

² Mayor Antonio Villaraigosa and LADWP, *Securing L.A.'s Water Supply*, at p. 8 (May 2008).

Ronald R. Gastelum
Career Brief

Ronald R. Gastelum's professional career began in 1971 following his graduation from UCLA Law School. His legal career has focused on environmental, municipal, and corporate law, with a particular emphasis on water, waste management, and energy. While each area of practice has required expertise in the applicable law, his expertise can best be described as essential public services or public infrastructure, including a detailed understanding of the associated administrative and legislative processes, finance, strategic planning, and public relations. Throughout his career Mr. Gastelum has developed extensive political and business contacts at the highest levels in California, other western states and Washington D.C.

Mr. Gastelum has also served in various capacities as a business manager, including as the Chief Executive Officer of The Metropolitan Water District of Southern California. In that capacity, Mr. Gastelum was responsible for managing the operations of one of the largest water suppliers in the world with an annual budget of over \$1 billion, serving the 18 million residents of urban Southern California. At Metropolitan, Mr. Gastelum was notably successful in leading the agency to further diversify the region's water supply sources with the development of new large water transfer, groundwater banking, reclaimed water, and conservation programs. This was during a period of extended drought conditions, a statewide energy crisis, and a major reduction in Southern California's Colorado River water rights, set in motion by an adverse court decision in the 1960's (Arizona v. California). During his tenure as CEO, the agency accomplished a major restructuring of its management, adopted a new Strategic Plan with unprecedented public participation, updated its long term resources plan, successfully defended multi-million dollar construction, employment and water rate litigation, completed a \$2 billion dollar new reservoir, adopted a long term capital improvement and finance plan, and completed a major overhaul of its rate structure.

Since retiring from Metropolitan in December 2004, Mr. Gastelum has formed a new Southern California energy supply company, and is developing a water conservation company. He also served in an interim capacity as the Executive Vice President of the L.A. Area Chamber of Commerce to provide leadership and management during the transition to a new CEO. Mr. Gastelum now serves on the Board of Directors of the Chamber. He also serves as Special Counsel to Cordoba Corporation, and engineering and construction management firm, as Special Counsel on Energy and Water.

Mr. Gastelum served as General Counsel for BKK Corporation, a solid waste management company, and Greenfield Environmental, a hazardous waste management company, beginning in 1982 until the assets of both companies were sold in 1998. In that capacity he managed all litigation and administrative environmental compliance matters, including extensive regulatory and legislative affairs in California and at the federal level. Prior to 1982, Mr. Gastelum was a partner in the law firm of Ochoa & Sillas, a Deputy General Counsel for Metropolitan Water District, and a staff attorney for California Rural Legal Assistance and Denver Legal Aid.

**APPENDIX E:
LETTERS FROM CITY AND APPLICANT REGARDING
NOTICE**

DEPARTMENT OF
CITY PLANNING
200 N. SPRING STREET, ROOM 525
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CITY PLANNING COMMISSION

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CITY OF LOS ANGELES
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March 12, 2009

Sabrina Venskus
171 Pier Avenue, Suite 204
Santa Monica, CA 90405

Dear Ms. Venskus:

I am writing in response to your March 5, 2009 letter requesting to extend the comment period on the Village at Playa Vista RS-DEIR (Case No. ENV-2002-6129-EIR). Your letter alleges defects in the mailing of the Notice of Completion and Availability of Recirculated Sections of Draft Environmental Impact Report No. ENV-2002-6129-EIR (Notice) sent out on January 29th, 2009 and the Planning Department website. We respectfully disagree.

Your letter lists seven individuals or organizations that you claim did not receive the Notice (Heal the Bay, Sempra Energy Utilities, Natural Resources Defense Council (NRDC), Friends of Sunset Park, Koreh LA, and Marcia Hanscom of Ballona Institute and Wetlands Action Network). I have confirmed that these individuals or organizations were included on the City's Notice distribution list and were sent Notices. Your letter does not claim that you or Ballona Wetlands Land Trust (BWLTL) failed to receive the Notice and I have also confirmed that you both were on the City's Notice distribution list and were sent Notices.

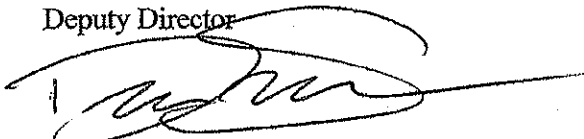
Lastly, the Notice posted on the City's website is not a requirement of the California Environmental Quality Act (CEQA) Guidelines, but nonetheless, the Notice was posted on the City website as a courtesy, at <http://cityplanning.lacity.org/>. Instructions were included in the Notice mailing that specified the website address and the location online where the RS-DEIR can be accessed by the public (click on "Environmental" and then "Draft Environmental Impact Reports"). In addition, the Notice listed the location of eight public libraries where hard copies of the RS-DEIR were made available to the public. Therefore, the City has complied with the CEQA Guidelines with respect to mailing of the Notice and making the RS-DEIR available to the public.

Notwithstanding the City's compliance with all applicable notice requirements, the project applicant, Playa Capital Company, LLC has voluntarily requested that the City

distribute a new Notice and extend the public comment period for 45 more days until April 30, 2009. We have addresses for the seven individuals or organizations you listed in your letter. If you would like to provide supplemental addresses for these seven individuals or organizations, or any other interested parties, please provide those to Department of City Planning by fax and email no later than 3:00 pm on Friday, March 13th, 2009. Please send supplemental addresses to david.weintraub@lacity.org and myself at david.somers@lacity.org and our fax number (213) 978-1343.

Sincerely,

Vincent P. Bertoni, AICP
Deputy Director

A handwritten signature in black ink, appearing to read "David J. Somers", written over a horizontal line.

David J. Somers
Environmental Review Coordinator

cc: Honorable City Councilman Bill Rosendahl
Michael LoGrande, Chief Zoning Administrator, City Planning Department

LATHAM & WATKINS LLP

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Los Angeles, California 90071-1680
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London	Shanghai
Los Angeles	Silicon Valley
Madrid	Singapore
Milan	Tokyo
Moscow	Washington, D.C.

March 10, 2009

Mr. David Somers
City of Los Angeles, Planning Department
200 N. Spring Street, Room 750
Los Angeles, CA 90012

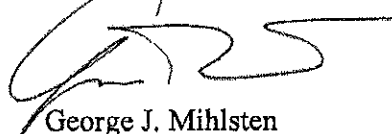
Dear Mr. Somers:

I represent Playa Capital Company. I am writing in reference to the March 5, 2009 letter to you from Ms. Sabrina Venskus who is in litigation against the City of Los Angeles and Playa Capital Company. Ms. Venskus is requesting an extension of the comment period on the Village at Playa Vista RS-DEIR (Case No. ENV-2002-6129-EIR). Her letter alleges defects in the mailing of the "Notice of Completion and Availability of Recirculated Sections of Draft Environmental Impact Report No. ENV-2002-6129-EIR" ("Notice") and the Planning Department website.

First, I point out that Ms. Venskus is not complaining that her own client, Ballona Wetlands Land Trust, did not receive notice because Notice in fact was sent to Ballona Wetlands Land Trust. Second, as for Ms. Venskus' concerns regarding the mailing of the Notice to entities that are not her client, we understand the City has mailed out over 6,000 Notices out. Lastly, the Notice posted on the City's website is not legally required, but nonetheless, the Notice was posted on the City website as a courtesy. There was no legal defect in either the mailing of the Notice or the Planning Department's website.

Setting that aside and given Ms. Venskus' litigious history with respect to the City on this project and other matters and in the interests of making sure all parties have a full opportunity to comment on the RS-DEIR, Playa Capital Company requests that the City simply reissue the Notice and extend the comment period for an additional 45 days. Frankly, we are more interested in ensuring that public has ample opportunity to comment rather than engaging in another frivolous claim by Ms. Venskus.

Sincerely,



George J. Mhlsten
of LATHAM & WATKINS LLP

cc: Mr. Marc Huffman

APPENDIX F:
RS-DEIR COMMENT LETTERS

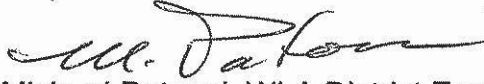
Letter No. 1

FORM GEN. 160 (Rev. 11-02)

CITY OF LOS ANGELES INTERDEPARTMENTAL CORRESPONDENCE

Date: April 8, 2009

To: David J. Somers, Planning Assistant
City Planning Department
Stop 395



From: Michael Patonai, WLA District Engineer
Bureau of Engineering

Subject: **THE VILLAGE AT PLAYA VISTA – NOTICE OF COMPLETION OF
RE-CIRCULATED SECTIONS OF DRAFT EIR**

This memo is presented to expand upon the Interdepartmental Correspondence (the Correspondence) dated March 12, 2009 addressed to David J. Somers of the EIR Unit, Division of Land/Environmental Review, Department of City Planning from Brent Lorscheider, Division Manager of the Wastewater Engineering Services Division, Bureau of Sanitation (Attachment #1). This Correspondence discusses the City's analysis of the sewer infrastructure and projected capacity. The last paragraph of the letter includes standard language stating "Further detailed gauging and evaluation will be needed as part of the permit process to identify a sewer connection point. If the public sewer has insufficient capacity then the developer will be required to build sewer lines to a point in the sewer with sufficient capacity. A final approval for sewer capacity and connection permit will be made at that time." This is a typical statement of the Bureau of Sanitation prior to plan approval, allowing for another final review of the capacity of the wastewater collection system tied to the permitting and connection to that system. However, as discussed below, in the case of the proposed Village at Playa Vista project, this additional review of capacity has, in fact, already occurred.

As discussed in the RS-DEIR, the Village at Playa Vista Project was originally approved by the City in September 2004. The Village approvals were subsequently vacated in compliance with a California Court of Appeals decision issued in September 2007. However, between the original 2004 approval and the appellate court's 2007 opinion, activity in furtherance of the project did occur. One such activity in the 2005 time frame was the review of sewer capacity and sewer connection plans by the West Los Angeles District of the Bureau of Engineering (Attachment #2). Specifically, at the time of permitting three sewer connection points from the on-site sewer system to the 42" diameter Marina Interceptor Sewer in Jefferson Boulevard, the Bureau of Engineering performed an evaluation of the capacity of the local and regional wastewater collection system and determined it had adequate capacity. The data provided by the Bureau of

Sanitation in its Correspondence, and the analysis contained in the RS-DEIR for the Proposed Village at Playa Vista Project, indicates that this determination remains valid and confirms that adequate sewer capacity exists for the Proposed Village at Playa Vista Project.

If you have any questions, please call me at (310) 575-8381.

MP:JB:mjw

H:Memo-Ltr/Village at Playa Vista Projected Sewer Capacity Letter 04 08 09

Attachments

cc: w/o attachment

Michael J. Crehan, P.E.

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

File: SC.CE.

DATE: March 12, 2009

TO: David J. Somers, EIR Unit
Division of Land/Environmental Review
Department of City Planning

RECEIVED
CITY OF LOS ANGELES

MAR 18 2009

FROM: 
Brent Lorscheider, Division Manager
Wastewater Engineering Services Division
Bureau of Sanitation

ENVIRONMENTAL
UNIT

SUBJECT: Village at Playa Vista – Notice of Completion of Re-circulated Sections of Draft EIR

This is in response to your January 29, 2009 letter requesting wastewater service information for the proposed project. The Bureau of Sanitation, Wastewater Engineering Services Division (WESD), has conducted a preliminary evaluation of the potential impacts to the wastewater system for the proposed project.

Projected Wastewater Discharges for the Proposed Project:

Type Description	Average Daily Flow per Type Description (GPD/UNIT)	Proposed No. of Units	Average Daily Flow (GPD)
<i>Proposed</i>			
Residential (2 BR)	160 GPD/DU	2,600 DU	416,000
Office Building	180 GPD/1000 SQ.FT	175,000 SQ.FT	31,500
Retail	80 GPD/1000 SQ.FT	150,000 SQ.FT	12,000
Civil/Institutional Facilities	80 GPD/1000 SQ.FT	40,000 SQ.FT	3,200
Total			462,700

SEWER AVAILABILITY

The sewer infrastructure in the vicinity of the proposed project includes the existing 42-inch Marina Interceptor Sewer (MIS) on Jefferson Blvd. The sewage from the existing line feeds into the Ballona Creek Pump Station, and then continues onto a 36-inch force main on Sepulveda Blvd, before discharging into the 114-inch North Central Outfall Sewer (NCOS). Ultimately, the sewage flow will be conveyed to the Hyperion Treatment Plant.

Based on Mike Urban modeling data, the projected dry weather conditions for the year 2010 and 2020 for the MIS, 36-inch Force Main, and the NCOS are as follows:

Sewer	ADWF (MGD)		PDWF (MGD)	
	2010	2020	2010	2020
MIS	1.43	1.60	1.91	2.13
36-inch Force Main	5.03	5.63	6.74	7.54
NCOS	55.8	58.0	66.1	68.7

Based on the estimated flows, it appears the sewer system might be able to accommodate the total flow for your proposed project. Further detailed gauging and evaluation will be needed as part of the permit process to identify a sewer connection point. If the public sewer has insufficient capacity then the developer will be required to build sewer lines to a point in the sewer with sufficient capacity. A final approval for sewer capacity and connection permit will be made at that time.

If you have any questions, please call Abdul Danishwar of my staff at (323)342-6220.

SEWER AREA STUDY
CALCULATIONS AND REPORT
For
PLAYA VISTA - PHASE 2
TRACT 60110-01

Psomas Project No.: IPCC0207.48
January 20, 2005

TABLE OF CONTENTS

Section 1	INTRODUCTION AND SUMMARY
1.0	Introduction
1.1	Summary of Proposed Sewer System
1.2	Summary of Data
Section 2	METHODOLOGY AND DESIGN CRITERIA
2.1	Methodology
2.2	Design Criteria

APPENDIX

Sewer Area Study Map for Tracts 60110-01

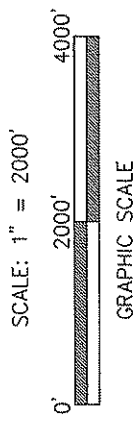
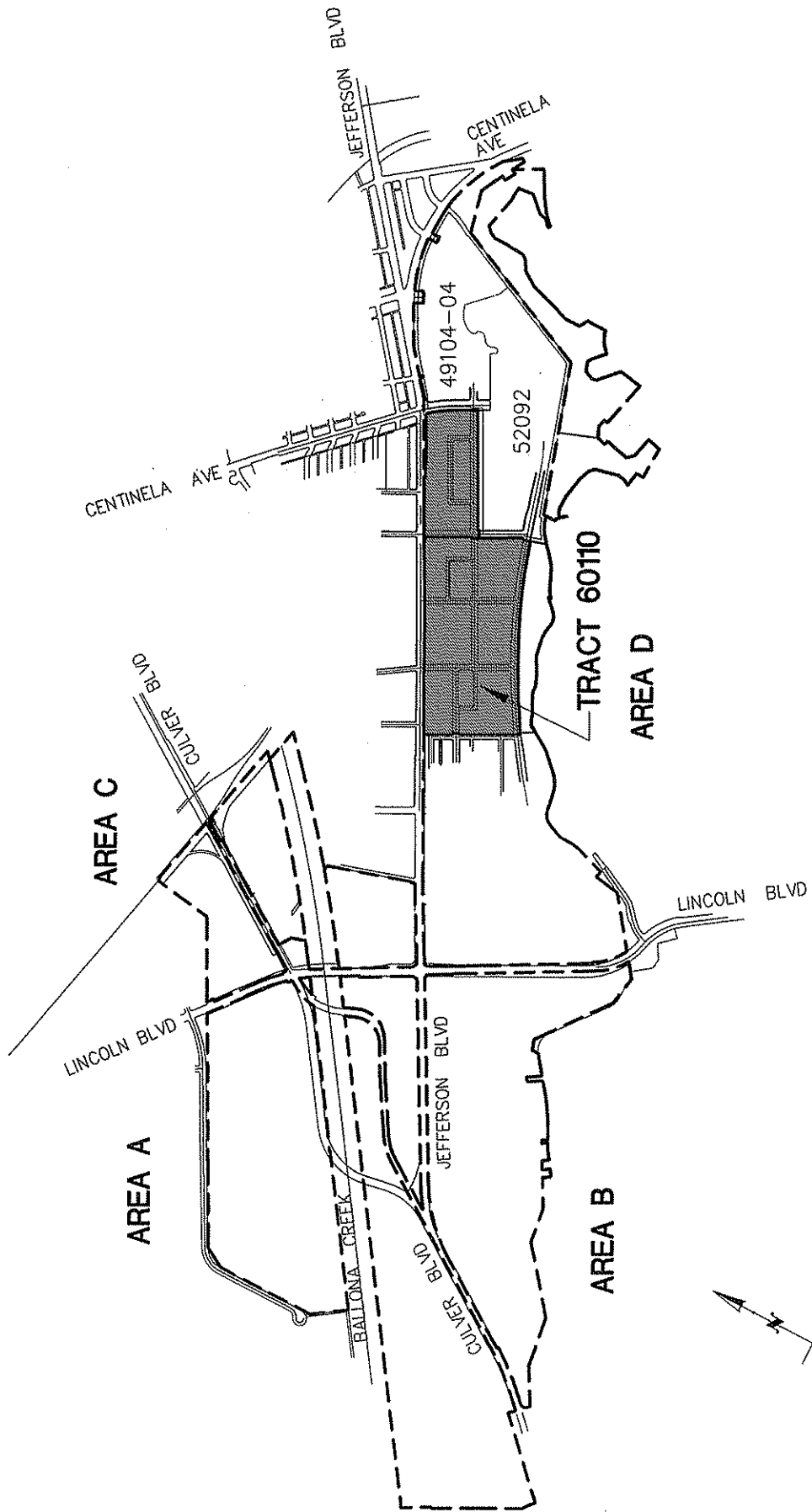
1.1 SUMMARY OF PROPOSED SEWER SYSTEM

The proposed sewer system improvements will provide for the conveyance of the estimated Peak Dry Weather Flows generated from tributary lot areas in the Tentative Tract 60110-01. The sewer system which is comprised of 3 tributary area systems will operate under gravity. Onsite branch mains, ultimately collected into 3 respective lines and routed offsite within the Jefferson Boulevard right-of-way will connect to a proposed City of L.A. sewer system (Marina Interceptor Sewer) via three "live connections" to the sewer.

The total estimated Peak Dry Weather Flow (PDWF) generated from the tributary lot areas is 2.3666 cfs. Pipe sizes for the system range from 8" diameter at the upstream end to 12" at the downstream end. The points of connection to the proposed sewer system, will be made by installing new manholes and tapping into the existing sewer. Complete, approved design plans for the proposed sewer system within Centinela Avenue and Jefferson Boulevard (The Marina Interceptor Sewer - W.O. E2002181) are assigned City of Los Angeles, Bureau of Engineering log number D-31427.

Sewer flows from the Marina Interceptor Sewer are conveyed to the existing Ballona Creek Pumping Plant (No. 654) approximately 2 blocks to the north. The pumping plant is located on the southeast corner of Juniette Street and Inglewood Boulevard

Tract 60110-01 sewer system improvements and the associated tributary areas are shown on a 1" = 100' scale Sanitary Sewer Area Study Map included in the appendix of this report.



SCALE: 1" = 2000'

GENERAL SITE MAP

PLAYA VISTA - PHASE 2 TRACTS 60110

FIGURE 1.2-1

PLAYA VISTA PHASE 2 TRACT 60110 - PUBLIC SEWER SYSTEM
 DETAILED TRIBUTARY AREA FLOW CALCULATIONS

SEWER LINE	LINE SEGMENT	LATERAL Main Segment-Lot No.	LOT AND BUILDING INFORMATION					ESTIMATED SEWER FLOWS - CITY OF LOS ANGELES BUREAU OF ENGINEERING CRITERIA								
			LOT NO. or LOT NO. - BLDG. NO.	BUILDING TYPE or LAND USE	LOT or BUILDING AREA (sf)	LOT or BUILDING AREA (acre)	ZONE Class.	Dwelling Unit Density (du/acre)	Unit (du)	Average Daily Flow Factor Table F200 (gpd/unit)	Average Dry Weather Flow (ADWF) (gpd)	Average Dry Weather Flow From Lot Lateral/Bldg. (ADWF) (cfs)	Contributing Upstream Line Number(s)	Additional AVERAGE DRY WEATHER FLOW From Upstream Pipes (cfs)	TOTAL AVERAGE DRY WEATHER FLOW (ADWF) (cfs)	TOTAL PEAK DRY WEATHER FLOW (PDWF) (cfs)
East System																
4		4E-71b	71	Rental	32,141	0.7378	R4 (PV)	75 du/acre	55 du	225 gpd/unit	12,451 gpd	0.0193 cfs	NONE	0.0000 cfs	0.0193 cfs	0.0740 cfs
4		4E-71a	71	Rental	32,141	0.7378	R4 (PV)	75 du/acre	55 du	225 gpd/unit	12,451 gpd	0.0193 cfs	NONE	0.0000 cfs	0.0193 cfs	0.0740 cfs
4	4E												4E-71b,a	0.0385 cfs	0.0385 cfs	0.1386 cfs
4		4D-70	70	Rental	63,946	1.4680	R4 (PV)	75 du/acre	110 du	225 gpd/unit	24,772 gpd	0.0383 cfs	NONE	0.0000 cfs	0.0383 cfs	0.1379 cfs
4	4D												4E,4D-70	0.0769 cfs	0.0769 cfs	0.2589 cfs
4		4C-68	68	P625	73,299	1.6827	R4 (PV)	45 du/acre	76 du	225 gpd/unit	17,102 gpd	0.0265 cfs	NONE	0.0000 cfs	0.0265 cfs	0.0986 cfs
4		4C-72	72	P925	70,215	1.6119	R4 (PV)	20 du/acre	32 du	225 gpd/unit	7,199 gpd	0.0111 cfs	NONE	0.0000 cfs	0.0111 cfs	0.0451 cfs
4	4C												4D,4C-68,72	0.1145 cfs	0.1145 cfs	0.3713 cfs
4		4B-67	67	Park	115,268	2.6462	R4 (PV)		6 fixtures	120 gpd/unit	720 gpd	0.0011 cfs	NONE	0.0000 cfs	0.0011 cfs	0.0056 cfs
4		4B73	73	Pool	33,750	0.7748	R4 (PV)		10 fixtures	120 gpd/unit	1,200 gpd	0.0019 cfs	NONE	0.0000 cfs	0.0019 cfs	0.0089 cfs
4		4B-66	66	P350	75,796	1.7400	R4 (PV)	48 du/acre	83 du	225 gpd/unit	18,675 gpd	0.0289 cfs	NONE	0.0000 cfs	0.0289 cfs	0.1068 cfs
4		4B-74	74	P925	70,215	1.6119	R4 (PV)	20 du/acre	32 du	225 gpd/unit	7,199 gpd	0.0111 cfs	NONE	0.0000 cfs	0.0111 cfs	0.0451 cfs
4	4B												4C,4B-67,73,66,74	0.1575 cfs	0.1575 cfs	0.4955 cfs
4		4A-64	64	Senior Rental	65,211	1.4970	R4 (PV)	72 du/acre	107 du	225 gpd/unit	24,090 gpd	0.0373 cfs	NONE	0.0000 cfs	0.0373 cfs	0.1345 cfs
4		4A-63	63	Assisted Living	65,076	1.4939	R4 (PV)	70 du/acre	105 du	225 gpd/unit	23,530 gpd	0.0364 cfs	NONE	0.0000 cfs	0.0364 cfs	0.1317 cfs
4	4A												4B,4A-64,63	0.2312 cfs	0.2312 cfs	0.7014 cfs
3		3A-J	100	Tract 52092-Area J, Park					6 fixtures	120 gpd/unit	720 gpd	0.0011 cfs	NONE	0.0000 cfs	0.0011 cfs	0.0056 cfs
3	3A												3A-J	0.0011 cfs	0.0011 cfs	0.0056 cfs
2	2A												4A,3A	0.2323 cfs	0.2323 cfs	0.7044 cfs
5		5A-62	62	P525	53,920	1.2378	R4 (PV)	45 du/acre	56 du	225 gpd/unit	12,494 gpd	0.0193 cfs	NONE	0.0000 cfs	0.0193 cfs	0.0742 cfs
5		5A-61	61	P525	51,919	1.1919	R4 (PV)	45 du/acre	53 du	225 gpd/unit	12,030 gpd	0.0186 cfs	NONE	0.0000 cfs	0.0186 cfs	0.0718 cfs
5		5A-57	57	P225	63,671	1.4617	R4 (PV)	50 du/acre	73 du	225 gpd/unit	16,424 gpd	0.0254 cfs	NONE	0.0000 cfs	0.0254 cfs	0.0951 cfs

Table 1.2-2
1 of 6

PLAYA VISTA PHASE 2 TRACT 60110 - PUBLIC SEWER SYSTEM
 DETAILED TRIBUTARY AREA FLOW CALCULATIONS

SEWER LINE	LINE SEGMENT	LATERAL Main Segment-Lot No.	LOT AND BUILDING INFORMATION					ESTIMATED SEWER FLOWS - CITY OF LOS ANGELES BUREAU OF ENGINEERING CRITERIA								
			LOT NO. or LOT NO. - BLDG. NO.	BUILDING TYPE or LAND USE	LOT or BUILDING AREA (sf)	LOT or BUILDING AREA (acre)	ZONE Class.	Dwelling Unit Density (du/acre)	Unit (du)	Average Daily Flow Factor Table F200 (gpd/unit)	Average Dry Weather Flow (ADWF) (gpd)	Average Dry Weather Flow From Lot Lateral/Bldg. (ADWF) (cfs)	Contributing Upstream Line Number(s)	Additional AVERAGE DRY WEATHER FLOW From Upstream Pipes (cfs)	TOTAL AVERAGE DRY WEATHER FLOW (ADWF) (cfs)	TOTAL PEAK DRY WEATHER FLOW (PDWF) (cfs)
LOTS IN TRACT 60110																
5	5A															
1		1B-53	53	P725	52,548	1.2063	R4 (PV)	41 du/acre	50 du	225 gpd/unit	11,251 gpd	0.0174 cfs	NONE	0.0000 cfs	0.0174 cfs	0.0675 cfs
1	1B												5A,2A,1B-53	0.3130 cfs	0.3130 cfs	0.9228 cfs
1		1A-52	52	P825	52,644	1.2085	R4 (PV)	35 du/acre	43 du	225 gpd/unit	9,569 gpd	0.0148 cfs	NONE	0.0000 cfs	0.0148 cfs	0.0583 cfs
1		1A-51	51	P825	52,564	1.2067	R4 (PV)	35 du/acre	42 du	225 gpd/unit	9,554 gpd	0.0148 cfs	NONE	0.0000 cfs	0.0148 cfs	0.0582 cfs
1		1A-65	65	Senior Rental	65,131	1.4952	R4 (PV)	72 du/acre	107 du	225 gpd/unit	24,061 gpd	0.0372 cfs	NONE	0.0000 cfs	0.0372 cfs	0.1344 cfs
1	1A												1B,1A-52,51,65	0.3799 cfs	0.3799 cfs	1.0994 cfs

PLAYA VISTA PHASE 2 TRACT 60110 - PUBLIC SEWER SYSTEM
 DETAILED TRIBUTARY AREA FLOW CALCULATIONS

SEWER LINE	LINE SEGMENT	LATERAL Main Segment-Lot No.	LOT AND BUILDING INFORMATION					ESTIMATED SEWER FLOWS - CITY OF LOS ANGELES BUREAU OF ENGINEERING CRITERIA								
			LOT NO. or LOT NO. - BLDG. NO.	BUILDING TYPE or LAND USE	LOT or BUILDING AREA (sf)	LOT or BUILDING AREA (acre)	ZONE Class.	Dwelling Unit Density (du/acre)	Unit (du)	Average Daily Flow Factor Table F200 (gpd/unit)	Average Dry Weather Flow (ADWF) (gpd)	Average Dry Weather Flow From Lot Lateral/Bldg. (ADWF) (cfs)	Contributing Upstream Line Number(s)	Additional AVERAGE DRY WEATHER FLOW From Upstream Pipes (cfs)	TOTAL AVERAGE DRY WEATHER FLOW (ADWF) (cfs)	TOTAL PEAK DRY WEATHER FLOW (PDWF) (cfs)
Central System																
8		8C-60	60	P1000	75,690	1.7376	R4 (PV)	33 du/acre	58 du	225 gpd/unit	13,050 gpd	0.0202 cfs	NONE	0.0000 cfs	0.0202 cfs	0.0772 cfs
8		8C-59	59	P825	37,590	0.8629	R4 (PV)	36 du/acre	31 du	225 gpd/unit	6,918 gpd	0.0107 cfs	NONE	0.0000 cfs	0.0107 cfs	0.0435 cfs
8		8C-75	75	Park	153,130	3.5154	R4 (PV)		6 fixtures	120 gpd/unit	720 gpd	0.0011 cfs	NONE	0.0000 cfs	0.0011 cfs	0.0056 cfs
8	8C												8C-60,59,75	0.0320 cfs	0.0320 cfs	0.1172 cfs
8	8B												8C	0.0320 cfs	0.0320 cfs	0.1172 cfs
8		8A-48	48	P775	47,584	1.0924	R4 (PV)	61 du/acre	66 du	225 gpd/unit	14,934 gpd	0.0231 cfs	NONE	0.0000 cfs	0.0231 cfs	0.0873 cfs
8		8A-58	58	P825	29,646	0.6806	R4 (PV)	36 du/acre	24 du	225 gpd/unit	5,456 gpd	0.0084 cfs	NONE	0.0000 cfs	0.0084 cfs	0.0351 cfs
8		8A-44	44	P650, w/ shop house	21,799	0.5004	R4 (PV)	48 du/acre	24 du	225 gpd/unit	5,372 gpd	0.0083 cfs	NONE	0.0000 cfs	0.0083 cfs	0.0346 cfs
8	8A												8B,8A-48,58,44	0.0719 cfs	0.0719 cfs	0.2437 cfs
11		11A-54	54	Park	137,818	3.1639	R4 (PV)		6 fixtures	120 gpd/unit	720 gpd	0.0011 cfs	NONE	0.0000 cfs	0.0011 cfs	0.0056 cfs
11		11A-56	56	P425	52,415	1.2033	R4 (PV)	48 du/acre	57 du	225 gpd/unit	12,936 gpd	0.0200 cfs	NONE	0.0000 cfs	0.0200 cfs	0.0766 cfs
11		11A-55	55	P425	52,439	1.2038	R4 (PV)	48 du/acre	58 du	225 gpd/unit	12,942 gpd	0.0200 cfs	NONE	0.0000 cfs	0.0200 cfs	0.0767 cfs
	11A												11A-54,56,65	0.0412 cfs	0.0412 cfs	0.1471 cfs
10		10A-30	30	Commercial and Rental over Commercial, 32% Retail, 38% Office/Commercial, 30% Residential	19,792	0.4544	C2 (PV)	16 du/acre	7 du	64 gpd/1000sf	1,271 gpd	0.0020 cfs	NONE	0.0000 cfs	0.0020 cfs	0.0094 cfs
10		10A-39	39	P650, w/ shop house	21,138	0.4853	C2 (PV)	48 du/acre	23 du	225 gpd/unit	5,209 gpd	0.0081 cfs	NONE	0.0000 cfs	0.0081 cfs	0.0336 cfs
10		10A-31	31	Commercial and Rental over Commercial, 32% Retail, 38% Office/Commercial, 30% Residential	19,792	0.4544	C2 (PV)	16 du/acre	7 du	64 gpd/1000sf	1,271 gpd	0.0020 cfs	NONE	0.0000 cfs	0.0020 cfs	0.0094 cfs
10		10A-40	40	P650, w/ shop house	21,138	0.4853	C2 (PV)	48 du/acre	23 du	225 gpd/unit	5,209 gpd	0.0081 cfs	NONE	0.0000 cfs	0.0081 cfs	0.0336 cfs
10		10A-32	32	Commercial and Rental over Commercial, 32% Retail, 38% Office/Commercial, 30% Residential	19,794	0.4544	C2 (PV)	16 du/acre	7 du	64 gpd/1000sf	1,271 gpd	0.0020 cfs	NONE	0.0000 cfs	0.0020 cfs	0.0094 cfs
10		10A-41	41	P650, w/ shop house	10,570	0.2427	C2 (PV)	48 du/acre	12 du	225 gpd/unit	2,605 gpd	0.0040 cfs	NONE	0.0000 cfs	0.0040 cfs	0.0180 cfs

Table 1.2-2
3 of 6

PLAYA VISTA PHASE 2 TRACT 60110 - PUBLIC SEWER SYSTEM
 DETAILED TRIBUTARY AREA FLOW CALCULATIONS

SEWER LINE	LINE SEGMENT	LATERAL Main Segment-Lot No.	LOT AND BUILDING INFORMATION					ESTIMATED SEWER FLOWS - CITY OF LOS ANGELES BUREAU OF ENGINEERING CRITERIA								
			LOT NO. or LOT NO. - BLDG. NO.	BUILDING TYPE or LAND USE	LOT or BUILDING AREA (sf)	LOT or BUILDING AREA (acre)	ZONE Class.	Dwelling Unit Density (du/acre)	Unit (du)	Average Daily Flow Factor Table F200 (gpd/unit)	Average Dry Weather Flow (ADWF) (gpd)	Average Dry Weather Flow From Lot Lateral/Bldg. (ADWF) (cfs)	Contributing Upstream Line Number(s)	Additional AVERAGE DRY WEATHER FLOW From Upstream Pipes (cfs)	TOTAL AVERAGE DRY WEATHER FLOW (ADWF) (cfs)	TOTAL PEAK DRY WEATHER FLOW (PDWF) (cfs)
LOTS IN TRACT 60110																
10		10A-34	34	Commercial and Rental over Commercial, 32% Retail, 38% Office/Commercial, 30% Residential	10,772	0.2473	C2 (PV)	16 du/acre	4 du	64 gpd/1000sf	692 gpd	0.0011 cfs	NONE	0.0000 cfs	0.0011 cfs	0.0054 cfs
10		10A-42	42	P650, w/ shop house	11,181	0.2567	C2 (PV)	48 du/acre	12 du	225 gpd/unit	2,755 gpd	0.0043 cfs	NONE	0.0000 cfs	0.0043 cfs	0.0189 cfs
	10A												10A-30,39,31,40,32,41,34,42	0.0314 cfs	0.0314 cfs	0.1151 cfs
7		7A-33	33	Commercial and Rental over Commercial, 32% Retail, 38% Office/Commercial, 30% Residential	10,208	0.2343	C2 (PV)	16 du/acre	4 du	64 gpd/1000sf	655 gpd	0.0010 cfs	NONE	0.0000 cfs	0.0010 cfs	0.0052 cfs
7	7A												8A,11A,10A,7A-33	0.1454 cfs	0.1454 cfs	0.4611 cfs
9		9A-50	50	P125	73,656	1.6909	R4 (PV)	79 du/acre	133 du	225 gpd/unit	29,927 gpd	0.0463 cfs	NONE	0.0000 cfs	0.0463 cfs	0.1637 cfs
9		9A-49	49	P425	65,438	1.5022	R4 (PV)	48 du/acre	72 du	225 gpd/unit	16,201 gpd	0.0251 cfs	NONE	0.0000 cfs	0.0251 cfs	0.0939 cfs
9	9A												9A-50,49	0.0714 cfs	0.0714 cfs	0.2421 cfs
6		6A-24	24	Commercial and Rental over Commercial, 32% Retail, 38% Office/Commercial, 30% Residential	62,452	1.4337	C2 (PV)	16 du/acre	23 du	64 gpd/1000sf	4,009 gpd	0.0062 cfs	NONE	0.0000 cfs	0.0062 cfs	0.0265 cfs
6		6A-22	22	Commercial and Rental over Commercial, 32% Retail, 38% Office/Commercial, 30% Residential	22,770	0.5227	C2 (PV)	16 du/acre	9 du	64 gpd/1000sf	1,462 gpd	0.0023 cfs	NONE	0.0000 cfs	0.0023 cfs	0.0107 cfs
6		6A-21	21	Commercial and Rental over Commercial, 32% Retail, 38% Office/Commercial, 30% Residential	22,684	0.5208	C2 (PV)	16 du/acre	9 du	64 gpd/1000sf	1,456 gpd	0.0023 cfs	NONE	0.0000 cfs	0.0023 cfs	0.0106 cfs
6	6A												7A,9A,6A-24,22,21	0.2275 cfs	0.2275 cfs	0.6914 cfs

PLAYA VISTA PHASE 2 TRACT 60110 - PUBLIC SEWER SYSTEM
 DETAILED TRIBUTARY AREA FLOW CALCULATIONS

SEWER LINE	LINE SEGMENT	LATERAL Main Segment-Lot No.	LOT AND BUILDING INFORMATION					ESTIMATED SEWER FLOWS - CITY OF LOS ANGELES BUREAU OF ENGINEERING CRITERIA								
			LOT NO. or LOT NO. - BLDG. NO.	BUILDING TYPE or LAND USE	LOT or BUILDING AREA (sf)	LOT or BUILDING AREA (acre)	ZONE Class.	Dwelling Unit Density (du/acre)	Unit (du)	Average Daily Flow Factor Table F200 (gpd/unit)	Average Dry Weather Flow (ADWF) (gpd)	Average Dry Weather Flow From Lot Lateral/Bldg. (ADWF) (cfs)	Contributing Upstream Line Number(s)	Additional AVERAGE DRY WEATHER FLOW From Upstream Pipes (cfs)	TOTAL AVERAGE DRY WEATHER FLOW (ADWF) (cfs)	TOTAL PEAK DRY WEATHER FLOW (PDWF) (cfs)
West System			LOTS IN TRACT 60110													
16		16B-14	14	P1326	75,757	1.7391	R4 (PV)	9 du/acre	15 du	225 gpd/unit	3,487 gpd	0.0054 cfs	NONE	0.0000 cfs	0.0054 cfs	0.0234 cfs
16		16B-15	15	P1225	62,631	1.4378	R4 (PV)	15 du/acre	22 du	225 gpd/unit	4,853 gpd	0.0075 cfs	NONE	0.0000 cfs	0.0075 cfs	0.0315 cfs
16	16B												16B-14,15	0.0129 cfs	0.0129 cfs	0.0515 cfs
16		16A-16	16	P1225	47,546	1.0915	R4 (PV)	15 du/acre	16 du	225 gpd/unit	3,684 gpd	0.0057 cfs	NONE	0.0000 cfs	0.0057 cfs	0.0246 cfs
16	16A												16B,16A-16	0.0186 cfs	0.0186 cfs	0.0717 cfs
15		15A-47	47	P775	43,472	0.9980	R4 (PV)	61 du/acre	61 du	225 gpd/unit	13,643 gpd	0.0211 cfs	NONE	0.0000 cfs	0.0211 cfs	0.0804 cfs
15		15A-46	46	P1050	41,673	0.9567	R4 (PV)	53 du/acre	51 du	225 gpd/unit	11,458 gpd	0.0177 cfs	NONE	0.0000 cfs	0.0177 cfs	0.0687 cfs
15		15A-45	45	P1050	41,794	0.9595	R4 (PV)	53 du/acre	51 du	225 gpd/unit	11,491 gpd	0.0178 cfs	NONE	0.0000 cfs	0.0178 cfs	0.0688 cfs
15	15A												15A-47,46,45	0.0566 cfs	0.0566 cfs	0.1964 cfs
14	14B												16A,15A	0.0752 cfs	0.0752 cfs	0.2539 cfs
14		14A-43	43	P350, w/ shop house	21,799	0.5004	R4 (PV)	57 du/acre	28 du	225 gpd/unit	6,400 gpd	0.0099 cfs	NONE	0.0000 cfs	0.0099 cfs	0.0405 cfs
14	14A												14B,14A-43	0.0851 cfs	0.0851 cfs	0.2840 cfs
13		13B-10	10	P1326	47,688	1.0948	R4 (PV)	9 du/acre	10 du	225 gpd/unit	2,195 gpd	0.0034 cfs	NONE	0.0000 cfs	0.0034 cfs	0.0154 cfs
13		13B-11	11	P925	39,211	0.9002	R4 (PV)	20 du/acre	18 du	225 gpd/unit	4,030 gpd	0.0062 cfs	NONE	0.0000 cfs	0.0062 cfs	0.0267 cfs
13	13B												13B-10,11	0.0096 cfs	0.0096 cfs	0.0395 cfs
13		13A-7	7	Park	91,786	2.1071	R4 (PV)		6 fixtures	120 gpd/unit	720 gpd	0.0011 cfs	NONE	0.0000 cfs	0.0011 cfs	0.0056 cfs
13		13A-12	12	P925	25,807	0.5924	R4 (PV)	20 du/acre	12 du	225 gpd/unit	2,653 gpd	0.0041 cfs	NONE	0.0000 cfs	0.0041 cfs	0.0183 cfs
13		13A-13	13	P925	51,023	1.1713	R4 (PV)	20 du/acre	23 du	225 gpd/unit	5,245 gpd	0.0081 cfs	NONE	0.0000 cfs	0.0081 cfs	0.0338 cfs
13	13A												13B,13A-7,12,13	0.0230 cfs	0.0230 cfs	0.0868 cfs
17		17A-29	29	Commercial and Rental over Commercial, 32%Retail, 38%Office/Commercial, 30%Residential	19,792	0.4544	C2 (PV)	16 du/acre	7 du	64 gpd/1000sf	1,271 gpd	0.0020 cfs	NONE	0.0000 cfs	0.0020 cfs	0.0094 cfs

Table 1.2-2
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PLAYA VISTA PHASE 2 TRACT 60110 - PUBLIC SEWER SYSTEM
 DETAILED TRIBUTARY AREA FLOW CALCULATIONS

SEWER LINE	LINE SEGMENT	LATERAL Main Segment-Lot No.	LOT AND BUILDING INFORMATION					ESTIMATED SEWER FLOWS - CITY OF LOS ANGELES BUREAU OF ENGINEERING CRITERIA								
			LOT NO. or LOT NO. - BLDG. NO.	BUILDING TYPE or LAND USE	LOT or BUILDING AREA (sf)	LOT or BUILDING AREA (acre)	ZONE Class.	Dwelling Unit Density (du/acre)	Unit (du)	Average Daily Flow Factor Table F200 (gpd/unit)	Average Dry Weather Flow (ADWF) (gpd)	Average Dry Weather Flow From Lot Lateral/Bldg. (ADWF) (cfs)	Contributing Upstream Line Number(s)	Additional AVERAGE DRY WEATHER FLOW From Upstream Pipes (cfs)	TOTAL AVERAGE DRY WEATHER FLOW (ADWF) (cfs)	TOTAL PEAK DRY WEATHER FLOW (PDWF) (cfs)
LOTS IN TRACT 60110																
17		17A-38	38	P350, w/ shop house Commerical and Rental over Commercial, 32%Retail, 38%Office/Commercial, 30%Residential	21,138	0.4853	C2 (PV)	57 du/acre	28 du	225 gpd/unit	6,206 gpd	0.0096 cfs	NONE	0.0000 cfs	0.0096 cfs	0.0394 cfs
17		17A-28	28		19,792	0.4544	C2 (PV)	16 du/acre	7 du	64 gpd/1000sf	1,271 gpd	0.0020 cfs	NONE	0.0000 cfs	0.0020 cfs	0.0094 cfs
17		17A-37	37	P350, w/ shop house Commerical and Rental over Commercial, 32%Retail, 38%Office/Commercial, 30%Residential	21,138	0.4853	C2 (PV)	57 du/acre	28 du	225 gpd/unit	6,206 gpd	0.0096 cfs	NONE	0.0000 cfs	0.0096 cfs	0.0394 cfs
17		17A-27	27		19,794	0.4544	C2 (PV)	16 du/acre	7 du	64 gpd/1000sf	1,271 gpd	0.0020 cfs	NONE	0.0000 cfs	0.0020 cfs	0.0094 cfs
17		17A-36	36	P350, w/ shop house Commerical and Rental over Commercial, 32%Retail, 38%Office/Commercial, 30%Residential	10,570	0.2427	C2 (PV)	57 du/acre	14 du	225 gpd/unit	3,103 gpd	0.0048 cfs	NONE	0.0000 cfs	0.0048 cfs	0.0211 cfs
17		17A-26	26		10,772	0.2473	C2 (PV)	16 du/acre	4 du	64 gpd/1000sf	692 gpd	0.0011 cfs	NONE	0.0000 cfs	0.0011 cfs	0.0054 cfs
17		17A-35	35	P350, w/ shop house	11,181	0.2567	C2 (PV)	57 du/acre	15 du	225 gpd/unit	3,283 gpd	0.0051 cfs	NONE	0.0000 cfs	0.0051 cfs	0.0221 cfs
17	17A												17A-29,38,28,37,27,36,26,35	0.0361 cfs	0.0361 cfs	0.1305 cfs
12		12B-25	25	Commerical and Rental over Commercial, 32%Retail, 38%Office/Commercial, 30%Residential	10,207	0.2343	C2 (PV)	16 du/acre	4 du	64 gpd/1000sf	655 gpd	0.0010 cfs	NONE	0.0000 cfs	0.0010 cfs	0.0052 cfs
12	12B												14A,13A,17A,12B-25	0.1452 cfs	0.1452 cfs	0.4603 cfs
12		12A-6	6	P650 Commerical and Rental over Commercial, 32%Retail, 38%Office/Commercial, 30%Residential	47,275	1.0853	R4 (PV)	40 du/acre	43 du	225 gpd/unit	9,707 gpd	0.0150 cfs	NONE	0.0000 cfs	0.0150 cfs	0.0591 cfs
12		12A-23	23		62,452	1.4337	C2 (PV)	16 du/acre	23 du	64 gpd/1000sf	4,009 gpd	0.0062 cfs	NONE	0.0000 cfs	0.0062 cfs	0.0265 cfs
12		12A-18	18	Commerical and Rental over Com	22,770	0.5227	C2 (PV)	16 du/acre	9 du	64 gpd/1000sf	1,462 gpd	0.0023 cfs	NONE	0.0000 cfs	0.0023 cfs	0.0107 cfs
12		12A-5	5	P650 Commerical and Rental over Commercial, 32%Retail, 38%Office/Commercial, 30%Residential	46,964	1.0781	R4 (PV)	40 du/acre	43 du	225 gpd/unit	9,643 gpd	0.0149 cfs	NONE	0.0000 cfs	0.0149 cfs	0.0587 cfs
12		12A-17	17		23,404	0.5373	C2 (PV)	16 du/acre	9 du	64 gpd/1000sf	1,503 gpd	0.0023 cfs	NONE	0.0000 cfs	0.0023 cfs	0.0109 cfs
12	12A												12B, 12A-6,23,18,5,17	0.1859 cfs	0.1859 cfs	0.5758 cfs

PLAYA VISTA PHASE 2 TRACT 60110
PUBLIC SEWER MAINLINE DESIGN COMPUTATION SHEET

Table 1.2-3

PIPE AND FLOW DATA									CITY OF LOS ANGELES BUREAU OF ENGINEERING CRITERIA												
SEWER LINE	LINE SEGMENT	UPSTREAM M.H. DIAMETER	DOWNSTREAM M.H. DIAMETER	MH-MH DIST. (ft)	PIPE LENGTH (ft)	PIPE DIAM. (in)	PIPE SLOPE (ft/ft)	Peak Dry Weather Flow PDWF (cfs)	PIPE CAPACITY CALCULATION												
									MANNING'S COEFF. "n"	PIPE AREA "A"	WETTED PERIM. "P"	HYDRAUL. RADIUS "R"	FULL FLOW CAPACITY "Q"	FULL FLOW VELOCITY "V"	1/2 FULL CAPACITY "Q"	NORMAL VELOCITY "V"	NORMAL DEPTH "d"	d/D	FLOW CAPACITY CHECK	INV. UP	INV. DOWN
East System																					
4	(Upstream Flow)	4.00	4.00	234.76	230.76	8 in.	0.0152 ft./ft.	0.0740 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.383 cfs	3.96 fps	0.692 cfs	2.09 fps	0.10 ft.	0.16	O.K.		
4	4E	4.00	4.00	234.76	230.76	8 in.	0.0152 ft./ft.	0.1386 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.383 cfs	3.96 fps	0.692 cfs	2.51 fps	0.14 ft.	0.21	O.K.	13.50	9.99
4	(Flow from 4E)	4.00	4.00	290.00	286.00	8 in.	0.0152 ft./ft.	0.1386 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.383 cfs	3.96 fps	0.692 cfs	2.51 fps	0.14 ft.	0.21	O.K.		
4	4D	4.00	4.00	290.00	286.00	8 in.	0.0152 ft./ft.	0.2589 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.383 cfs	3.96 fps	0.692 cfs	3.02 fps	0.19 ft.	0.29	O.K.	9.79	5.44
4	(Flow from 4D)	4.00	4.00	380.00	376.00	8 in.	0.0090 ft./ft.	0.2589 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.065 cfs	3.05 fps	0.532 cfs	2.51 fps	0.22 ft.	0.34	O.K.		
4	4C	4.00	4.00	380.00	376.00	8 in.	0.0090 ft./ft.	0.3713 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.065 cfs	3.05 fps	0.532 cfs	2.77 fps	0.27 ft.	0.41	O.K.	5.24	1.86
4	(Flow from 4C,4B-67,73)	4.00	4.00	455.00	451.00	10 in.	0.0070 ft./ft.	0.3800 cfs	0.014	0.545 s.f.	2.618 ft.	0.208 ft.	1.702 cfs	3.12 fps	0.851 cfs	2.51 fps	0.27 ft.	0.32	O.K.		
4	4B	4.00	4.00	455.00	451.00	10 in.	0.0070 ft./ft.	0.4955 cfs	0.014	0.545 s.f.	2.618 ft.	0.208 ft.	1.702 cfs	3.12 fps	0.851 cfs	2.69 fps	0.30 ft.	0.37	O.K.	1.69	-1.47
4	(Flow from 4B)	4.00	4.00	290.00	286.00	10 in.	0.0058 ft./ft.	0.4955 cfs	0.014	0.545 s.f.	2.618 ft.	0.208 ft.	1.549 cfs	2.84 fps	0.775 cfs	2.51 fps	0.32 ft.	0.39	O.K.		
4	4A	4.00	4.00	290.00	286.00	10 in.	0.0058 ft./ft.	0.7014 cfs	0.014	0.545 s.f.	2.618 ft.	0.208 ft.	1.549 cfs	2.84 fps	0.775 cfs	2.77 fps	0.39 ft.	0.47	O.K.	-1.67	-3.33
3	(Upstream Flow)	4.00	4.00	401.50	397.50	8 in.	0.0320 ft./ft.	0.0056 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	2.007 cfs	5.75 fps	1.004 cfs	1.28 fps	0.02 ft.	0.04	O.K.		
3	3A	4.00	4.00	401.50	397.50	8 in.	0.0320 ft./ft.	0.0056 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	2.007 cfs	5.75 fps	1.004 cfs	1.28 fps	0.02 ft.	0.04	O.K.	12.00	-0.72
2	(Flow from 4A, 3A)	4.00	4.00	393.00	389.00	10 in.	0.0050 ft./ft.	0.7044 cfs	0.014	0.545 s.f.	2.618 ft.	0.208 ft.	1.439 cfs	2.64 fps	0.719 cfs	2.61 fps	0.41 ft.	0.49	O.K.		
2	2A	4.00	4.00	393.00	389.00	10 in.	0.0050 ft./ft.	0.7044 cfs	0.014	0.545 s.f.	2.618 ft.	0.208 ft.	1.439 cfs	2.64 fps	0.719 cfs	2.61 fps	0.41 ft.	0.49	O.K.	-3.53	-5.48
5	(Upstream Flow)	0.00	4.00	479.00	477.00	8 in.	0.0180 ft./ft.	0.0742 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.505 cfs	4.31 fps	0.753 cfs	2.23 fps	0.10 ft.	0.15	O.K.		
5	5A	0.00	4.00	479.00	477.00	8 in.	0.0180 ft./ft.	0.2174 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.505 cfs	4.31 fps	0.753 cfs	3.06 fps	0.17 ft.	0.26	O.K.	13.00	4.41
1	(Flow from 5A, 2A,1B-53)	4.00	4.00	351.39	347.39	12 in.	0.0039 ft./ft.	0.8763 cfs	0.014	0.785 s.f.	3.142 ft.	0.250 ft.	2.066 cfs	2.63 fps	1.033 cfs	2.51 fps	0.45 ft.	0.45	O.K.		
1	1B	4.00	4.00	351.39	347.39	12 in.	0.0039 ft./ft.	0.9228 cfs	0.014	0.785 s.f.	3.142 ft.	0.250 ft.	2.066 cfs	2.63 fps	1.033 cfs	2.55 fps	0.47 ft.	0.47	O.K.	-5.68	-7.03
1	(Flow from 1B, 1A-52)	4.00	6.00	300.00	295.00	12 in.	0.0045 ft./ft.	0.9622 cfs	0.014	0.785 s.f.	3.142 ft.	0.250 ft.	2.219 cfs	2.83 fps	1.110 cfs	2.72 fps	0.46 ft.	0.46	O.K.		
1	1A	4.00	6.00	300.00	295.00	12 in.	0.0045 ft./ft.	1.0994 cfs	0.014	0.785 s.f.	3.142 ft.	0.250 ft.	2.219 cfs	2.83 fps	1.110 cfs	2.81 fps	0.50 ft.	0.50	O.K.	-7.13	-8.46

Table 1.2-3
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PLAYA VISTA PHASE 2 TRACT 60110
PUBLIC SEWER MAINLINE DESIGN COMPUTATION SHEET
Table 1.2-3

PIPE AND FLOW DATA									CITY OF LOS ANGELES BUREAU OF ENGINEERING CRITERIA																	
SEWER LINE	LINE SEGMENT	UPSTREAM M.H. DIAMETER	DOWNSTREAM M.H. DIAMETER	MH-MH DIST. (ft)	PIPE LENGTH (ft)	PIPE DIAM. (in)	PIPE SLOPE (ft/ft)	Peak Dry Weather Flow PDWF (cfs)	PIPE CAPACITY CALCULATION																	
									MANNING'S COEFF. "n"	PIPE AREA "A"	WETTED PERIM. "p"	HYDRAUL. RADIUS "R"	FULL FLOW CAPACITY "Q"	FULL FLOW VELOCITY "V"	1/2 FULL CAPACITY "Q"	NORMAL VELOCITY "V"	NORMAL DEPTH "d"	d/D	FLOW CAPACITY CHECK	INV. UP	INV. DOWN					
Central System																										
8	(Upstream Flow)	0.00	4.00	326.45	324.45	8 in.	0.0246 ft./ft.	0.0772 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.760 cfs	5.04 fps	0.880 cfs	2.50 fps	0.09 ft.	0.14	O.K.							
8	8C	0.00	4.00	326.45	324.45	8 in.	0.0246 ft./ft.	0.1172 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.760 cfs	5.04 fps	0.880 cfs	2.86 fps	0.11 ft.	0.18	O.K.	16.50	8.52					
8	(Flow from 8C)	4.00	4.00	205.16	201.16	8 in.	0.0172 ft./ft.	0.1172 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.472 cfs	4.22 fps	0.736 cfs	2.51 fps	0.13 ft.	0.19	O.K.							
8	8B	4.00	4.00	205.16	201.16	8 in.	0.0172 ft./ft.	0.1172 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.472 cfs	4.22 fps	0.736 cfs	2.51 fps	0.13 ft.	0.19	O.K.	8.32	4.86					
8	(Flow from 8B,8A-48,58)	4.00	4.00	350.00	346.00	8 in.	0.0104 ft./ft.	0.2180 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.144 cfs	3.28 fps	0.572 cfs	2.52 fps	0.20 ft.	0.30	O.K.							
8	8A	4.00	4.00	350.00	346.00	8 in.	0.0104 ft./ft.	0.2437 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.144 cfs	3.28 fps	0.572 cfs	2.59 fps	0.21 ft.	0.31	O.K.	4.76	1.16					
11	(Upstream Flow)	4.00	4.00	327.50	323.50	8 in.	0.0238 ft./ft.	0.0805 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.731 cfs	4.96 fps	0.866 cfs	2.51 fps	0.10 ft.	0.15	O.K.							
11	11A	4.00	4.00	327.50	323.50	8 in.	0.0238 ft./ft.	0.1471 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.731 cfs	4.96 fps	0.866 cfs	3.00 fps	0.13 ft.	0.20	O.K.	16.70	9.00					
10	(Upstream Flow)	4.00	4.00	362.75	358.75	8 in.	0.0300 ft./ft.	0.0410 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.944 cfs	5.57 fps	0.972 cfs	2.23 fps	0.07 ft.	0.10	O.K.							
10	10A	4.00	4.00	362.75	358.75	8 in.	0.0300 ft./ft.	0.1151 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.944 cfs	5.57 fps	0.972 cfs	2.99 fps	0.11 ft.	0.16	O.K.	16.60	5.84					
7	(Flow from 8A,11A,10A)	4.00	4.00	326.00	322.00	10 in.	0.0062 ft./ft.	0.4582 cfs	0.014	0.545 s.f.	2.618 ft.	0.208 ft.	1.602 cfs	2.94 fps	0.801 cfs	2.53 fps	0.30 ft.	0.37	O.K.							
7	7A	4.00	4.00	326.00	322.00	10 in.	0.0062 ft./ft.	0.4611 cfs	0.014	0.545 s.f.	2.618 ft.	0.208 ft.	1.602 cfs	2.94 fps	0.801 cfs	2.53 fps	0.30 ft.	0.37	O.K.	0.96	-1.04					
9	(Upstream Flow)	4.00	4.00	327.36	323.36	8 in.	0.0130 ft./ft.	0.1637 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.279 cfs	3.67 fps	0.640 cfs	2.51 fps	0.16 ft.	0.24	O.K.							
9	9A	4.00	4.00	327.36	323.36	8 in.	0.0130 ft./ft.	0.2421 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.279 cfs	3.67 fps	0.640 cfs	2.79 fps	0.19 ft.	0.29	O.K.	16.90	12.70					
6	(Flow from 7A,9A,6A-24)	4.00	6.00	334.34	329.34	10 in.	0.0048 ft./ft.	0.6789 cfs	0.014	0.545 s.f.	2.618 ft.	0.208 ft.	1.410 cfs	2.58 fps	0.705 cfs	2.55 fps	0.40 ft.	0.49	O.K.							
6	6A	4.00	6.00	334.34	329.34	10 in.	0.0048 ft./ft.	0.6914 cfs	0.014	0.545 s.f.	2.618 ft.	0.208 ft.	1.410 cfs	2.58 fps	0.705 cfs	2.56 fps	0.41 ft.	0.49	O.K.	-1.14	-2.72					

PLAYA VISTA PHASE 2 TRACT 60110
PUBLIC SEWER MAINLINE DESIGN COMPUTATION SHEET
Table 1.2-3

PIPE AND FLOW DATA									CITY OF LOS ANGELES BUREAU OF ENGINEERING CRITERIA												
SEWER LINE	LINE SEGMENT	UPSTREAM M.H. DIAMETER	DOWNSTREAM M.H. DIAMETER	MH-MH DIST. (ft)	PIPE LENGTH (ft)	PIPE DIAM. (in)	PIPE SLOPE (ft/ft)	Peak Dry Weather Flow PDWF (cfs)	PIPE CAPACITY CALCULATION												
									MANNING'S COEFF. "n"	PIPE AREA "A"	WETTED PERIM. "P"	HYDRAUL. RADIUS "R"	FULL FLOW CAPACITY "Q"	FULL FLOW VELOCITY "V"	1/2 FULL CAPACITY "Q"	NORMAL VELOCITY "V"	NORMAL DEPTH "d"	d/D	FLOW CAPACITY CHECK	INV. UP	INV. DOWN
West System																					
16	(Upstream Flow)	4.00	4.00	322.04	318.04	8 in.	0.0220 ft./ft.	0.0234 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.664 cfs	4.77 fps	0.832 cfs	1.66 fps	0.05 ft.	0.08	O.K.		
16	16B	4.00	4.00	322.04	318.04	8 in.	0.0220 ft./ft.	0.0515 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.664 cfs	4.77 fps	0.832 cfs	2.15 fps	0.08 ft.	0.12	O.K.	11.60	4.60
16	(Flow from 16B, 16A-16)	4.00	4.00	270.00	266.00	8 in.	0.0200 ft./ft.	0.0717 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.587 cfs	4.55 fps	0.793 cfs	2.25 fps	0.09 ft.	0.14	O.K.		
16	16A	4.00	4.00	270.00	266.00	8 in.	0.0200 ft./ft.	0.0717 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.587 cfs	4.55 fps	0.793 cfs	2.25 fps	0.09 ft.	0.14	O.K.	4.50	-0.82
15	(Upstream Flow)	0.00	4.00	466.12	464.12	8 in.	0.0236 ft./ft.	0.0804 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.724 cfs	4.94 fps	0.862 cfs	2.50 fps	0.10 ft.	0.15	O.K.		
15	15A	0.00	4.00	466.12	464.12	8 in.	0.0236 ft./ft.	0.1964 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.724 cfs	4.94 fps	0.862 cfs	3.26 fps	0.15 ft.	0.23	O.K.	16.00	5.05
14	(Flow from 16A, 15A)	4.00	4.00	261.68	257.68	8 in.	0.0092 ft./ft.	0.2539 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.076 cfs	3.08 fps	0.538 cfs	2.52 fps	0.22 ft.	0.33	O.K.		
14	14B	4.00	4.00	261.68	257.68	8 in.	0.0092 ft./ft.	0.2539 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.076 cfs	3.08 fps	0.538 cfs	2.52 fps	0.22 ft.	0.33	O.K.	-1.02	-3.39
14	(Flow from 14B, 14A-43)	4.00	4.00	250.00	246.00	8 in.	0.0084 ft./ft.	0.2840 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.028 cfs	2.95 fps	0.514 cfs	2.50 fps	0.24 ft.	0.36	O.K.		
14	14A	4.00	4.00	250.00	246.00	8 in.	0.0084 ft./ft.	0.2840 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.028 cfs	2.95 fps	0.514 cfs	2.50 fps	0.24 ft.	0.36	O.K.	-3.49	-5.56
13	(Upstream Flow)	0.00	4.00	195.67	193.67	8 in.	0.0430 ft./ft.	0.0395 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	2.327 cfs	6.67 fps	1.163 cfs	2.50 fps	0.06 ft.	0.09	O.K.		
13	13B	0.00	4.00	195.67	193.67	8 in.	0.0430 ft./ft.	0.0395 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	2.327 cfs	6.67 fps	1.163 cfs	2.50 fps	0.06 ft.	0.09	O.K.	17.60	9.27
13	(Flow from 13B, 13A-7,12)	4.00	4.00	299.73	295.73	8 in.	0.0316 ft./ft.	0.0585 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.995 cfs	5.71 fps	0.997 cfs	2.50 fps	0.08 ft.	0.12	O.K.		
13	13A	4.00	4.00	299.73	295.73	8 in.	0.0316 ft./ft.	0.0868 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.995 cfs	5.71 fps	0.997 cfs	2.83 fps	0.09 ft.	0.14	O.K.	9.17	-0.18
17	(Flow from 17A-29,38)	4.00	4.00	362.75	358.75	8 in.	0.0300 ft./ft.	0.0467 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.944 cfs	5.57 fps	0.972 cfs	2.30 fps	0.07 ft.	0.11	O.K.		
17	17A	4.00	4.00	362.75	358.75	8 in.	0.0300 ft./ft.	0.1305 cfs	0.014	0.349 s.f.	2.094 ft.	0.167 ft.	1.944 cfs	5.57 fps	0.972 cfs	3.16 fps	0.12 ft.	0.18	O.K.	17.00	6.24
12	(Flow from 14A,13A,17A)	4.00	4.00	334.80	330.80	10 in.	0.0062 ft./ft.	0.4574 cfs	0.014	0.545 s.f.	2.618 ft.	0.208 ft.	1.602 cfs	2.94 fps	0.801 cfs	2.53 fps	0.30 ft.	0.37	O.K.		
12	12B	4.00	4.00	334.80	330.80	10 in.	0.0062 ft./ft.	0.4603 cfs	0.014	0.545 s.f.	2.618 ft.	0.208 ft.	1.602 cfs	2.94 fps	0.801 cfs	2.53 fps	0.30 ft.	0.37	O.K.	-5.76	-7.81
12	(Flow from 12B,12A-6,23)	4.00	6.00	330.00	325.00	10 in.	0.0056 ft./ft.	0.5209 cfs	0.014	0.545 s.f.	2.618 ft.	0.208 ft.	1.522 cfs	2.79 fps	0.761 cfs	2.52 fps	0.33 ft.	0.40	O.K.		
12	12A	4.00	6.00	330.00	325.00	10 in.	0.0056 ft./ft.	0.5758 cfs	0.014	0.545 s.f.	2.618 ft.	0.208 ft.	1.522 cfs	2.79 fps	0.761 cfs	2.59 fps	0.35 ft.	0.43	O.K.	-7.91	-9.73

Table 1.2-3
3 of 3

2.1 METHODOLOGY

The methodology employed for the projection of wastewater flows and the hydraulic design of the sewer main is outlined in the City of Los Angeles, Bureau of Engineering Manual for Sewer Design, Part F, dated June 1992, hereafter referred to as "The Sewer Design Manual".

Tributary area, land use, commercial flows and infiltration/inflow parameters were evaluated to project wastewater flows. Commercial flowrates were obtained from the Sewer Design Manual, Table F227, entitled Public and Commercial Facilities Average Daily Flow Projections.

For each lot in the study area, Average Daily Flow Projections for each building type or land use multiplied by the proposed gross building area or land area for that lot yields the Average Dry Weather Flow (ADWF, gal/day) for that lot. ADWF multiplied by a peaking factor, as outlined in section F 235, of the Sewer Design Manual, yields the Peak Dry Weather Flow (PDWF, gal/day) for the lot. PDWF is the basis for determining a sewer pipe size and slope.

For each lot, the lot area, the proposed land use designation, corresponding Average Daily Flow Projections used, and computed ADWF and PDWF is tabulated in Table 1.2-2. The lot areas were determined from the Proposed Development Criteria for Tentative Tract Map No. 60110-01.

For sewer mains downstream of the confluence of upstream branch mains, the PDWF was determined by summing the upstream ADWF's and multiplying the sum by the peaking factor found in Section F 235 of the Sewer Design Manual.

Open channel flow is used as the basis for hydraulic design of the sewer system.

A complete listing of design criteria used in designing the sewer system can be found in Section 2.2 of this report.

Portions of the onsite sewer reach considerable rim-to-invert depths. The maximum depth from the manhole rim elevation to the sewer invert is approximately _____ feet. On non-radial sewer alignments, construction of the sewer main utilizing microtunneling methods may be considered.

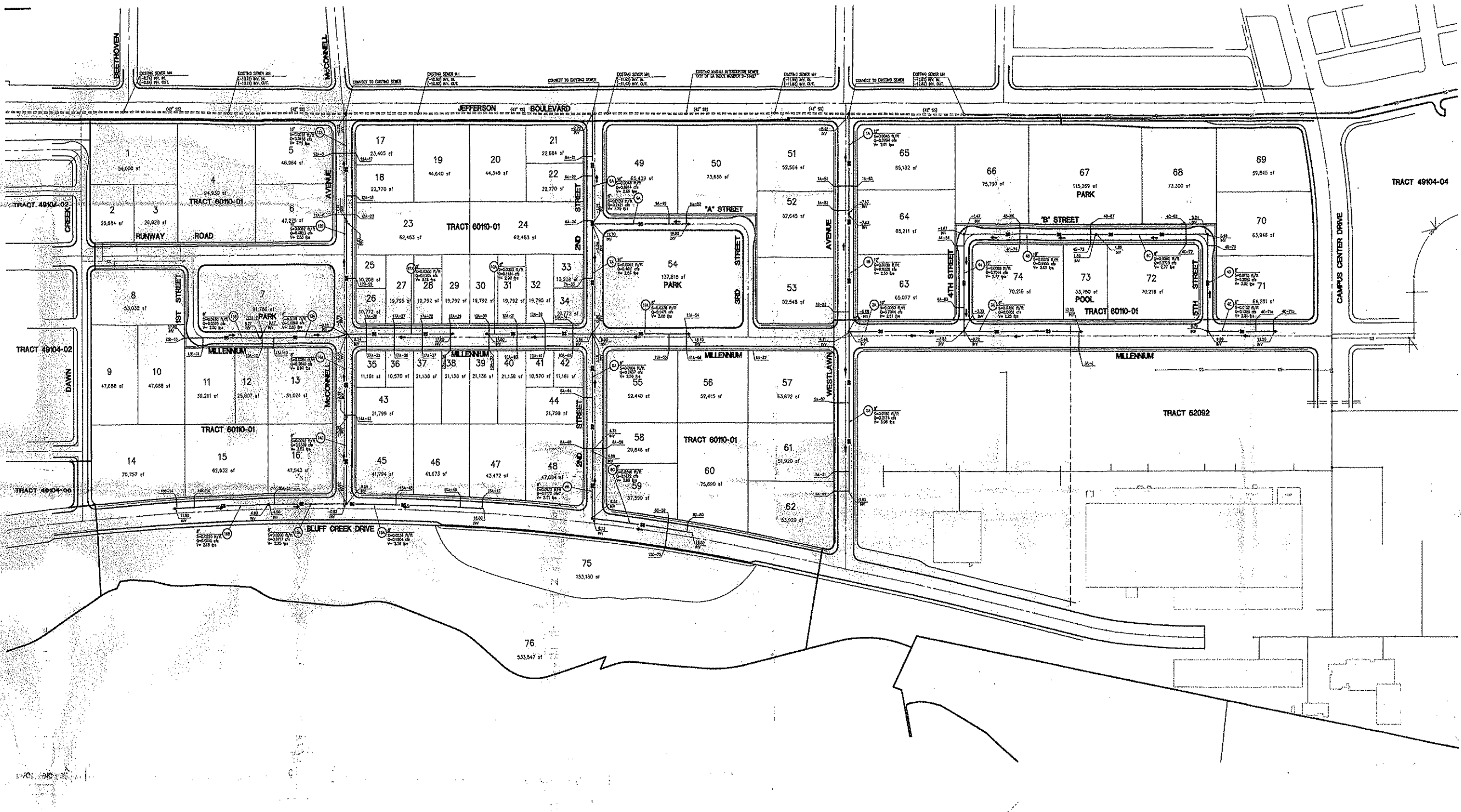
2.2 DESIGN CRITERIA

The design criteria used for the hydraulic design of the sewer main is outlined in the City of Los Angeles, Bureau of Engineering Manual for Sewer Design, Part F, Section F 250, dated June 1992, hereafter referred to as "The Sewer Design Manual", (SDM).

The following is a summary of the design criteria used:

Minimum Design Period	100 years, Section F222, SDM
Design depth of flow, (d/D): d = depth of flow D = pipe diameter	≤ 0.5, Section F250, SDM
Average Daily Flow Projections	Table F229, SDM
	Office building 200 gpd/1000 gr.sq.ft. Retail 100 gpd/1000 gr.sq.ft. Residential 225 gpd/dwelling unit Res: Apt. 2.5 BDR
Minimum pipe velocity	≥ 2.5 fps (formerly agreed upon with L.A.C. B.O.E. and L.A.C. Bureau of Maintenance representatives)
Minimum pipe slope	≥ 0.0039 ft/ft
Pipe material	Vitrified Clay Pipe (n = 0.014) (formerly agreed upon with L.A.C. B.O.E. and L.A.C. Bureau of Maintenance representatives)
Manning's Roughness Coefficient "n"	n = 0.014, Section F252, SDM
Average Dry Weather Flow	ADWF definition, Section F232, SDM
Peak Dry Weather Flow	PDWF definition, Section F233, SDM
$Q_{PDWF} = 2.64 (Q_{ADWF})^{0.905}$	Section F235, SDM
Pipe flow velocity, fps	$V = (1.486/n) R^{2/3} S^{1/2}$ from Manning's Equation
Pipe flowrate, cfs	$Q = VA$ $Q = (1.486/n) AR^{2/3} S^{1/2}$ from Manning's Equation, Section F251, SDM

Pipe size and slope selection	$Q_{PDWF} \leq Q$ Where $n = 0.014$ and $d/D = 0.5$
Horizontal Curve Alignment	Deflected Straight Pipe, Section F321.411, SDM
Maintenance Hole Spacing	for sewer sizes 8" - 30" ≤ 500 feet, Section F461, SDM
Maintenance Hole Sizes	for sewer sizes 8" - 15" 4.0 feet inner diameter 27 inch frame and cover, Section F462, SDM
Maintenance Hole Locations	at end of curves
Invert drops across Maintenance Holes	Section F254, F255, SDM
House Connection Depth	Section F484, SDM
Use of chimneys	at lateral connections where mainline ≥ 15 ft; Chimney height ≤ 12 ft from street surface

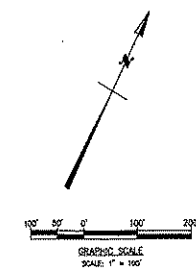


LEGEND

- Sewer Line Number and Size
- Design Slope (ft/ft)
- Peak Dry Weather Flow, PDWF (cfs)
- Normal Velocity (fps)
- Tract Lot Number and Area
- Tract 60110-01 Boundary
- Existing Sewer Line

**SANITARY SEWER AREA STUDY
PLAYA VISTA - PHASE 2
TRACT 60110-01**

PSOMAS
1144 West Olympic Boulevard, Suite 700
West Los Angeles, CA 90024
(310) 954-3700 (310) 954-3777 (FAX)



DATE: 01-20-05

Letter No. 2

From: Lily Quan [Lily.Quan@lacity.org]
Sent: Wednesday, March 18, 2009 8:33 AM
To: David Somers
Subject: Fwd: Notices of Completion & Availability of Recirculated Sections of EIRs

Please correct. Thanks

>>> Martha Lucero 3/18/2009 7:49 AM >>>
Hi Lily.

I wanted to appraise you that several Notices of Completion of EIR's have been mailed to the Bureau of Fire Prevention, Dal L. Howard, Asst. Fire Marshal & to Alfred B. Hernandez via regular US mail (42 postage). Both men have since retired. These Notices were signed off by David J. Somers, EIR Unit, Division of Land/Environmental Review (Rm 750, CH). Could you please inform them that the new Asst. Fire Marshal is Craig A. Fry and that these notices should be sent via grey messenger not US postal in light of the City's financial situation. Thanks

Letter No. 3

CITY OF LOS ANGELES INTER-DEPARTMENTAL CORRESPONDENCE

File: SC.CE.

DATE: March 12, 2009

TO: David J. Somers, EIR Unit
Division of Land/Environmental Review
Department of City Planning

RECEIVED
CITY OF LOS ANGELES

MAR 18 2009

FROM: 
Brent Lorscheider, Division Manager
Wastewater Engineering Services Division
Bureau of Sanitation

ENVIRONMENTAL
UNIT

SUBJECT: Village at Playa Vista – Notice of Completion of Re-circulated Sections of Draft EIR

This is in response to your January 29, 2009 letter requesting wastewater service information for the proposed project. The Bureau of Sanitation, Wastewater Engineering Services Division (WESD), has conducted a preliminary evaluation of the potential impacts to the wastewater system for the proposed project.

Projected Wastewater Discharges for the Proposed Project:

Type Description	Average Daily Flow per Type Description (GPD/UNIT)	Proposed No. of Units	Average Daily Flow (GPD)
Proposed			
Residential (2 BR)	160 GPD/DU	2,600 DU	416,000
Office Building	180 GPD/1000 SQ.FT	175,000 SQ.FT	31,500
Retail	80 GPD/1000 SQ.FT	150,000 SQ.FT	12,000
Civil/Institutional Facilities	80 GPD/1000 SQ.FT	40,000 SQ.FT	3,200
Total			462,700

SEWER AVAILABILITY

The sewer infrastructure in the vicinity of the proposed project includes the existing 42-inch Marina Interceptor Sewer (MIS) on Jefferson Blvd. The sewage from the existing line feeds into the Ballona Creek Pump Station, and then continues onto a 36-inch force main on Sepulveda Blvd, before discharging into the 114-inch North Central Outfall Sewer (NCOS). Ultimately, the sewage flow will be conveyed to the Hyperion Treatment Plant.

Based on Mike Urban modeling data, the projected dry weather conditions for the year 2010 and 2020 for the MIS, 36-inch Force Main, and the NCOS are as follows:

Sewer	ADWF (MGD)		PDWF (MGD)	
	2010	2020	2010	2020
MIS	1.43	1.60	1.91	2.13
36-inch Force Main	5.03	5.63	6.74	7.54
NCOS	55.8	58.0	66.1	68.7

Based on the estimated flows, it appears the sewer system might be able to accommodate the total flow for your proposed project. Further detailed gauging and evaluation will be needed as part of the permit process to identify a sewer connection point. If the public sewer has insufficient capacity then the developer will be required to build sewer lines to a point in the sewer with sufficient capacity. A final approval for sewer capacity and connection permit will be made at that time.

If you have any questions, please call Abdul Danishwar of my staff at (323)342-6220.

Letter No. 4



BILL ROSENDAHL

City of Los Angeles
Councilmember, Eleventh District

Committees

Chair, *Public Works*

Vice-Chair, *Trade, Commerce & Tourism*

Member, *Budget & Finance*

Member, *Transportation*

Member, *Ad Hoc Homelessness*

February 11, 2009

Gail Goldberg
Director, Department of City Planning
200 N. Spring Street, 5th Floor
Los Angeles, CA 90012

Re: RS-DEIR -- Village at Playa Vista -- ENV-2002-6129-EIR

Dear Ms. Goldberg:

As you know, the recirculated sections of the Draft Environmental Impact Report for Phase 2 of Playa Vista (aka Village at Playa Vista) has been released. This was done as the result of a California Court of Appeals ruling that the original FEIR contained legal deficiencies with respect to the analysis of land use impacts, archaeological resources, and wastewater impacts.

The three volumes of the DEIR are considerable in their scope and level of detail, and my constituents need adequate time to review and digest the newly released material. I am therefore writing to request an extension of time for the public comment period of no fewer than 90 days.

Such an extension will allow people adequate time to review the documents, and will allow Neighborhood Councils and other local organizations enough time to discuss the matter with their own members and constituents.

Thank you in advance for your assistance in this very important matter.

Regards,

BILL ROSENDAHL
Councilmember 11th District

BR:ga

Westchester Office
7166 W. Manchester Boulevard
Westchester, CA 90045
(310) 568-8772
(310) 410-3946 Fax

City Hall
200 N. Spring Street, Room 415
Los Angeles, CA 90012
(213) 473-7011
(213) 473-6926 Fax

West Los Angeles Office
1645 Corinth Avenue, Room 201
Los Angeles, CA 90025
(310) 575-8461
(310) 575-8305 Fax

Letter No. 5

From: Susan Stiles [Susan.Stiles@lacity.org]
Sent: Tuesday, March 17, 2009 9:08 AM
To: David Somers
Subject: FYI

I just received another call on multiple mailings of the Playa Vista notice, and in addition to receiving 4 mailings, the following is a correction they want made to and address -

Michael De La Torre
Governmental Affairs Manager
STRIKE OUT PACIFIC ENTERPRISES SO. CALIFORNIA
Sempra Energy Corporation
555 West 5th St., GT 26E2
STRIKE OUT ML28
Los Angeles, CA 90013

If you have any questions, call me at 978-1271.

Letter No. 6

DEL REY NEIGHBORHOOD COUNCIL

13428 Maxella Avenue #730
Marina del Rey, CA 90292

RECEIVED
CITY OF LOS ANGELES

APR 30 2009

ENVIRONMENTAL
UNIT

April 28, 2009

VIA CERTIFIED MAIL & FACSIMILE - (213) 978-1343

Mr. David J. Somers
City Planning Department
Room 750, City Hall
200 N. Spring Street
Los Angeles, CA 90012

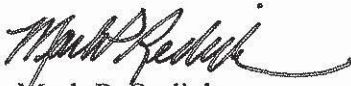
RE: Case Number ENV-2002-6129-EIR

Dear Mr. Somers:

The Del Rey Neighborhood Council has approved the recommendation of its Planning, Land Use & Transportation Committee that the project known as Playa Vista Phase II be given their endorsement to accept the revised Sections of the Draft Environmental Impact Report, because it has addressed the issues raised by the Court of Appeals.

We, therefore, urge the City of Los Angeles to recertify the Environmental Impact Report for the Village at Playa Vista (including the Recirculated Sections) and to reapprove the land use entitlements and related approvals for The Village at Playa Vista.

Respectfully submitted,



Mark P. Redick
President

Letter No. 7



April 14, 2009

Mar Vista Community Council

P.O. Box 66871
Mar Vista, CA 90066

Board of Directors 2008-2009

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Rob Kadota
rob@marvista.org

1st Vice-Chair

Albert Olson
albert@marvista.org

2nd Vice-Chair

Sharon Commins
smcommins@msn.com

Secretary

Laura Bodensteiner
laura@marvista.org

Treasurer

Christopher McKinnon
chrism@aol.com

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Babak Nahid

Zone 2

Bill Koontz

Zone 3

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Zone 4

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Christopher McKinnon

Zone 6

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At-Large Directors

Ken Alpern

Laura Bodensteiner

Sharon Commins

Bob Fitzpatrick

Albert Olson

Bill Scheduling

Community Director

Rob Kadota



Certified Neighborhood Council
August 13, 2002

Mr David Somers
Department of City Planning, Environmental Review
200 North Spring Street, Room 750,
Los Angeles, CA 90012

RE: The Village at Playa Vista Project RS-DEIR
Case No. ENV-2002-6129-EIR
State Clearinghouse Number: 2002111065

The Mar Vista Community Council, at its regular April 14th meeting, passed the following motion and is submitting such as the MVCC Response to the "Village at Playa Vista Project" RS-DEIR.

Whereas the State of California Court of Appeal found the Village at Playa Vista, aka Playa Vista Phase 2, Environmental Impact Report Case No. ENV-2002-6129-EIR [State Clearinghouse Number: 2002111065] deficient in accurate assessments of impacts in the areas of Land Use; Wastewater; and Cultural Resources;

Whereas alternatives in the areas of Land Use; Wastewater; and Cultural Resources which would adhere to the remaining development of 108,050 square feet of office and light industrial space allowed by the Playa Vista Area D Specific Plan were not presented in sufficient detail to allow decision makers to evaluate the full range of impacts of the upzoning accurately;

Whereas the adverse environmental impacts of the proposed project should be mitigated to the greatest possible degree;

The Mar Vista Community Council presents comments and recommendations to the LA City Planning Department in response to the RS-DEIR pertaining to the Village at Playa Vista.

1. LAND USE IMPACTS

The Up Zoning from Manufacturing (M1) to a combination of High Density Residential and Commercial zones was never fully explained in the first EIR, but entitlements were granted anyway.

The previous Playa Vista Phase 2 entitlements should now be re-evaluated in the light of substantially changed land use facts and circumstances, including the well publicized diminished water delivery available to the City of Los Angeles due to drought and court rulings.

WATER: Fresh water is now in short supply in Los Angeles.

LA residents have been given a mandate to reduce water consumption due to ongoing drought conditions.

In its 2003 water supply assessment report for the proposed project, the Los Angeles Department of Water and Power put forth its independent forecast of water use by land use for the year 2020. The chart titled Table II, on page 6 of Technical Appendix I, shows industrial activity would consume 4% of projected water demand across the City in the year 2020 as opposed to 35% for multifamily use and 16% for commercial use—considerable differences in consumption.

The current Playa Vista M1 zoning typically uses far less water than the proposed high density residential and commercial.

How can the City approve a development that increases density in such a massive way when at the same time it is telling its current residents that there is not enough water and has mandated severe city wide conservation measures?

POWER CONSUMPTION: How much more power will the new development consume above what would be needed for manufacturing uses?

What solar power solutions are being implemented?

The City of LA has recently passed new Green Building standards which should also be applied to this project in order to mitigate some of the various adverse environmental impacts.

PRESERVATION OF INDUSTRIAL LAND: In 1995, the Playa Vista Area D Specific Plan was amended under Council File numbers 93-1621-S1 and 95-1547 to change the P (V) zone classification to the M (PV) zone along the abandoned Southern Pacific Railroad spur line which had formerly served the Hughes Aircraft manufacturing facilities.

Council File Report 95-1547 clearly states:

“All surrounding properties in the vicinity are designated for Light Industrial uses & the majority are zoned M (PV). NOW, THEREFORE MOVE that Ccl initiate a Plan amend on the subj area now designated P (PV) in Playa Vista Specific Plan Area D. FURTHER MOVE that this land be proposed for light Industrial uses. FURTHER MOVE that proposal to rezone the subj area be compatible with the surrounding use, height, intensity, yard requirements consistent with those in the immediate surrounding area without increasing development entitlements established in the Specific Plan. FURTHER MOVE that, pursuant to Section 11.5.8.D of LAMC, Ccl find that, because this action is necessary to achieve compatible land uses & other planning objectives.”

CEQA requires that alternative uses and feasible mitigation measures using existing zone classifications must be explored and described in detail *even if the project’s proponents decline to accept them.*

Rather than amend well thought out Community Plans, the project should be revised to accommodate the land use goals and objectives of the existing applicable Community Plans: the Palms Mar Vista Del Rey Community Plan, the Playa Vista Area D Specific Plan prior to Ordinance #176235, and the General Plan with special attention to the preservation of industrial land per the City’s Industrial Land Use Policy report entitled “Los Angeles’ Industrial Land: Sustaining a Dynamic Economy”, December 2007, prepared by the Department of City Planning and the Community Redevelopment Agency of the City of Los Angeles.

From Page 11 of the ILUP report:

“Evolving Industrial Districts

The term “industrial” no longer only refers to large factories producing steel, cars or other mass produced goods. Today the term describes a broader array of job-producing uses and activities—in addition to traditional industrial uses—such as furniture and clothing design, biomedical research/manufacturing, and

entertainment-related post-production activities that do not necessarily generate impacts such as noise, traffic and pollution.

While the industrial/employment sector is evolving, Los Angeles County remains the largest manufacturing region in the United States. Although globalization has generally triggered an exodus of jobs from many American city centers, the strategic importance of Los Angeles and its industrial lands has been strengthened”.

And from page 14 of the same report:

“Additionally, industrial lands in Los Angeles play an important role as incubator space for small start up and creative businesses. This entrepreneurial pattern fits perfectly into Los Angeles’ tradition of supporting a broad base of independently owned and operated businesses; most businesses in Los Angeles are small, independently owned and operated.¹¹ These firms represent entrepreneurial and innovative businesses that can only become established under conditions available in industrial zones—relatively low rents, small spaces/lots and/or business incubator space. Many of these businesses are cleaner than those of the past and they provide good career-ladder jobs for local neighborhoods that have seen a decline in other local manufacturing jobs.”

In the City of Los Angeles Zoning Code, grocery stores are permitted in the RAS3; RAS4; C1; C1.5; C2; C4; CM; M1; M2; and M3 Zones.

Playa Vista Phase 2 is presently zoned M.

Therefore, the desire to add a grocery store and ancillary shopping/ commercial spaces due to a planning “omission” in Playa Vista Phase 1 is not sufficient reason for a massive up zoning in Phase 2 which will have a significant negative impact upon Los Angeles shrinking industrial land base by removing 111 acres from the M classification without compensating for said loss on an acre for acre basis.

This proposed permanent loss of 111 valuable acres of industrial land in the Western Los Angeles area proximate to the region’s major airport and key freeway interchanges should be analyzed in depth with regard to:

1. The impact of that economic loss on the City’s urgent need to establish and maintain a stable, permanent industrial employment base in the Western Los Angeles area
2. The encouragement of sprawl contrary to SB 375’s stated goal and objective of reducing vehicle miles travelled by pushing employment generating, industrial land uses to outlying areas of Los Angeles, and the resulting significant impacts upon job creation, traffic and infrastructure as more intense housing development follows the important industrial jobs base to the far edges of the city...or to other municipalities.

COMMUNITY PLAN INCONSISTENCIES: Cumulative impacts upon surrounding communities have not been adequately stated.

The Westchester Bluffs create a natural buffer between Westchester and the Playa Vista/Del Rey/Mar Vista communities.

This buffer separates these communities in a variety of practical and environmental areas including transportation, view, air quality, housing, jobs, and shopping.

In fact the impacts of this project will be felt in a much higher degree north of Jefferson Boulevard than Westchester. Changing the Westchester Community Plan to suit the needs of Playa Vista without significant mitigation for impacts upon adjacent northerly communities is not adequate.

Every detail of master planned communities is typically determined prior to construction.

The Playa Vista Area D Specific Plan Regional Mixed Use Commercial Zone C. C2 (PV) classification, as defined in Zone Regulations Section 4 C. paragraph 1, forbids some 83 uses.

This places an undue burden on surrounding communities, and constitutes a significant negative impact upon these communities which do not have the luxury of excluding those less desirable uses which Playa Vista refuses.

Additionally, the C2 (PV) classification requested in the entitlement application permits all uses allowed in the R5 zone, including hotels, motels, and hospitals [except animal hospitals].

Yet, there would appear to be no plans to incorporate middle schools, high schools, or places of worship within the development boundaries -surely major cornerstones of any 'live, work, play' master planned community.

TRACT MAP MODIFICATIONS AND LAND USE INCONSISTENCIES: City Controller Laura Chick's March 16, 2009 audit report, Performance Audit of the City of Los Angeles' Process for Planning Conditions for Development, cites failure of the existing system to effectively track implementation of entitlement conditions:

"Now as Controller, I have circled back to answer the question: "Who ensures that the requirements attached to these developments are followed,?" The answer is: "No one." We are actually often relying on voluntary compliance by the developers.

My report found that, in general, there is no single Department in charge of development projects from beginning to end. The Planning Department is indeed the lead agency in imposing conditions. However other Departments, such as Building and Safety, can add or change conditions without including the Planning Department... It is clear some significant changes must be made here. If projects are approved with conditions attached, is it not in the City's best interest to ensure those conditions are met? Certainly that is what the public expects."

From the summary of audit results:

The City of Los Angeles has not established an adequate process for reviewing, approving, and overseeing development projects that ensures that the final project conforms to the intent of the decision maker. No single City department manages development projects from the project review through project construction and completion. The Department of City Planning does not manage other City departments' review of proposed projects, and does not actively monitor compliance with the projects' conditions of approval once the building permits have been issued. In the absence of a single point of management, development projects can materially change during the project plan review and project construction and completion, resulting in the final project being different from the project as it was approved by the decision maker."

Modifications to project tract map subdivisions have occurred routinely, without an opportunity for discussions and input from nearby community stakeholders.

Additional future modifications to Vesting Tract Maps, such as changes to the Land Use Designation of Lot 113 of VTT 49104 (Open Space) to other Land Use Designations, or similar land use and zone changes to VTT 60110, should not occur without disclosure and public review.

In addition these changes should require a zone change and general plan amendment with appropriate findings and additional environmental clearances by the Advisory Agency.

The RS-DEIR moreover fails to address impacts and adequate mitigation measures as a result of land use inconsistencies resulting from the proposed allocation of 66,950 square feet of proposed office and light industrial uses to be developed within the Community Commercial Land Use Designation in Area D.

Light industrial uses are generally incompatible with mixed-use residential and community serving uses and incompatible with the project's already approved narrower standard streets.

Furthermore, the entire RS-DEIR fails to adequately address any by-right density scenarios that could result in an additional 35% density, or approximately 910 units outside of the equivalency scenarios of 2810 units by exercising the use of the newly adopted City's Density Bonus Ordinance.

The maximum development of the Project's equivalency scenario shown in Table II.A-4 excludes any calculations that show the potential for an added 35% density of the project area.

The RS-DEIR falls far short of analyzing this potential major increase in density, thereby dramatically understating significant adverse environmental impacts, including traffic and water consumption, as well as overstating the number of permanent jobs potentially created by the proposed project.

Additional Land Use and transportation analysis and appropriate mitigation measures should be included as part of the evaluation of the project as it relates to density and disclosure of potential impacts due to incompatible light industrial uses with residential uses.

LAND USE RELATED TRANSPORTATION IMPACTS: "NEW CONDITIONS WHICH REQUIRE A NEW TRAFFIC STUDY": The Mar Vista Community Council has the following concerns with Playa Vista Phase 2 traffic mitigations:

1. The City only requires mitigation of traffic impacts estimated to occur during the Peak Traffic Hour and the traffic impact mitigations secured by the City in 2004 from Playa Vista Phase 2 were based on a Traffic Study which assumed that only 1/4 to 1/3 of the project's total circulation demand from its residential units (condos) will occur during the Peak Traffic Hour (see Appendix A.), and only a portion of that portion was mitigated.
2. The combination of the unmitigated portion of the 1/4 to 1/3 Peak Hour traffic and the 2/3's to 3/4's un-addressed non-Peak-Hour traffic will severely impact commuters, residents and businesses by:
 - increasing both the severity and hours of arterial congestion,
 - increasing commuter traffic cutting through residential neighborhoods,
 - forcing commuters to spread their commuting over even more than 3 to 4 hours each AM and PM, and
 - forcing business to further expand their Staggered Start times, and incur further productivity losses.
3. The Phase 2 Traffic Study violated traffic engineering principles, and the natural laws of physics, by assuming that Phase 2 traffic can be accommodated at LOS "F" intersections, where traffic demand was already predicted to be from 1% to 40% greater (V/C Ratio 1.40) than the intersection's physical capacity (see Appendix B.)
4. The assumption that only 1/3 to 1/4 of AM and PM commute trips will occur during the Peak Traffic Hours is a violation of the California Environmental Quality Act (CEQA), which requires impacts to be assessed under the worst conditions, which, with regard to traffic generation, would be that all condos will generate 2 trips during the Peak Traffic Hour (see Appendix A.)
5. The mitigations offered for even the "Significantly Impacted intersections were insufficient to maintain both satisfactory and adequate Levels of Service at all intersections to be used by Phase 2 traffic, and therefore violated the Palms-Mar Vista-Del Rey, and the Venice Community Plans (see Appendix C.)
6. To even further reduce the mitigations required, the Traffic Study used selected residential Collector streets in neighborhoods other than Playa Vista to absorb Playa Vista Phase 1 and other Related Project traffic competing with Phase 2 for arterial space (see Appendix D.) to make arterials appear to have more remaining capacity for Phase 2 traffic. This likely reduced the apparent number of intersections significantly impacted by even the underestimated Phase 2 traffic and the mitigations required. Such use of residential Collector streets violated the General Plan which states that Collector streets are intended to serve only neighborhood-local traffic.
7. In an attempt to nullify the above violations, the Westchester Community Plan was gutted of all rational traffic-planning policies, thereby leaving existing Los Angeles residents unprotected from Playa Vista's traffic, and causing the Westchester Community Plan to violate the Community Plan consistency rule (see Appendix E.)
8. The Phase 2 Traffic Study was done in 2003 and is now 6 years out of date.
9. Hundreds of additional condos and thousands of additional square feet of commercial and retail development have been approved since the original Phase 2 Traffic Study (see Appendix F.), adding hundreds to thousands

of additional trips to Westside arterials and leaving less room for Playa Vista Phase 2 traffic (assuming there ever was room).

Therefore the Mar Vista Community Council believes that the Playa Vista Phase 2 Traffic Study should be re-done,

- Assuming two commuters per condo, because two L.A-average incomes will be required to purchase a Phase 2 condo, therefore the likelihood of two commuter trips from each condo during each commute period,
- Allocating all 5,200 commute trips generated by Phase 2's proposed 2600 residential units to the AM and to the PM Peak Traffic Hours as CEQA requires impacts to be assessed under the worst conditions and the developer was no power to force Phase 2 condo buyers to spread their commuting over more than the Peak Hour, and
- Assigning all trips only to major and secondary highways intended to absorb such traffic, not to residential streets in neighborhoods other than Playa Vista.

Then mitigate the newly discovered impacts in accordance with the Satisfactory Level of Service policies specified in the Community Plans of the communities impacted by Phase 2 traffic. We anticipate that this will result in a 200% to 300% increase in mitigations over those secured by the original irrational and now out-of-date Traffic Study.

STORMWATER RUNOFF: “Additionally, on March 2, 2007, Council members Ed Reyes (CD 1) and Bill Rosendahl (CD 11) introduced Council Motion 07-0663 to develop a water quality master plan with strategic directions for planning, budgeting and funding to reduce pollution from urban runoff in the City of Los Angeles.

The Water Quality Compliance Master Plan for Urban Runoff (WQCMPUR) was developed by the Bureau of Sanitation, Watershed Protection Division to address the requirements of the Council Motion” [from the final draft of the Water Quality Compliance Master Plan for Urban Runoff (WQCMPUR) developed by the Bureau of Sanitation, Watershed Protection Division].

Therefore, the Playa Vista Phase 2 RS-DEIR must address the issue of stormwater runoff into Ballona Creek and other bodies of water, and include plans if not already included, to mitigate the effects of runoff from Phase II to the citizens of Los Angeles and others.

2. CULTURAL [ARCHAEOLOGICAL] IMPACTS

The First EIR did not analyze more environmentally superior alternatives and the second EIR has the same faults. CEQA mandates that these superior alternatives be considered.

Such alternatives include “No Build” and other options for avoiding archaeologically sensitive areas completely.

3. WASTEWATER IMPACTS

After extensive cost to the City of LA and LA taxpayers, the LA Hyperion Plant was built and more recently, after much more additional costs to taxpayers, its capacity was greatly increased.

The Plant is now providing mitigation of the Environmental Impacts of the Playa Vista project in regards to the millions of gallons of wastewater created by the project.

It has been determined that its capacity will be sufficient for the next 10 years, but what then?

The Mar Vista Community Council recommends all these aforementioned significant impacts be analyzed in the RS-DEIR.

The Mar Vista Community Council also recommends the significant land use impacts of Playa Vista Phase 1 upon neighboring communities be assessed prior to any additional Playa Vista Phase 2 discretionary approvals by the City.

As the primary Charter function of the Mar Vista Community Council is to represent Mar Vista Community Stakeholders, the Mar Vista Community Council recommends that any negotiations that take place with Playa Capital and Council District 11, should include at a minimum a Mar Vista Community Council representative Chair or Co Chair from the Traffic and Infrastructure, and the Planning and Land Use Management Committees [PLUM].

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Rob Kadota', written in a cursive style.

Rob Kadota
Chair
Mar Vista Community Council
Board of Directors

**Mar Vista Community Council Response to The Village at Playa Vista Project RC-DEIR
Appendices**

Appendix A. Estimated Trips versus Probably Real Trip Generation

Trips Estimated in City-Certified Phase 2's Traffic Study

To estimate the traffic impact from development projects, the City used Trip Generation Rates from the Institute of Transportation Engineers (ITE). These Rates are an averaging of trips observed from prior completed projects:

- in cities with better mass transit options than are available to L.A. commuters,
- where two incomes, therefore the likelihood of 2 commuters, are not required to purchase a condo, and
- averaged as far back as the 1970's when two career families was not the norm.

Today such observations represent congestion-constrained flow out of or into recently completed projects. They do **NOT** represent the project's total circulation **DEMAND**, most of which is forced to remain inside or outside of the project during peak traffic hours due to the arterial congestion caused by the City not requiring developers to mitigate all of their projects' traffic impacts. None of the ITE studied projects were of California-based, much less Los Angeles-based development projects.

The AM and PM Trip Rates used for Playa Vista Phase 2 are shown in the table below, along with the number of trips estimated to occur during the AM and PM Peak Traffic Hours, and the Total Daily Trips. The Total Daily Trip estimates for the 2600 Dwelling Units appears to account for the 2 commute trips likely for Westside-priced condos during the AM and PM commute period (4 trips total), plus one additional round-trip, for an average to approximately 6 Total Daily Trips.

Trip Source	Size	AM Trip Rate	AM Peak Hour Trips	PM Trip Rate	PM Peak Hour Trips	Daily Trip Rate	Total Daily Trips
Office	175,000 sf		326		305		2,271
Dwelling Units	2,600 du	0.44	1,444	0.54	1,404	5.86	15,236
Retail	150,000 sf		143		575		6,193
Community Serving	40,000 sf		13		18		520
Total			1,926		2,302		24,220

Probable Real Trip Generation

The probably real AM and PM Trip DEMAND Rates for Playa Vista Phase 2 are shown below. Since the California Environmental Quality Act (CEQA) requires impacts to be assessed under the worst conditions, it must be assumed that the total circulation demand from Phase 2's 2600 condos must be assessed during the AM and PM Peak Traffic Hours.

Trip Source	Size	AM Trip Demand Rate	AM Peak Hour Trips	PM Trip Demand Rate	PM Peak Hour Trips	Daily Trip Rate	Total Daily Trips
Office	175,000 sf		326		305		2,271
Dwelling Units	2,600 du	2.00	5,200	2.00	5,200	5.86	15,236
Retail	150,000 sf		143		575		6,193
Community Serving	40,000 sf		13		18		520
Total			5,682		6,098		24,220

As you can see, the Peak Hour Trip Rates and counts used in the original Playa Vista Phase 2 Traffic Study (based on ITE Trip Rates) account for only approximately one-quarter (1/4) of the actual demand to be generated by Phase 2's Dwelling Units which constitute 92% of the additional demand this project would place on the City's transportation infrastructure. Not addressing and not requiring the developer to provide the mitigations necessary to accommodate the entire demand during the Peak Hour will severely impact commuters, residents and businesses by:

- increasing both the severity and hours of arterial congestion,
- increasing commuter traffic cutting through residential neighborhoods,
- forcing commuters to spread their commuting over even more than 3 to 4 hours each AM and PM, and
- forcing business to further expand their Staggered Start times, and incur further productivity loses.

If the above probable trip counts were used, the traffic impact mitigations required from Playa Vista would be approximately three times those secured by the 2004 Development Agreement just to achieve the same but still unsatisfactory and inadequate intersection Level of Service ratings to be expected from the currently planned mitigations. But at least it will prevent congestion and cut-thru traffic from increasing, compute periods from lengthening, and business productivity from dropping further.

Appendix B. Playa Vista Phase 2 Allowed to Add Traffic to Intersections that Cannot Accommodate More Traffic.

2003 Westside Intersection LOS Map

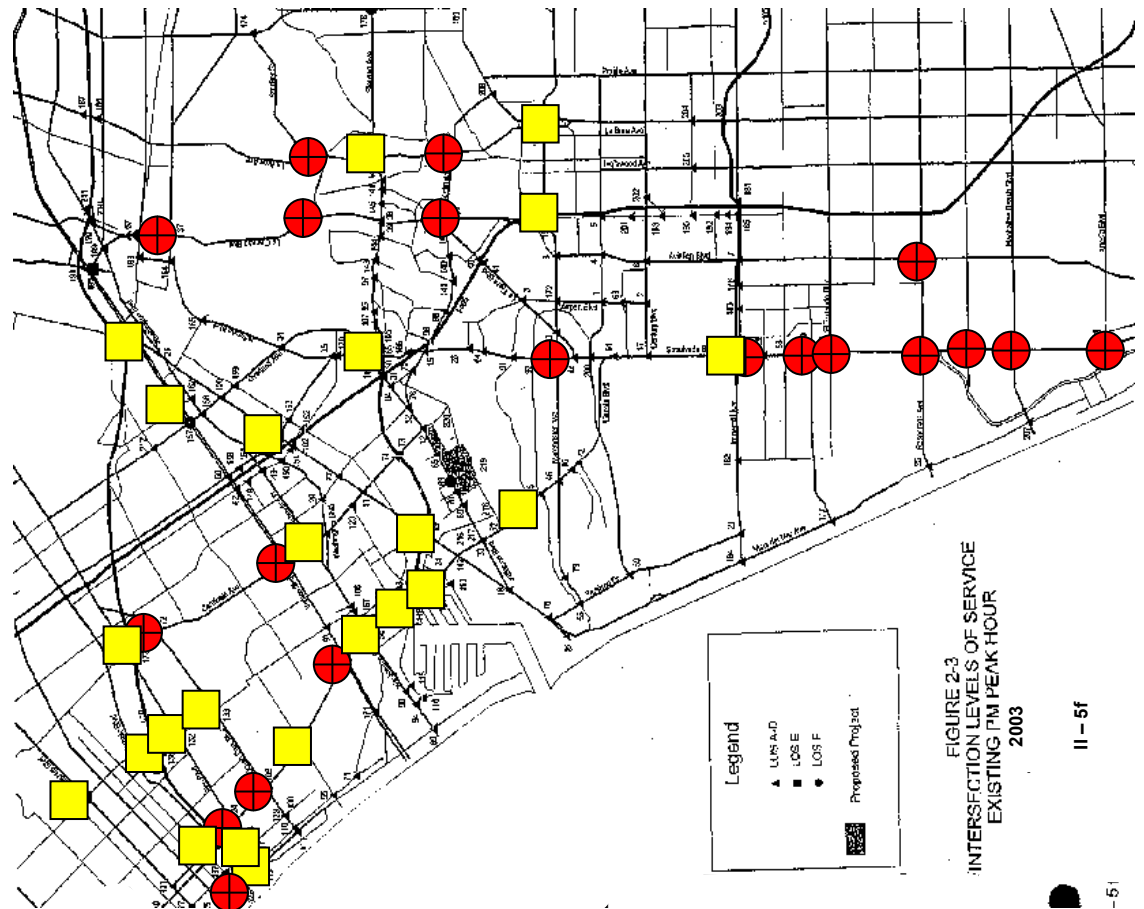
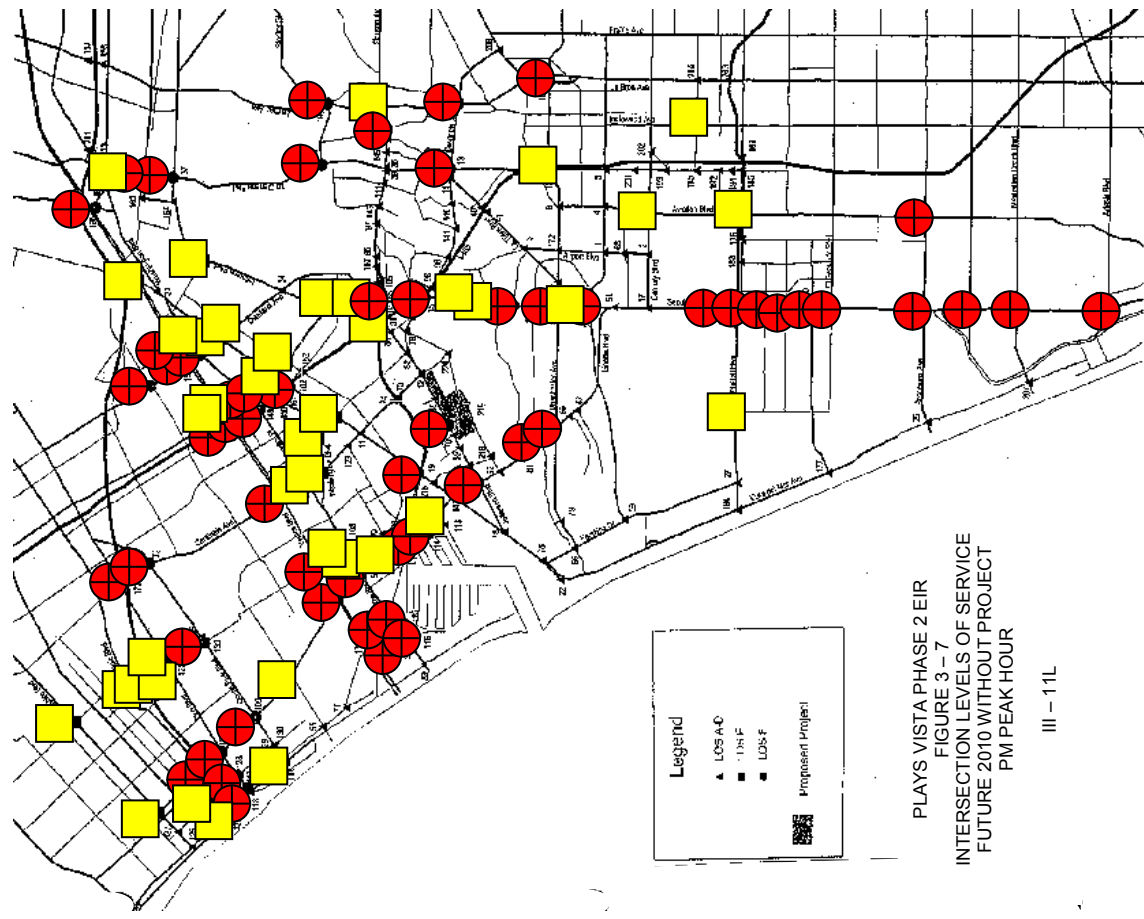


FIGURE 2-3
INTERSECTION LEVELS OF SERVICE
EXISTING PM PEAK HOUR
2003

II - 5f

2003-Projected LOS Baseline Conditions for Phase 2 traffic.



PLAYS VISTA PHASE 2 EIR
FIGURE 3 - 7
INTERSECTION LEVELS OF SERVICE
FUTURE 2010 WITHOUT PROJECT
PM PEAK HOUR

III - 11L

- LOS "F" Intersection - Fails to accommodate existing traffic .
Can NOT accommodate additional traffic.
- LOS "E" Intersection - Traffic delayed for multiple signal cycles.
- ▲ LOS "D" Intersection - Stopped traffic may not clear on one signal cycle.

Appendix C. Intersection Level of Service Policy Violations of the Brentwood, Del Rey, Mar Vista, Palms, Venice, West Los Angeles, and Westwood Community Plans.

Community Plans, which make up the Land Use section of the Los Angeles General Plan, contain the City's fundamental Land Use Transportation Policies, pursuant to State Code 65300.

All 35 Community Plans, with the exception of the Westchester Community Plan which was modified to benefit Playa Capital, contain the following two basic Transportation Policies related to maintaining a satisfactory Level of Service (LOS) for existing residents and ensuring an adequate infrastructure before approving new development: (the policy numbers may differ by Plan)

Policy 15-1.1 [a] "Maintain a satisfactory LOS for streets and highways not to exceed LOS "D" for secondary highways and collector streets; nor LOS "E" for major highways or major business districts."

% Unsatisfactory Intersections (Below LOS "D")	<u>2003</u>	<u>After PV Phase 1</u>	<u>After PV Phase 2</u>
- Mar Vista	27%	60%	53%*
- Westside	20%	40%	42%*

Policy 16-1.1 [b] "If existing levels of service are LOS "E" or LOS "F" on a portion of a highway or collector street, then the level of service for future growth should be maintained at LOS "E."

Playa Vista improved only 4 of 84 LOS 'F' intersections to LOS 'E' .

Policy 16-2.1 "No increase in density shall be effected by zone change or subdivision unless it is determined that the transportation infrastructure serving the property can accommodate the traffic generated."

LOS 'F' rated intersections cannot accommodate more traffic."

% Intersections Unable to Accommodate Playa Vista Traffic (LOS "F" Intersections)	<u>2003</u>	<u>After PV Phase 1</u>	<u>After PV Phase 2</u>
- Mar Vista	10%	33%	30%*
- Westside	10%	38%	36%*

Results:

105%* increase in "Unsatisfactory" arterial intersections increasing congestion, commute times and neighborhood cut-thru traffic.

173%* increase in "Failed", 5-minute-delay, LOS 'F' intersections.

100%* to 200% increase in Cut-thru traffic in residential neighborhoods.

* All of the above are based on assessing the impact of only 1/4 (25%) of actually total circulation demand likely to be generated by Phase 2's 2600 residential dwelling units. The actual adverse impact to the City's transportation infrastructure's Level of Service will be much greater than shown above.

Source: Intersection V/C & LOS data presented to MVCC Traffic Committee by Playa Vista and Kaku Associates on September 22, 2003, and the Playa Vista Phase 2 EIR.

Appendix D. General Plan and Community Plan Street Usage Policy Violations

LA's General Plan (LA's "official" policy document pursuant to State Code 65300) states that,

"Collector streets are intended to assist local traffic to major and secondary highways."

- General Plan, Transportation Element, Chapter VI – Street Designations and Standards,
Section B. Selection/Performance Criteria For Street Designations, paragraph 1. Item d. "Collector Streets"

The Palms, Mar Vista, Del Rey and Venice Community Plans say that the City is to:

"Discourage Non-Resident Traffic on Residential Streets."

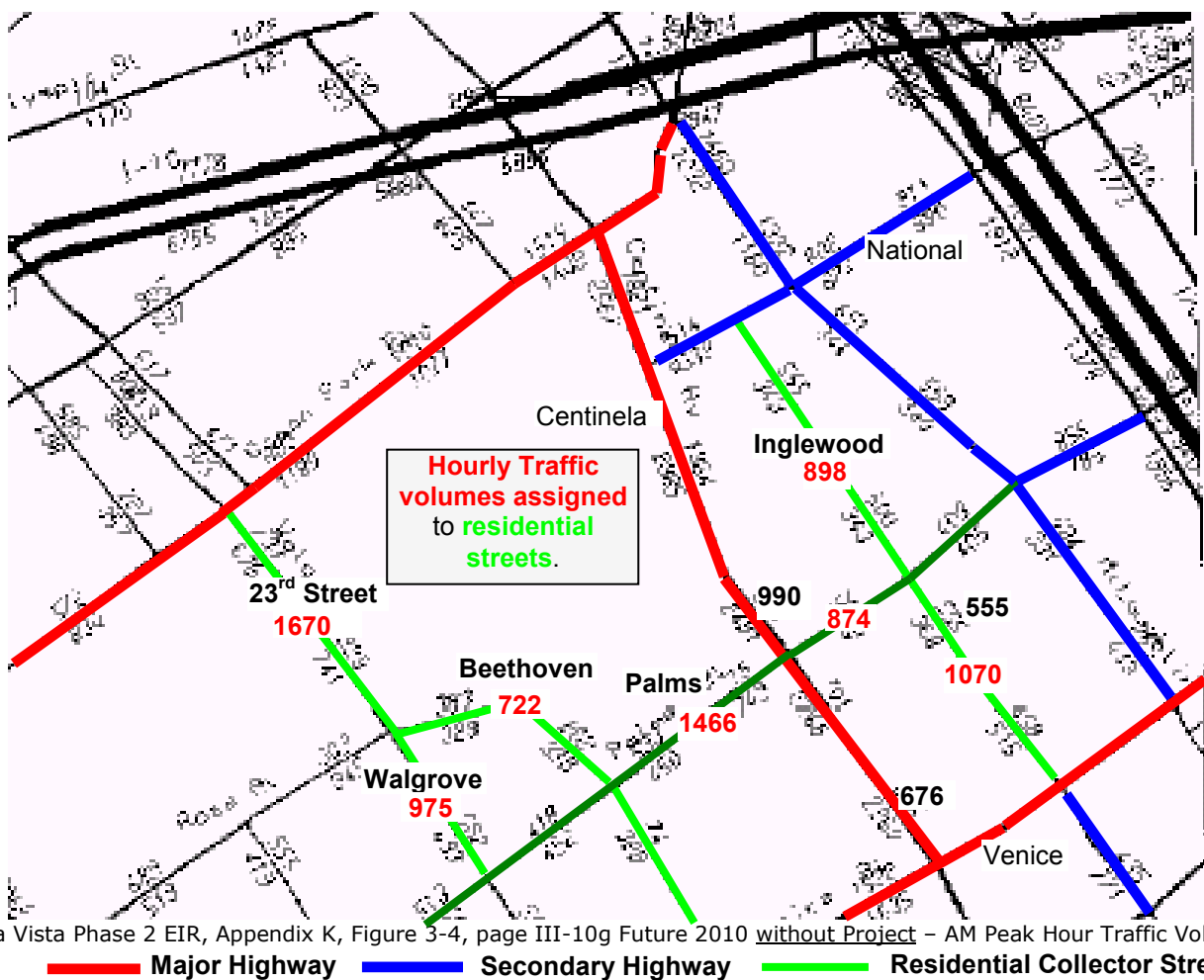
- Neighborhood Protection Plan, Goal 14

However Playa Vista Phase 2's EIR says,

"The City's [arterial framework] model was revised to add network enhancements (to add all Collector streets"

"As one corridor becomes congested, the model assigns traffic to parallel routes"

"The City's transportation policy planning criteria seeks to focus traffic on arterials and collector streets and away from residential streets."



Therefore Playa Vista Phase 2's Traffic Plan violated the above General and Community Plan policies.

- 1. Collector streets are residential streets, and are for local neighborhood traffic only!**
- 2. Residential streets, either Collector or Local, are not to serve as commuter arterials.**

Appendix E. Westchester Community Plan Gutted of Rational Traffic Planning Policies to Enable Phase 2 Approval.

The following modifications were made to the Westchester Community Plan.

Transportation Section, page III-32

The former Westchester Community Plan contained the following policy:

"Maintain a satisfactory LOS for streets and highways not to exceed LOS "D" for secondary highways and collector streets; and not to exceed LOS "E" for Major Highways or major business districts."

See the 2003 and 2010 Intersection LOS Maps in the Phase 2 EIR or above for a graphical picture of how many intersections will be driven over the acceptable level of LOS "D" and "E" by 2010. The combined Playa Vista Phase 1 and 2 projects will cause 51% of this degradation. Councilwoman's Miscikowski's husband Doug Ring's Marine Development projects will cause 28% of the degradation.

The modified Westchester Community Plan now reads:

11-1.1 Seek to maintain a satisfactory Level of Service (LOS) **to extent possible** for Major Highways, Secondary Highways and Collector Streets. (Pg III-34)

Although traffic from Playa Vista Phase 1 and Phase 2 projects impact intersections in the Palms, Mar Vista, Del Rey and Venice communities, and these projects can not survive without use of streets and intersections in the these communities, Playa Capital stated in the Final EIR that they were not bound by policies in the Palms, Mar Vista, Del Rey and Venice Community Plans. The EIR shows that Playa Vista projects contribute a majority of the projected traffic increases that will result in 18 intersections, currently providing Levels of Service of "D" or better, to deteriorate to LOS "E", (a 40% increase in LOS "E" intersections and a violation of the original Plan's policy), the deterioration of 76 intersections to LOS "F" (a 176% increase and also a violation of the original policy), and only 4 of 84 projected LOS "F" intersections will be "maintained at" (brought back to) LOS "E" by Phase 2 planned mitigations.

All Westside Community Plans (except the modified Westchester Plan) contain the following policy:

No increase in density shall be effected by zone change or subdivision unless it is determined that the transportation infrastructure serving the property can accommodate the traffic generated.

In 2003, 10% of Westside were rated LOS "F" by LADOT, meaning the intersections fails to accommodate the current traffic demand being placed them.

The 2010 Baseline traffic model for Phase 2, which predicts the conditions after Playa Vista Phase 1 and the conditions into which Phase 2 traffic would be added, predicts that 38% of intersections required by Phase 2 traffic will be LOS "F".

While the above predicted Westside infrastructure deterioration is said to be the combined impact of 96 "Related Projects", Playa Vista Phase 1 and 2 constitute 51% of residential unit increases cited in the EIR and therefore must be considered as contributing the majority of traffic increases. The Ring/Miscikowski Marina Development Projects contributed 27% of the residential unit increases and therefore a likely percentage of the traffic increases.

Playa Vista Phase 2 could not be approved into these conditions under the original Westchester Community Plan policies. Therefore, the Westchester Community Plan was altered as shown below:

11-2.1 No increase in density shall be effected by zone change, plan amendment, subdivision or any other discretionary action, unless ~~it is determined that the transportation infrastructure serving the property can accommodate the traffic generated~~ **Decision-makers make the following findings [see below] or a statement of overriding considerations:**

The transportation infrastructure serving the project site and surrounding area, specifically the Freeways, Highways, and Streets presently serving the affected area within the Westchester-Playa del Rey Community Plan, have adequate capacity to accommodate the existing traffic flow volumes, and any additional traffic volume which would be generated from projects enabled by such discretionary actions.

The weakening of the Westchester Community Plan allowed the project to be approved solely on a statement that "Overriding Considerations justify approval", in spite of the fact that the Phase 2 traffic model clearly predicted that **the transportation infrastructure serving the property can not accommodate the traffic it will generate.**

Even after removing the requirements for Playa Vista to maintain Satisfactory Levels of Service at LA intersections, their traffic would not physically fit solely on the major and secondary highways, the streets designated and designed for such traffic. Therefore Playa Capital spread they traffic over all Westside residential Collector streets in their mathematical traffic model so it would appear as if Playa Vista traffic would be accommodated.

Such use of residential Collector streets was a violation of the Los Angeles General Plan and all Westside Community Plans (except the modified Westchester Community Plan. All other plans state that the City is to,

"DISCOURAGE NON-RESIDENT TRAFFIC FLOW ON RESIDENTIAL STREETS..."

There are two types of Residential streets; Collector streets or Local streets.

The modified Westchester Community Plan now states that the City need only to:

DISCOURAGE NON-RESIDENT TRAFFIC FLOW ON **LOCAL** RESIDENTIAL STREETS.

This allowed Playa Capital to offload Phase 1 traffic, in their traffic model, from the arterials onto residential Collector streets to make it appear as if there would still be room on the arterials for Phase 2 traffic.

This was a violation of the General Plan Transportation Element policy which states that,

"Collector streets are intended to assist local traffic flow to major and secondary highways",

rather than being used as a major or secondary highway.

The modification made this policy illogical. "Local" streets do not connect to commuter arterials (Major or Secondary Highway) at signal-controlled intersections. Therefore they do not require protection from non-resident traffic because non-resident commuter traffic cannot use Local streets to cut through a residential neighborhood.

Appendix F. Development Projects Approved Since Playa Vista Phase 2's Traffic Study in 2003

The following is a partial list of traffic-generating development projects believed to have been approved since Playa Vista Phase 2's 2003 Traffic Study. The additional traffic from these project leaves less capacity for Playa Vista Phase 2 Traffic. The Phase 2 Traffic Study needs to be redone to account for these significantly changed conditions.

[City Planning should verify, correct and/or expand this partial list of Phase 2's Related Projects.]

Many Lofts in Marina Del Rey (No trip data available.)

Marina Pointe = 31 stories, 800 new condos.

Lincoln/Washington Office Building = 7 stories.

Centinela/Bundy SMC Campus = 5000 more trips on Centinela (or residential streets).

Centinela/Venice Condos = 80+ additional Peak Hour cut-thrus on Inglewood, Grand View.

Centinela/Washington Condos = 300+ additional Peak Hour cut-thrus on Inglewood, Grand View.

Centinela/Grand V.-LT Care Facility = 100+ additional P.H. cut-thrus on Inglewood, Grand View.

New Projected Peak Hour Cut-Thru Traffic on Inglewood = 1500 per hour for 6 hours.

11904 Culver @ Inglewood – add 70 – 190? new Condos.

11427 W Culver – 5 Condos.

S Barrington: 417 – 33 Condos, 1835– 8 Condos

Bundy & Olympic 377 Condos

3115 Sepulveda – 173 Condos

12095 Washington Boulevard

12099 Washington Boulevard

12101 Washington Boulevard

12803 Washington Boulevard

“Over the last decade, LA City Planning has approved new development projects at twice the historic rate.”
– LA City Controller Audit of LA Planning Department.

Letter No. 8



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March 9, 2009

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Frances Stronks
Jack Topal
John-David Webster

David Somers
EIR Unit
Division of Land/Environmental Review
Department of City Planning
200 North Spring Street
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RE: The Village at Playa Vista - RS-DEIR

Dear Mr. Somers:

On March 3, 2009, the Neighborhood Council of Westchester Playa voted to adopt the attached Resolution regarding The Village at Playa Vista RS-DEIR.

If you have any questions, please feel free to contact me at 310.779.6706 or the Chairperson of our Planning and Land Use Committee, Steve Donell, at 310.207.8481.

Sincerely,

Cyndi Hench
President

Enclosure

Cc: Steve Donell

NEIGHBORHOOD COUNCIL OF WESTCHESTER/PLAYA

RESOLUTION OF SUPPORT The Village at Playa Vista

Whereas, the Playa Vista project is located within the boundaries of the Westchester Playa Neighborhood Council; and

Whereas, the Westchester Playa Neighborhood Council in 2004 concluded that The Village at Playa Vista project (the "Village") should be approved due to its many benefits to our community, including new parks and habitat, transportation improvements, retail opportunities and new homes to improve the jobs/housing imbalance on the Westside; and

Whereas, the Westchester Playa Neighborhood Council therefore endorsed the Village when it was going through the city approval process in 2004 (see attached resolution); and

Whereas the Los Angeles City Council voted overwhelmingly to support the Village in 2004; and

Whereas the Los Angeles Superior Court ruled on two California Environmental Quality Act lawsuits and upheld the City Council's approval of the Village in 2006; and

Whereas the Court of Appeals, in 2007, required further analysis of three issues (land use, wastewater and archaeological resources) in the Village Environmental Impact Report and ruled that the balance of the Village Environmental Impact Report (including traffic and methane analyses) complied with the California Environmental Quality Act; and

Whereas the City of Los Angeles has conducted further analysis of the three issues required by the Court of Appeals and released "Recirculated Sections of the Draft Environmental Impact Report" for the Village for public comment; and

Whereas the land use analysis has been revised to indicate that the Village is an "upzoning" with regard to the levels of development permitted under the existing Specific Plan and zoning, and concludes that with the proposed zone changes and plan amendments, the Village would be consistent with all applicable policies and plans, and would be compatible with surrounding land uses; and

Whereas the wastewater analysis has been revised and concludes that current information confirms that adequate treatment capacity will be available at Hyperion to handle wastewater flows from the Village, as well as other future flows through at least 2020, and that the additional wastewater generated by the Village, along with other future projected sources, would not have a cumulative impact on water quality in Santa Monica Bay; and

Whereas the archaeological resources analysis has been revised to discuss preservation in place, including possible options to relocate the riparian corridor, and concludes that impacts to archaeological resources would still occur under any such relocation, and that any such relocation would result in additional adverse impacts on water quality, habitat and wildlife; and

Whereas the City of Los Angeles will soon consider whether to recertify the Environmental Impact Report for the Village and reapprove land use entitlements and related approvals for Village; and

NOW THEREFORE BE IT RESOLVED:

That the Westchester Playa Neighborhood Council strongly reiterates its 2004 support for the Village at Playa Vista and urges the City of Los Angeles to recertify the Environmental Impact Report for the Village at Playa Vista (including the Recirculated Sections thereof) and to reapprove the land use entitlements and related approvals for The Village at Playa Vista

Adopted this 3rd day of March, 2009.



ARNOLD SCHWARZENEGGER
GOVERNOR

Letter No. 9

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



CYNTHIA BRYANT
DIRECTOR

Memorandum

Date: March 16, 2009
To: All Reviewing Agencies
From: Scott Morgan, Senior Planner
Re: SCH # 2002111065
The Village at Playa Vista

The Lead Agency has revised some information regarding the above-mentioned project. Please see the attached materials for more specific information. The review period has been extended to end on April 30, 2009. All other project information remains the same.

cc: David Somers
City of Los Angeles, Dept. of City Planning
200 North Spring Street, Room 750
Los Angeles, CA 90012

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CITY OF LOS ANGELES

MAR 25 2009

ENVIRONMENTAL
UNIT

ATTACHMENT B

PROJECT DESCRIPTION:

The Village at Playa Vista consists of the following two components: (1) a mixed-use community ("the Urban Development Component"); and (2) a Riparian Corridor and restoration and maintenance of a portion of the Westchester Bluffs adjacent to the Riparian Corridor (the "Habitat Creation/Restoration Component").

The Urban Development Component, the primary component of the Project, would enable the development of a master planned community composed of residential, commercial, recreational, and community-serving uses. This development would occur on an approximately 99.3-acre site consisting of 87.5 acres of development, 11.4 acres of parks, and 0.4 acre of other passive open space. The proposed development includes 2,600 dwelling units, 175,000 square feet (sq.ft.) of office space, 150,000 sq.ft. of retail space, and 40,000 sq.ft. of community-serving uses. The Urban Development Component also would provide a comprehensive program of parks and open space areas that would contribute to the aesthetic character of the area and complement the land use program described above. An Equivalency Program is proposed to allow a limited exchange of office uses for retail and/or assisted living uses in order to meet future needs, within the framework of a balanced Project consistent with the Project's mixed-use concept. Under the proposed Equivalency Program, a maximum of 125,000 sq.ft. of office development may be exchanged for up to 56,832 sq.ft. of retail uses or up to 200 assisted living units, or a combination thereof (e.g., an increase of both retail and assisted living development).

Land uses may be exchanged based on specific equivalency factors and subject to the limits set forth above.

The Habitat Creation/Restoration Component includes a total of 11.7 acres, of which the Riparian Corridor involves approximately 6.7 acres, with the restoration of the adjoining portion of the Westchester Bluffs occurring over the remaining 5 acres. The construction of the Riparian Corridor would complete a 25-acre riparian corridor that also includes sections east and west of the Riparian Corridor, ultimately feeding into the Playa Vista First Phase Freshwater Marsh.

RS-DEIR SECTIONS AND SIGNIFICANT EFFECTS:

In accordance with the California Court of Appeal's opinion and the Superior Court's writ of mandate, the City has prepared and circulated this RS-DEIR pursuant to CEQA Guidelines section 15088.5, subdivision (c) and (g). As CEQA Guidelines section 15088.5, subdivision (f)(2) permits, the City requests that reviewers limit the scope of their comments to that material which is within the text of the revised sections and the appendices included in the RS-DEIR. This RS-DEIR contains the following revised and updated sections to be recirculated for public comment:

- (1) This Executive Summary for the RS-DEIR, which includes a revised Introduction and summary of the Proposed Project's potential impacts on land use, archaeological resources, and wastewater, including cumulative impacts to the Santa Monica Bay. This Executive Summary replaces and supersedes Sections I.A and I.G-9, 23 and 27 of the Original DEIR.
- (2) Revised analysis of land use impacts, which supersedes and replaces in full Section IV.G, Land Use, of the Original DEIR.
- (3) Revised archaeology section that discusses the preservation in place of Native American resources in accordance with Guidelines section 15126.4, subdivisions (a)(1)(B) and (b)(3), which supersedes and replaces in full Section IV.P.2, Cultural Resources, of the Original DEIR.
- (4) Revised wastewater section that identifies the intended and likely measures to dispose of the Proposed Project's wastewater and analyzes the environmental impacts of employing those measures to dispose of the wastewater generated by the Proposed Project, including any cumulative impacts to the Santa Monica Bay, which section supersedes and replaces in full Section IV.N.2, Wastewater, of the Original DEIR.

In addition to the above sections required to address deficiencies in the Original FEIR, this RS-DEIR contains an analysis of the Proposed Project's impacts regarding global climate change. While neither the appellate opinion nor the writ of mandate directed the City to include such an analysis, California has adopted new legislation since the certification of the Original FEIR that requires State agencies to implement regulations designed to address climate change by, among other things, reducing the amount of greenhouse gases emitted. In addition, the research and public interest regarding this subject matter has advanced to the point where many lead agencies are now including analyses of the topic in CEQA documents. Therefore, even though not required by the Court of Appeal's decision and case law concerning the effect of that decision, the City has analyzed global climate change in this RS-DEIR for the Proposed Project given the recent State legislation and regulations concerning climate change and the absence of any analysis of climate change in the Original FEIR. The discussion of global climate change may be found in Section II.D. of this RS-DEIR. All of the potential impacts with regard to the four issues analyzed in this RS-DEIR are concluded to be less than significant, except that the projects contribution to cumulative archeological resources impacts is concluded to be significant and cumulatively considerable.

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
 For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #2002111065

Project Title: The Village at Playa Vista
Lead Agency: City of Los Angeles Department of City Planning **Contact Person:** David Somers
Mailing Address: 200 North Spring Street, Room 750 **Phone:** (213) 978-1355
City: Los Angeles **Zip:** 90012 **County:** Los Angeles

Project Location: County: Los Angeles **City/Nearest Community:** Los Angeles/Westchester - Playa del Rey
Cross Streets: W. Jefferson Blvd., Bluff Creek Dr., Lincoln Blvd. **Zip Code:** 90094
Longitude/Latitude (degrees, minutes and seconds): 33 ° 58 ' 35.14" N / 118 ° 24 ' 58.95" W **Total Acres:** 111.0
Assessor's Parcel No.: _____ **Section:** 23 **Twp.:** 2S **Range:** 15W **Base:** _____
Within 2 Miles: State Hwy #: I-405, SR-90, 1,42, & 187 **Waterways:** Santa Monica Bay, Ballona Channel & Ballona Creek
Airports: LAX **Railways:** _____ **Schools:** NUMEROUS

Document Type:
 CEQA: NOP Draft EIR Supplement/Subsequent EIR (Prior SCH No.) 200211065 Other: RS-DEIR
 NEPA: NOI EA Draft EIS FONSI
 Other: Joint Document Final Document Other: _____

Local Action Type:
 General Plan Update Specific Plan Master Plan Planned Unit Development Site Plan Rezone Use Permit Land Division (Subdivision, etc.)
 General Plan Amendment Other: _____
 General Plan Element Other: _____
 Community Plan Other: _____

Development Type:
 Residential: Units 2,600 Acres _____
 Office: Sq. ft. 175,000 Acres _____ Employees 700
 Commercial: Sq. ft. 150,000 Acres _____ Employees 400
 Industrial: Sq. ft. _____ Acres _____ Employees _____
 Educational: _____
 Recreational: 11.4 parks, 0.4 acres passive open space
 Water Facilities: Type _____ MGD
 Transportation: Type _____
 Mining: Mineral _____
 Power: Type _____ MW
 Waste Treatment: Type _____ MGD
 Hazardous Waste: Type _____
 Other: 40,000 Sq. Ft. of Community Serving Uses (80 emp.)

Project Issues Discussed in Document:
 Aesthetic/Visual Fiscal Recreation/Parks Vegetation
 Agricultural Land Flood Plain/Flooding Schools/Universities Water Quality
 Air Quality Forest Land/Fire Hazard Septic Systems Water Supply/Groundwater
 Archeological/Historical Geologic/Seismic Sewer Capacity Wetland/Riparian
 Biological Resources Minerals Soil Erosion/Compaction/Grading Growth Inducement
 Coastal Zone Noise Solid Waste Land Use
 Drainage/Absorption Population/Housing Balance Toxic/Hazardous Cumulative Effects
 Economic/Jobs Public Services/Facilities Traffic/Circulation Other: Climate Change

Present Land Use/Zoning/General Plan Designation:
 Vacant/C2(PV), M(PV), R4(PV), [Q]R4-1, R1-1/Light/Limited Industry, Regional Mixed Use Commercial, High Medium Density Res.
Project Description: (please use a separate page if necessary)

The Village at Playa Vista consists of the following two components: (1) a mixed-use community ("the Urban Development Component"); and (2) a Riparian Corridor and restoration and maintenance of a portion of the Westchester Bluffs adjacent to the Riparian Corridor (the "Habitat Creation/Restoration Component").

State Clearinghouse Contact: (916) 445-0613 *AKC*

State Review Began: 1-29-2009

SCH COMPLIANCE 4-30-2009

- per lead

Please note State Clearinghouse Number (SCH#) on all Comments

SCH#: **2002111065**

Please forward late comments directly to the Lead Agency

AQMD/APCD 33

(Resources: 3, 21)

Project Sent to the following State Agencies

- | | |
|---|--|
| <input checked="" type="checkbox"/> Resources | <input type="checkbox"/> State/Consumer Svcs |
| <input type="checkbox"/> Boating & Waterways | <input type="checkbox"/> General Services |
| <input checked="" type="checkbox"/> Coastal Comm | <input type="checkbox"/> Cal EPA |
| <input checked="" type="checkbox"/> Colorado Rvr Bd | <input type="checkbox"/> ARB - Airport Projects |
| <input checked="" type="checkbox"/> Conservation | <input type="checkbox"/> ARB - Transportation Projects |
| <input checked="" type="checkbox"/> Fish & Game # 5 | <input type="checkbox"/> ARB - Major Industrial Projects |
| <input type="checkbox"/> Delta Protection Comm | <input checked="" type="checkbox"/> Integrated Waste Mgmt Bd |
| <input type="checkbox"/> Cal Fire | <input type="checkbox"/> SWRCB: Clean Wtr Prog |
| <input checked="" type="checkbox"/> Historic Preservation | <input type="checkbox"/> SWRCB: Wtr Quality |
| <input checked="" type="checkbox"/> Parks & Rec | <input type="checkbox"/> SWRCB: Wtr Rights |
| <input type="checkbox"/> Central Valley Flood Prot. | <input checked="" type="checkbox"/> Reg. WQCB # 4 |
| <input type="checkbox"/> Bay Cons & Dev Comm | <input checked="" type="checkbox"/> Toxic Sub Ctr-CTC |
| <input checked="" type="checkbox"/> DWR | <input type="checkbox"/> Yth/Adlt Corrections |
| <input checked="" type="checkbox"/> OES (Emergency Svcs) | <input type="checkbox"/> Corrections |
| <input type="checkbox"/> Bus Transp Hous | <input type="checkbox"/> Independent Comm |
| <input checked="" type="checkbox"/> Aeronautics | <input type="checkbox"/> Energy Commission |
| <input checked="" type="checkbox"/> CHP | <input checked="" type="checkbox"/> NAHC |
| <input checked="" type="checkbox"/> Caltrans # 7 | <input checked="" type="checkbox"/> Public Utilities Comm |
| <input type="checkbox"/> Trans Planning | <input checked="" type="checkbox"/> State Lands Comm |
| <input checked="" type="checkbox"/> Housing & Com Dev | <input type="checkbox"/> Tahoe Rgl Plan Agency |
| <input type="checkbox"/> Food & Agriculture | |
| <input type="checkbox"/> Health Services | |
| | <input type="checkbox"/> Conservancy |
| | <input type="checkbox"/> Other: _____ |



ARNOLD SCHWARZENEGGER
GOVERNOR

Letter No. 10

STATE OF CALIFORNIA

GOVERNOR'S OFFICE of PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT



CYNTHIA BRYANT
DIRECTOR

May 1, 2009

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MAY 08 2009

ENVIRONMENTAL
UNIT

David Somers
City of Los Angeles, Department of City Planning
200 N. Spring Street, Room 750
Los Angeles, CA 90012

Subject: The Village at Playa Vista Project
SCH#: 2002111065

Dear David Somers:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on April 30, 2009, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts
Director, State Clearinghouse

**Document Details Report
State Clearinghouse Data Base**

SCH# 2002111065
Project Title The Village at Playa Vista Project
Lead Agency Los Angeles, City of

Type EIR Draft EIR
Description The Village at Playa Vista consists of the following two components: (1) a mixed-use community ("the Urban Development Component"); and (2) a Riparian Corridor and restoration and maintenance of a portion of the Westchester Bluffs adjacent to the Riparian Corridor (the "Habitat Creation/Restoration Component").

Lead Agency Contact

Name David Somers
Agency City of Los Angeles, Department of City Planning
Phone 213-978-1355 **Fax**
email
Address 200 N. Spring Street, Room 750
City Los Angeles **State** CA **Zip** 90012

Project Location

County Los Angeles
City
Region
Lat / Long 33° 58' 35.5" N / 118° 25' 38.2" W
Cross Streets Lincoln Boulevard/W. Jefferson Boulevard/Bluff Creek Drive
Parcel No. 1,42,90,187&I-405
Township 2S **Range** 15W **Section** 23 **Base**

Proximity to:

Highways 1,42,90,187& I-405
Airports LAX
Railways
Waterways Santa Monica Bay, Marina del Rey and Ballona Channel
Schools multiple
Land Use PLU: Vacant
Z: C2(PV), M(PV), R4(PV), [Q] R4-1, R1-1
GP: Light/Limited Industry, Regional Mixed Use Commercial, High Medium Density Residential

Project Issues Sewer Capacity; Other Issues; Cumulative Effects; Landuse

Reviewing Agencies Resources Agency; California Coastal Commission; Department of Fish and Game, Region 5; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Office of Emergency Services; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 7; Department of Housing and Community Development; Integrated Waste Management Board; Regional Water Quality Control Board, Region 4; Native American Heritage Commission

Date Received 01/29/2009 **Start of Review** 01/29/2009 **End of Review** 04/30/2009



ARNOLD SCHWARZENEGGER
GOVERNOR

Letter No. 11

STATE OF CALIFORNIA

GOVERNOR'S OFFICE of PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT



CYNTHIA BRYANT
DIRECTOR

May 7, 2009

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MAY 21 2009

ENVIRONMENTAL
UNIT

David Somers
City of Los Angeles, Department of City Planning
200 N. Spring Street, Room 750
Los Angeles, CA 90012

Subject: The Village at Playa Vista Project
SCH#: 2002111065

Dear David Somers:

The enclosed comment (s) on your Draft EIR was (were) received by the State Clearinghouse after the end of the state review period, which closed on April 30, 2009. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project.

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2002111065) when contacting this office.

Sincerely,

Terry Roberts
Senior Planner, State Clearinghouse

Enclosures
cc: Resources Agency

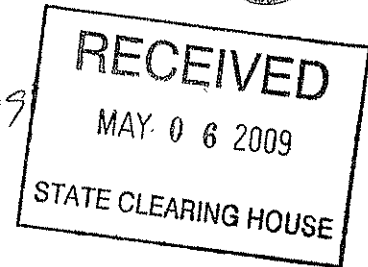
NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
 SACRAMENTO, CA 95814
 (916) 659-6251
 Fax (916) 657-5390
 Web Site www.nahc.ca.gov
 e-mail: ds_nahc@pacbell.net



February 13, 2009

Alan
 4.30.09
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 e



Mr. David J. Somers, Environmental Planner
 CITY OF LOS ANGELES
 CITY PLANNING DEPARTMENT
 200 N. Spring Street, ROOM 750
 Los Angeles, CA 90012

Re: SCH#2002111065: CEQA Notice Completion: ENV-2002-6129-EIR; Re-Circulated draft Environmental Impact Report (RS-DEIR) for the The Village at Playa Vista Project; City of Los Angeles City Planning Department; Los Angeles County, California

Dear Mr. Somers:

The Native American Heritage Commission (NAHC) is the state 'trustee agency' pursuant to Public Resources Code §21070 designated to protect California's Native American Cultural Resources. The NAHC is also a 'reviewing agency' for both federal and state environmental documents circulated for review under both federal and state statutes and environmental regulations. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the California Code of Regulations §15064.5(b)(c)(f) CEQA guidelines). Section 15382 of the 2007 CEQA Guidelines defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE)', and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

√ Contact the appropriate California Historic Resources Information Center (CHRIS) for possible 'recorded sites' in locations where the development will or might occur.. Contact information for the Information Center nearest you, the South Central Coastal Information Center (Contact Ms. Stacy St. James at 714-278-5395). The record search will determine:

- If a part or the entire APE has been previously surveyed for cultural resources.
- If any known cultural resources have already been recorded in or adjacent to the APE.
- If the probability is low, moderate, or high that cultural resources are located in the APE.
- If a survey is required to determine whether previously unrecorded cultural resources are present.
- √ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure.
 - The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological information center.
- √ The Native American Heritage Commission (NAHC) performed:
 - * A Sacred Lands File (SLF) search of the project 'area of potential effect (APE)': The results: Known Native American Cultural Resources were identified within one-half mile of the 'area of potential effect' (APE). The NAHC SLF is not exhaustive and local tribal contacts should be consulted from the attached list and there are Native American cultural resources in close proximity..
 - The NAHC advises the use of Native American Monitors, also, when professional archaeologists or the equivalent are employed by project proponents, in order to ensure proper identification and care given cultural resources that may be discovered. This is particularly true for this, proposed project, because of the *plethora of Native American human remains and archaeological features discovered during Phase I of the Playa Vista Project*. The NAHC, FURTHER, recommends that contact be made with Native American Contacts on the attached list to get their input on potential IMPACT of the project (APE) on cultural resources.. In some cases, the existence of a Native American cultural resources may be known only to a local tribe(s) or Native American individuals or elders.
 - √ Lack of surface evidence of archeological resources does not preclude their subsurface existence.

- Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
 - Again, a culturally-affiliated Native American tribe may be the only source of information about a Sacred Site/Native American cultural resource.
 - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
- √ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans.
- CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.

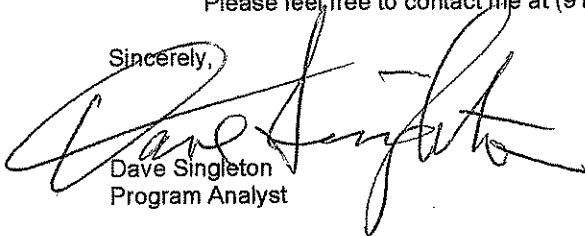
FURTHERMORE, we assume this project, *The Village at Playa Vista*, will also require a permit, as required for Phase I of the Playa Vista Project, from the Department of the Army, Corps of Engineers –Los Angeles District, and possibly a Programmatic Agreement of which the City of Los Angeles will be a signatory. The NAHC is also a 'reviewing agency' for environmental documents prepared under the National Environmental Policy Act (NEPA; 42 U.S.C 4321 *et seq*); Parts 1500 to 1508, USACE Regulations for Implementing NEPA, 33 CFR Part 220; and that are subject to the Tribal and interested Native American consultation requirements of the National Historic Preservation Act, as amended (Section 106) (16 U.S.C. 470). The provision of the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001-3013) apply to this project if Native American human remains are inadvertently discovered during 'ground-breaking' activity. The NAHC is of the opinion that the federal standards, pursuant to the above-referenced Acts of the U.S. Congress and the President's Council on Environmental Quality (CSQ; 42 U.S.C. 4371 *et seq*) are similar to and in many cases more stringent with regard to the 'significance' of historic, including Native American items, and archaeological features, including those of Native American origin, than are the provisions of the California Environmental Quality Act (CEQA.) of 1970, as amended. Therefore, the NAHC urges the City of Los Angeles to support and coordinate the federal tribal consultation and Native American cultural resource requirements with those provided for in state statutes and regulations also found in a *Programmatic Agreement* or memorandum of understanding (MOU).

√ Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the California Code of Regulations (CEQA Guidelines) mandate procedures to be followed, including that construction or excavation be stopped in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery until the county coroner or medical examiner can determine whether the remains are those of a Native American. Note that §7052 of the Health & Safety Code states that disturbance of Native American cemeteries is a felony.

√ Finally, Lead Agencies should consider avoidance, as defined in §15370 of the California Code of Regulations (CEQA Guidelines), when significant cultural resources are discovered during the course of project planning and implementation

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,



Dave Singleton
Program Analyst

Attachment: List of Native American Contacts

Cc: State Clearinghouse

Letter No. 12

STATE OF CALIFORNIA

Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net



RECEIVED
CITY OF LOS ANGELES

MAR 09 2009

ENVIRONMENTAL
UNIT

February 13, 2009

Mr. David J. Somers, Environmental Planner
CITY OF LOS ANGELES
CITY PLANNING DEPARTMENT
200 N. Spring Street, ROOM 750
Los Angeles, CA 90012

Re: SCH#2002111065; CEQA Notice Completion; ENV-2002-6129-EIR; Re-Circulated draft Environmental Impact Report (RS-DEIR) for the The Village at Playa Vista Project; City of Los Angeles City Planning Department; Los Angeles County, California

Dear Mr. Somers:

The Native American Heritage Commission (NAHC) is the state 'trustee agency' pursuant to Public Resources Code §21070 designated to protect California's Native American Cultural Resources. The NAHC is also a 'reviewing agency' for both federal and state environmental documents circulated for review under both federal and state statutes and environmental regulations. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the California Code of Regulations §15064.5(b)(c)(f) CEQA guidelines. Section 15382 of the 2007 CEQA Guidelines defines a significant impact on the environment as "a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ... objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE)', and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

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 - * A Sacred Lands File (SLF) search of the project 'area of potential effect (APE)': The results: Known Native American Cultural Resources were identified within one-half mile of the 'area of potential effect' (APE). The NAHC SLF is not exhaustive and local tribal contacts should be consulted from the attached list and there are Native American cultural resources in close proximity..
 - The NAHC advises the use of Native American Monitors, also, when professional archaeologists or the equivalent are employed by project proponents, in order to ensure proper identification and care given cultural resources that may be discovered. This is particularly true for this, proposed project, because of the *plethora of Native American human remains and archaeological features discovered during Phase I of the Playa Vista Project*. The NAHC, FURTHER, recommends that contact be made with Native American Contacts on the attached list to get their input on potential IMPACT of the project (APE) on cultural resources.. In some cases, the existence of a Native American cultural resources may be known only to a local tribe(s) or Native American individuals or elders.
 - √ Lack of surface evidence of archeological resources does not preclude their subsurface existence.

- Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
 - Again, a culturally-affiliated Native American tribe may be the only source of information about a Sacred Site/Native American cultural resource.
 - Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.
- √ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans.
- CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.

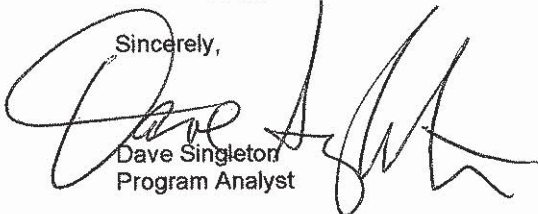
FURTHERMORE, we assume this project, *The Village at Playa Vista*, will also require a permit, as required for Phase I of the Playa Vista Project, from the Department of the Army, Corps of Engineers –Los Angeles District, and possibly a Programmatic Agreement of which the City of Los Angeles will be a signatory. The NAHC is also a 'reviewing agency' for environmental documents prepared under the National Environmental Policy Act (NEPA; 42 U.S.C 4321 *et seq*); Parts 1500 to 1508, USACE Regulations for Implementing NEPA, 33 CFR Part 220; and that are subject to the Tribal and interested Native American consultation requirements of the National Historic Preservation Act, as amended (Section 106) (16 U.S.C. 470). The provision of the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001-3013) apply to this project if Native American human remains are inadvertently discovered during 'ground-breaking' activity. The NAHC is of the opinion that the federal standards, pursuant to the above-referenced Acts of the U.S. Congress and the President's Council on Environmental Quality (CSQ; 42 U.S.C. 4371 *et seq*) are similar to and in many cases more stringent with regard to the 'significance' of historic, including Native American items, and archaeological features, including those of Native American origin, than are the provisions of the California Environmental Quality Act (CEQA.) of 1970, as amended. Therefore, the NAHC urges the City of Los Angeles to support and coordinate the federal tribal consultation and Native American cultural resource requirements with those provided for in state statutes and regulations also found in a *Programmatic Agreement* or memorandum of understanding (MOU).

√ Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the California Code of Regulations (CEQA Guidelines) mandate procedures to be followed, including that construction or excavation be stopped in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery until the county coroner or medical examiner can determine whether the remains are those of a Native American. . Note that §7052 of the Health & Safety Code states that disturbance of Native American cemeteries is a felony.

√ Finally, Lead Agencies should consider avoidance, as defined in §15370 of the California Code of Regulations (CEQA Guidelines), when significant cultural resources are discovered during the course of project planning and implementation

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,



Dave Singleton
Program Analyst

Attachment: List of Native American Contacts

Cc: State Clearinghouse

Native American Contacts
Los Angeles County
February 13, 2009

Charles Cooke
32835 Santiago Road
Acton , CA 93510

(661) 733-1812 - cell
suscol@intox.net

Chumash
Fernandeno
Tataviam
Kitanemuk

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Admin.

tattnlaw@gmail.com
310-570-6567

Gabrielino Tongva

Fernandeno Tataviam Band of Mission Indians
William Gonzalaes, Cultural/Environ Depart
601 South Brand Boulevard, Suite 102
San Fernando , CA 91340
ced@tataviam.org

(818) 837-0794 Office
(818) 581-9293 Cell
(818) 837-0796 Fax

Fernandeno
Tataviam

Gabrieleno/Tongva San Gabriel Band of Mission
Anthony Morales, Chairperson
PO Box 693
San Gabriel , CA 91778

(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 Fax

Gabrielino Tongva

Julie Lynn Tumamait
365 North Poli Ave
Ojai , CA 93023
jtumamait@sbcglobal.net

(805) 646-6214

Chumash

Gabrielino Tongva Nation
Sam Dunlap, Tribal Secretary
P.O. Box 86908
Los Angeles , CA 90086
samdunlap@earthlink.net

(909) 262-9351 - cell

Gabrielino Tongva

Ti'At Society
Cindi Alvitre
6515 E. Seaside Walk, #C
Long Beach , CA 90803
calvitre@yahoo.com

(714) 504-2468 Cell

Gabrielino

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Tribal Chair/Cultural Resources
P.O. Box 490
Bellflower , CA 90707
gtongva@verizon.net

562-761-6417 - voice
562-925-7989 - fax

Gabrielino Tongva

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2002111065; CEQA Notice of Completion; ENV-2002-6129-EIR; Re-Circulated draft Environmental Impact Report (RS-DEIR) for the Village at Playa Vista Project; City of Los Angeles; Los Angeles County, California.

Letter No. 13

From: Shelley Luce [sluce@santamonicabay.org]
Sent: Monday, March 09, 2009 3:29 PM
To: david.somers@lacity.org
Subject: The Village at Playa Vista DEIR

Hello,

I would like to review this DEIR (No. ENV-2002-6129-EIR). I cannot locate it online. Can you send me a link or an e-copy? Thank you,

Shelley

*Shelley Luce, D.Env.
Executive Director
Santa Monica Bay Restoration Commission
1 LMU Drive, North Hall
Pereira Annex MS:8160
Los Angeles, CA 90045
Tel. (310) 216-9827*

www.santamonicabay.org

Letter No. 14

From: Melanie Denninger [mdenninger@scc.ca.gov]
Sent: Monday, March 16, 2009 5:13 PM
To: david.somers@lacity.org
Subject: DEIR No. ENV-2002-6129-EIR--mailing list

Dear Mr. Somers:

Please remove my name and street address from your mailing list for this project.

Incidentally, today I received 4 envelopes, each containing an identical notice for this project.

Thank you.

--Melanie Denninger

Melanie Denninger
Project Specialist
State Coastal Conservancy
1330 Broadway, 13th Floor
Oakland, CA 94612
phone: 510-286-0748
fax: 510-286-0470
mdenninger@scc.ca.gov

Letter No. 15

SOUTHERN CALIFORNIA



**ASSOCIATION of
GOVERNMENTS**

Main Office
818 West Seventh Street
12th Floor
Los Angeles, California
90017-3435

t (213) 236-1800
f (213) 236-1825

www.scag.ca.gov

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Human Development
Larry McCallon, Highland
Energy and Environment
Keith Hanks, Azusa
Transportation
Mike Ten, South Pasadena

April 30, 2009

Mr. David Somers
City Planning Department
Room 750
City Hall
200 N. Spring Street
Los Angeles, CA 90012
david.somers@lacity.org

RE: SCAG Comments on the Recirculated Sections of Draft Environmental Impact Report No. ENV-2002-6129-EIR – The Village at Playa Vista [SCAG No. I20090020]

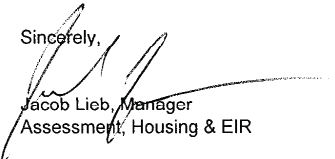
Dear Mr. Somers,

Thank you for submitting the **Recirculated Sections of Draft Environmental Impact Report (RS-DEIR) (ENV-2002-6129-EIR) for The Village at Playa Vista [SCAG No. I20090020]** to the Southern California Association of Governments (SCAG) for review and comment. SCAG is the authorized regional agency for Inter-Governmental Review of Programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12372 (replacing A-95 Review). Additionally, pursuant to Public Resources Code Section 21083(d) SCAG reviews Environmental Impacts Reports of projects of regional significance for consistency with regional plans per the California Environmental Quality Act Guidelines, Sections 15125(d) and 15206(a)(1). SCAG is also the designated Regional Transportation Planning Agency and as such is responsible for both preparation of the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP) under California Government Code Section 65080 and 65082. As the clearinghouse for regionally significant projects per Executive Order 12372, SCAG reviews the consistency of local plans, projects, and programs with regional plans. This activity is based on SCAG's responsibilities as a regional planning organization pursuant to state and federal laws and regulations. Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of regional goals and policies.

SCAG staff has reviewed this project and determined that the proposed project is regionally significant per California Environmental Quality Act (CEQA) Guidelines, Sections 15125 and/or 15206. The proposed project, located on 111 acres, would offer 2,600 dwelling units, 175,000 square feet (sq. ft.) of office space, 150,000 sq. ft. of retail space, 40,000 sq. ft. of community-serving uses, along with an 11.7-acre Habitat Creation/Restoration Component. SCAG staff's comments will address updates to the following sections in the Recirculated Sections of the Draft Environmental Impact Report (land use impacts, archaeological resources, and wastewater impacts) as well as a new section on global climate change.

We have evaluated this project based on the policies of SCAG's Regional Transportation Plan (RTP) and Compass Growth Vision (CGV) that may be applicable to your project. The RTP and CGV can be found on the SCAG web site at: <http://scag.ca.gov/figr>. The attached detailed comments are meant to provide guidance for considering the proposed project within the context of our regional goals and policies. We also encourage the use of the SCAG List of Mitigation Measures extracted from the RTP to aid with demonstrating consistency with regional plans and policies. Please provide a copy of the Final Environmental Impact Report (FEIR) for our review. If you have any questions regarding the attached comments, please contact Bernard Lee at (213) 236-1800. Thank you.

Sincerely,


Jacob Lieb, Manager
Assessment, Housing & EIR

DOCS# 151375

The Regional Council is comprised of 83 elected officials representing 189 cities, six counties, five County Transportation Commissions, Imperial Valley Association of Governments and a Tribal Government representative within Southern California.

403:09

April 30, 2009
Mr. Somers

SCAG No. I20090020

**COMMENTS ON THE RECIRCULATED SECTIONS OF DRAFT
ENVIRONMENTAL IMPACT REPORT NO. ENV-2002-6129-EIR – THE VILLAGE
AT PLAYA VISTA [SCAG NO. I20090020]**

PROJECT LOCATION

The proposed project is within the larger Playa Vista development and is located in the City of Los Angeles, approximately two miles east of Santa Monica Bay. It is generally bounded by the adjacent Playa Vista First Phase Project to the east and west, Jefferson Boulevard to the north, and the Westchester Bluffs to the south.

PROJECT DESCRIPTION

The proposed project, which is located on 111 acres, consists of two components – an Urban Development Component and a Habitat Creation/Restoration Component. At buildout, the Urban Development Component would offer 2,600 dwelling units, 175,000 square feet of office space, 150,000 square feet of retail space, and 40,000 square feet of community-serving uses. The proposed project would include an Equivalency Program to allow a limited exchange of office uses for retail uses and/or assisted living uses. In addition, the Urban Development Component would include 11.4 acres of on-site parks and an acre of on-site bicycle lanes. The Habitat Creation/Restoration Component includes a 6.7-acre Riparian Corridor (which would connect the riparian corridor built as part of the Playa Vista First Phase development) and restoration of native vegetation on a 5.0-acre area of the adjacent Westchester Bluffs.

The proposed project site is currently vacant. The Playa Vista First Phase Project located east of the proposed project site is being developed with office and commercial uses, while the area west of the proposed project site contains predominantly residential uses with some mixed-use development.

The following summarizes discretionary actions and permits being sought by the project:

- Amendment of the General Plan to amend the Westchester/Playa del Rey Community Plan
- Amendments to the Playa Vista Area D Specific Plan
- Approval of a Tract Map for the Village at Playa Vista by the City
- In conjunction with approval of the Village Tract Map, adoption of Conditions of Approval
- Re-subdivision of Lot 113 of VTTM 49104 within the Village Tract Map
- Approval of a Development Agreement with the City
- Approval of Conditional Use Permits (CUPs) for alcohol sales, community-serving uses, and other uses that require CUPs
- Approval by the City of grading, building, and other permits
- Plot plan/site plan approvals by the City
- Approval of a NPDES construction permit for development in the proposed project area by RWQCB
- Other actions from local, regional, state, and federal agencies as may be required to implement the proposed project

Due to findings of legal deficiency, the RS-DEIR was created to provide updates to land use impacts, archaeological resources, and wastewater impacts. SCAG staff's comments in this letter will only address content from these updated sections, as well as content from a new section related to global climate change.

CONSISTENCY WITH REGIONAL TRANSPORTATION PLAN

Regional Growth Forecasts

The RS-DEIR states that it reflects the most current SCAG forecasts, which are the 2008 RTP (adopted May 2008) Population, Household and Employment forecasts.

The **2008 Regional Transportation Plan (RTP)** also has goals and policies that are pertinent to this proposed project. This RTP links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations. The RTP continues to support all applicable federal and state laws in implementing the proposed project. Among the relevant goals and policies of the RTP are the following:

Regional Transportation Plan Goals:

- RTP G1** *Maximize mobility and accessibility for all people and goods in the region.*
- RTP G2** *Ensure travel safety and reliability for all people and goods in the region.*
- RTP G3** *Preserve and ensure a sustainable regional transportation system.*
- RTP G4** *Maximize the productivity of our transportation system.*
- RTP G5** *Protect the environment, improve air quality and promote energy efficiency.*
- RTP G6** *Encourage land use and growth patterns that complement our transportation investments.*
- RTP G7** *Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.*

SCAG Staff Comments:

Regional Transportation Plan Goals RTP G1, G2, G3, G4, G5, and G7 are not applicable. Regarding RTP G6, the proposed project meets consistency, as it attempts to utilize various modes of transportation. On page II.A-32 the RS-DEIR states that "The Proposed Project would create an integrated new mixed-use community that would generate housing (including multi-family housing), recreational activities, community-serving activities, a ratio of jobs to housing, so as to decrease dependency on the automobile, encourage pedestrian activity and alternative transportation modes, make efficient use of existing infrastructure, reduce energy consumption, and foster a sense of place/cohesion."

GROWTH VISIONING

The fundamental goal of the **Compass Growth Visioning** effort is to make the SCAG region a better place to live, work and play for all residents regardless of race, ethnicity or income class. Thus, decisions regarding growth, transportation, land use, and economic development should be made to promote and sustain for future generations the region's mobility, livability and prosperity. The following "Regional Growth Principles" are proposed to provide a framework for local and regional decision making that improves the quality of life for all SCAG residents. Each principle is followed by a specific set of strategies intended to achieve this goal.

Principle 1: Improve mobility for all residents.

- GV P1.1** *Encourage transportation investments and land use decisions that are mutually supportive.*
- GV P1.2** *Locate new housing near existing jobs and new jobs near existing housing.*
- GV P1.3** *Encourage transit-oriented development.*
- GV P1.4** *Promote a variety of travel choices*

SCAG Staff Comments:

The proposed project meets consistency with Principle 1. The project meets consistency with GV P1.1 and P1.2, based on the project description on page II.A-32.

The proposed project intends to create transit-oriented development and meets consistency with GV P1.3. Per page II.A-38, "The Proposed Project would emphasize public transit and non-motorized transportation through the provision of an internal shuttle system and linkages to area wide bus systems. Also, the Proposed Project would implement a system of pedestrian walkways and bicycle paths, coupled with access to public transit. The Proposed Project use of an internal shuttle system is designed to promote the reduction of vehicle trips within the Proposed Project site and the surrounding area. The Proposed Project also would provide improved bus service through the provision of five new buses on at least two Culver City Bus Lines. The Proposed Project's off-site improvements also would support implementation of the existing and expanded public transit programs in the area."

In addition to promoting the use of transit, the proposed project would promote pedestrian/bicycle modes, and meets consistency with GV P1.4. Starting on page II.A-37, the RS-DEIR states "The Proposed Project, a mixed-use development, would place interrelated uses in proximity to one another. The various on-site activity centers would be connected via convenient and extensive pedestrian facilities, the internal shuttle system, and Class II bicycle trails."

Principle 2: Foster livability in all communities.

- GV P2.1** *Promote infill development and redevelopment to revitalize existing communities.*
- GV P2.2** *Promote developments, which provide a mix of uses.*
- GV P2.3** *Promote "people scaled," walkable communities.*
- GV P2.4** *Support the preservation of stable, single-family neighborhoods.*

SCAG Staff Comments:

Overall, the proposed project meets consistency with Principle 2. In general, the proposed project meets consistency with GV P2.1, as its location is infill in nature. It is surrounded on the west and east by the Playa Vista First Phase, as well as development along Jefferson Boulevard. It is not a redevelopment given that the project site is currently vacant.

The proposed project meets consistency with GV P2.2. As mentioned earlier, page II.A-32 describes the mixed-use nature of the project.

With respect to GV P2.3, the proposed project would create a walkable community. On page II.A-38, the RS-DEIR states "With regard to the pedestrian paths more specifically, in addition to a well-defined sidewalk network along all residential local, collector, and arterial streets within the Proposed Project site, pedestrian paths would be provided at appropriate locations to connect with crosswalks at intersections and other key destinations within the Proposed Project site. A pedestrian path would also be provided along the south side of Bluff Creek Drive within the Proposed Project site and the adjacent Playa Vista First Phase Project from Lincoln Boulevard on the west to Centinela Avenue on the east. In addition, the Proposed Project's Village Center is envisioned as an area defined by mixed-use development centered on a public plaza which would provide pedestrian amenities that encourage pedestrian travel.

The proposed project meets consistency with GV P2.4, as it would support the preservation of single-family neighborhoods. As described on pages II.A-33 and II.A-34, the proposed project would not alter existing single-family neighborhoods and would be buffered from the residential area to the south by the Westchester Bluffs and from the residential area to the north by Jefferson

Boulevard.

Principle 3: Enable prosperity for all people.

- GV P3.1 *Provide, in each community, a variety of housing types to meet the housing needs of all income levels.*
- GV P3.2 *Support educational opportunities that promote balanced growth.*
- GV P3.3 *Ensure environmental justice regardless of race, ethnicity or income class.*
- GV P3.4 *Support local and state fiscal policies that encourage balanced growth*
- GV P3.5 *Encourage civic engagement.*

SCAG Staff Comments:

The proposed project partially meets consistency with Principle 3. GV P3.2, P3.3, and P3.5 are not applicable.

The proposed project intends to offer a range of housing types to meet the needs of all income levels. Pages II.A-34 and II.A-35 describe the proposed non market-rate housing program in the project. Therefore the proposed project does meet consistency with GV P3.1.

With respect to GV P3.4, the project meets consistency as it does attempt to provide commercial and industrial growth opportunities that provide employment opportunities and maintain the City's fiscal viability. Page II.A-36 indicates that the proposed project "would provide a long-term revenue stream to the City, contributing to the City's long-term economic viability and stability. The Proposed Project's commercial development, integrated into the mixed-use development, is designed to meet the needs of the Proposed Project as well as the adjoining Playa Vista First Phase Project."

Principle 4: Promote sustainability for future generations.

- GV P4.1 *Preserve rural, agricultural, recreational, and environmentally sensitive areas*
- GV P4.2 *Focus development in urban centers and existing cities.*
- GV P4.3 *Develop strategies to accommodate growth that uses resources efficiently, eliminate pollution and significantly reduce waste.*
- GV P4.4 *Utilize "green" development techniques*

SCAG Staff Comments:

The proposed project partially meets consistency with Principle 4. SCAG staff cannot determine consistency with GV P4.1, since the project is located in an environmentally sensitive area. Page II.A-4 describes how most of the original project site is now open space/recreation and that the applicant must maintain a freshwater marsh.

With respect to GV P4.2, the proposed project meets consistency as it is within the City of Los Angeles and adjacent to urbanized areas, as described in the Surrounding Areas subsection on page II.A-20.

The proposed project meets consistency with GV P4.3 since it proposes to utilize resources efficiently, and reduce pollution and waste. Table II.D-8 (Project Consistency with 2006 CAT Report Greenhouse Gas Emission Reduction Strategies), which starts on page II.D-35, outlines some of the measures the proposed project intends to take to meet this principle. Some of the measures include increased recycling programs (which have been successful at the Playa Vista First Phase), water-saving fixtures, energy-efficient appliances, and reduced vehicle travel due to

April 30, 2009
Mr. Somers

SCAG No. I20090020

accessibility of uses and availability of alternate modes.

With respect to GV P4.4, the proposed project meets consistency, as it intends to utilize "green" development techniques, which is outlined on page II.D-41. This would include planting 800 trees as a means of providing carbon storage and supporting buildings constructed in attaining LEED certification.

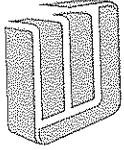
CONCLUSION

On the whole, where Goals and Principles are applicable to the content in the RS-DEIR, the proposed project generally meets consistency with SCAG Regional Transportation Plan Goals and Growth Visioning Principles.

All feasible measures needed to mitigate any potentially negative regional impacts associated with the proposed project should be implemented and monitored, as required by CEQA. Refer to the SCAG List of Mitigation Measures for additional guidance, which may be found here:
http://www.scag.ca.gov/igr/documents/SCAG_IGRMMRP_2008.pdf

When a project is of statewide, regional, or areawide significance, transportation information generated by a required monitoring or reporting program shall be submitted to SCAG as such information becomes reasonably available, in accordance with CEQA, Public Resource Code Section 21018.7, and CEQA Guidelines Section 15097 (g).

Letter No. 16



MWD

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Executive Office

RECEIVED
CITY OF LOS ANGELES

MAR 09 2009

ENVIRONMENTAL
UNIT

February 12, 2009

Mr. David Somers
Planning Department
City of Los Angeles
200 N. Spring Street, RM 750
Los Angeles, California 90012

Dear Mr. Somers:

Change of Contact for Public Notices Relating to
CEQA Documents and Environmental Regulatory Permit Application

Effective immediately, please direct all Public Notices and CEQA documents addressed to The Metropolitan Water District of Southern California to:

Ms. Rebecca De Leon
Environmental Planning Team
The Metropolitan Water District of Southern California
700 N. Alameda Street, US3-230
Los Angeles, CA 90012

If you have any questions, please call me at (213) 217-6217. Thank you for your cooperation.

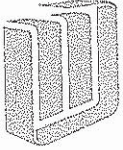
Very Truly Yours,

Delaine W. Shane
Manager, Environmental Planning Team

RDL

(Public Folders\EPT\2008 Letters\31-JUL-08A.doc)

Letter No. 17



MWD

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Executive Office

February 12, 2009

Mr. David Somers
City Planning Dept.
City of Los Angeles
200 N. Spring Street, RM 750
Los Angeles, CA 90012

Dear Mr. Somers:

Notice of Preparation of a
Draft Environmental Impact Report for the Village at Playa Vista Project

Thank you for submitting the Village at Playa Vista Project for review and comment. The Metropolitan Water District of Southern California (Metropolitan) is comprised of 26 cities and water agencies charged with providing a reliable supply of high quality drinking water to 18 million people in six counties in Southern California. Metropolitan reviews the consistency of local plans, projects, and programs for effects to Metropolitan's projects, programs, activities, and planning efforts. Information provided by these reviews is intended to encourage local agencies and project sponsors to take actions that aid and sustain Metropolitan's water policies and programs, including conservation, recycling, and reclamation.

We reviewed the notice environmental document and determined the proposed Project is not regionally significant to Metropolitan. Metropolitan does not own or operate any facilities or maintain real estate entitlements within the footprint of the proposed Project; however, we are concerned with water conservation and encourage projects to include water conservation measures. Metropolitan supports mitigation measures such as using water efficient fixtures, drought-tolerant landscaping, and reclaimed water to offset any increase in water use associated with the proposed project.

Should there be a change in the scope of the Project, we would appreciate the opportunity to review and comment at that time. If we can be of further assistance, please contact Mrs. Rebecca De Leon at (213) 217-6337.

Very truly yours,

Delaine W. Shane

Manager, Environmental Planning Team

RDL

(Public Folders\EPT\2008 Letters\22-SEP-08A.doc)

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MAR 09 2009

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MAR 09 2009

ENVIRONMENTAL
UNIT

Letter No. 18



COUNTY OF LOS ANGELES REGISTRAR-RECORDER/COUNTY CLERK

12400 E. IMPERIAL HWY.-P.O. BOX 53592, NORWALK, CALIFORNIA 90650 - 562-462-2177

DEAN C. LOGAN

Registrar-Recorder/County Clerk

Please resubmit enclosed documents with necessary correction(s) for processing

1. Please submit notice in appropriate form, see attached for example.
2. Original signatures are required on both notice and No Effect Form from the Dept. of Fish & Game when submitted.
3. A legible copy of notice/No Effect Form from the Dept. of Fish & Game is needed for processing.
4. Notice is incomplete the incomplete portions are highlighted for your convenience.
5. There is a posting fee in the amount of \$75.00 for each notice submitted.
6. We do not accept checks dated more than 90 days from the due date of issuance.
7. Please make check/money order payable to the Los Angeles County Clerk.
8. There is a \$2068.00/\$2,843.25 fee required to process your NOD as submitted. However, if the project was found to be exempt, resubmit the enclosed NOD along with an original signed No Effect Form from the Department of Fish & Game and a check made payable to the Los Angeles County Clerk's office in the amount of \$75.00.
9. Please provide an actual copy of your notice for processing.
10. Check/Money Order is not signed.
11. Check/ Money Order was sent without documents.
12. The bulk of your notice has been held up at our office due to a lack of postage. A prepaid postage envelope in the amount of \$10.00 must be provided within 30 days from due date of this notice, if you would like for your notice to be returned.
13. We do not accept checks with any alterations. Please resubmit a new check.
14. other: all these document are the same

NOTE: Please include the following to ensure prompt processing & return:

- A) original signatures on notices and exemption from Dept. of Fish & Game
- B) two copies of notice if applicant/agency would like to receive a stamped copy before the posting period(s) end
- C) two return addressed envelopes
- D) please send back to the address shown above

DEAN C. LOGAN
Registrar-Recorder/County Clerk


L. ARTERBERRY Deputy

3.17.09

Date



COUNTY OF LOS ANGELES
REGISTRAR-RECORDER/COUNTY CLERK

12400 E. IMPERIAL HWY.-P.O. BOX 53592, NORWALK, CALIFORNIA 90650 - 562-462-2177

DEAN C. LOGAN

Registrar-Recorder/County Clerk

THERE ARE NO EXCEPTIONS: NO ONE IS EXEMPT FROM THE FILING FEES PER FISH AND GAME SECTION 711.4

The following are a list of notices filed with our office for posting and their requirements:

NOD - Notice of Determination

- ⇒ Original signatures are required on both notice and No Effect Form from the Department of Fish & Game
- ⇒ When filed with a No Effect Form from the Department of Fish & Game filing fee is **\$75.00**
- ⇒ When filed without a No Effect Form from the Department of Fish & Game fees are as follows:
 - ↳ If an **Environmental Impact Report (EIR)** was prepared for the project then the fee is **\$2,768.25** plus the **\$75.00** county posting fee = **\$2,843.25**
 - ↳ If an **Negative Declaration (ND)** was prepared for the project then the fee is **\$1,993.00** plus the **\$75.00** county posting fee = **\$2,068.00**
- ⇒ 1 additional copy of notice & exemption from the Department of Fish & Game (for your records)

NOE - Notice of Exemption

- ⇒ Original signatures are required
- ⇒ **\$75.00** county posting fee is required
- ⇒ 1 additional copy of notice (for your records)

NOP - Notice of Preparation

- ⇒ An (NOP) is given to inform public that the lead agency is in the process of preparing either a **DRAFT EIR** or a **MITIGATED NEG DEC**
- ⇒ **\$75.00** county posting fee is required
- ⇒ No original signature is required
- ⇒ 1 additional copy of notice (for your records)

NOC - Notice of Completion

- ⇒ An (NOC) is issued to inform the public when the lead agency has completed a **NEG DEC** or **DRAFT EIR**
- ⇒ **\$75.00** county posting fee is required
- ⇒ No original signature is required
(*Documents are sometimes for recording & not posting. Make sure they're environmental projects & not construction.)
- ⇒ 1 additional copy of notice (for your records)

NPH - Notice of Public Hearing

- ⇒ Normally issued to inform public hearing date on a particular project
- ⇒ **\$75.00** county posting fee is required
- ⇒ No original signature is required
- ⇒ 1 additional copy of notice (for your records)

ND - Negative Declaration

- ⇒ All **NEG DEC** filings are considered to be final negative documents unless otherwise indicated
- ⇒ **NEVER** accept for filing without an **NOD**, unless **NEG DEC** is **PROPOSED** or **MITIGATED**, not final
- ⇒ 1 additional copy of notice (for your records)

PND - Proposed Negative Declaration

- ⇒ Name is self explanatory
- ⇒ **\$75.00** county posting fee is required
- ⇒ No original signature is required
- ⇒ 1 additional copy of notice (for your records)

MND - Mitigated Negative Declaration

- ⇒ Same as Proposed Negative Declaration

EIR - Environmental Impact Report

- ⇒ **NEVER** accept for filing without **NOD**

DRAFT EIR - Draft Environmental Impact Report

- ⇒ **NEVER** accept for filing alone. Can only be accepted with some type of notice (**NOI**, **NPH**, **NOC** and **NOP**)

NOI - Notice of Intent (adopt an EIR, ND, DRAFT EIR or MND) normally issued to inform public of hearing date on a particular project

- ⇒ No original signature is required
- ⇒ **\$75.00** county posting fee is required
- ⇒ 1 additional copy of notice (for your records)

NOA - Notice of Availability

- ⇒ **\$75.00** county posting fee is required
- ⇒ 1 additional copy of notice (for your records)

INITIAL STUDY

- ⇒ Are not accepted alone, must have a notice

DEPARTMENT OF CITY
PLANNING

200 N. SPRING STREET, ROOM 525
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AND
6262 VAN NUYS BLVD., SUITE 351
VAN NUYS, CA 91401

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www.planning.lacity.org

March 16, 2009

**NOTICE OF COMPLETION AND AVAILABILITY OF
RECIRCULATED SECTIONS OF DRAFT ENVIRONMENTAL
IMPACT REPORT NO.
ENV-2002-6129-EIR
STATE CLEARINGHOUSE-NO. 2002111065**

To: Owners of Property and Occupants and other interested parties

Project Name: The Village at Playa Vista Project

SITE LOCATION: Westchester - Playa Del Rey Community, Los Angeles, CA 90094

PROJECT BACKGROUND: The City of Los Angeles, as the lead agency, prepared this document, entitled "Recirculated Sections of Draft Environmental Impact Report" (RS-DEIR), to analyze potential environmental impacts of the Village at Playa Vista project.

In 2004, the City initially approved the Village at Playa Vista project (the "Proposed Project") and certified a Final Environmental Impact Report (EIR), which included the Original Draft EIR prepared for the Proposed Project in 2003. This Recirculated Sections of Draft EIR replaces certain sections of the Original Draft EIR in response to the California Court of Appeal's ruling in the consolidated cases of *City of Santa Monica v. City of Los Angeles and Ballona Ecosystem Education Project v. City of Los Angeles* that the Original Final EIR contained legal deficiencies with respect to the analysis of land use impacts, archaeological resources and wastewater impacts. The City is recirculating this RS-DEIR pursuant to California Environmental Quality Act ("CEQA") Guidelines section 15088.5, subdivision (c), which requires the modified sections of an EIR to be recirculated. As CEQA Guidelines section 15088.5, subdivision (f)(2) permits, the City requests that reviewers limit the scope of their comments to that material which is within the text of the revised sections and the appendices included in the RS-DEIR. The full Original

Final EIR is available at the Department of City Planning, Room 720 City Hall, 200 North Spring St., Los Angeles, CA 90012, or on-line at <http://cityplanning.lacity.org/>.

PROJECT DESCRIPTION: The Village at Playa Vista consists of the following two components: (1) a mixed-use community ("the Urban Development Component"); and (2) a Riparian Corridor and restoration and maintenance of a portion of the Westchester Bluffs adjacent to the Riparian Corridor (the "Habitat Creation/Restoration Component").

The Urban Development Component would enable the development of a master planned community composed of 2,600 dwelling units, 175,000 square feet (sq.ft.) of office space, 150,000 sq.ft. of retail space, and 40,000 sq.ft. of community-serving uses. This development would occur on an approximately 99.3-acre site consisting of 87.5 acres of development, 11.4 acres of parks, and 0.4 acre of other passive open space. The Urban Development Component also would provide a comprehensive program of parks and open space areas that would contribute to the aesthetic character of the area and complement the land use program described above. An Equivalency Program is proposed to allow a limited exchange of office uses for retail and/or assisted living uses in order to meet future needs, within the framework of a balanced Project consistent with the Project's mixed-use concept. Under the proposed Equivalency Program, a maximum of 125,000 sq.ft. of office development may be exchanged for up to 56,832 sq.ft. of retail uses or up to 200 assisted living units, or a combination thereof (e.g., an increase of both retail and assisted living development). Land uses may be exchanged based on specific equivalency factors and subject to the limits set forth above.

The Habitat Creation/Restoration Component includes a total of 11.7 acres, of which the Riparian Corridor involves approximately 6.7 acres, with the restoration of the adjoining portion of the Westchester Bluffs occurring over the remaining 5 acres. The construction of the Riparian Corridor would complete a 25-acre riparian corridor that also includes sections east and west of the Riparian Corridor, ultimately feeding into the Playa Vista First Phase Freshwater Marsh.

PROJECT LOCATION: The Village at Playa Vista is comprised of 111.0 acres located within the Westside area of the City of Los Angeles, approximately two miles inland from Santa Monica Bay. The Proposed Project site is generally bounded by the adjacent Playa Vista First Phase Project to the east and west, Jefferson Boulevard to the north, and the Westchester Bluffs to the south, and located at 33° 58' 35.14"N Latitude and 118° 24' 58.95"W Longitude. The Westchester Bluffs rise approximately 120 feet above the Proposed Project site.

In a larger context, the Proposed Project is surrounded by the existing City of Los Angeles communities of Westchester on the south, Del Rey to the northeast, Venice/Mar Vista further to the north and Playa del Rey further to the west. The Los Angeles County community of Marina del Rey lies further to the northwest, and the City of Culver City further to the east.

RS-DEIR SECTIONS AND SIGNIFICANT EFFECTS: In accordance with the California Court of Appeal's opinion and the Superior Court's writ of mandate, the City has prepared and circulated this RS-DEIR pursuant to CEQA Guidelines section 15088.5, subdivision (c) and (g). This RS-DEIR contains the following revised and updated sections to be recirculated for public comment:

- (1) An Executive Summary for the RS-DEIR, which includes a revised Introduction and summary of the Proposed Project's potential impacts on land use, archaeological resources, and wastewater, including cumulative impacts to the Santa Monica Bay. This Executive Summary replaces and supersedes Sections I.A and I.G-9, 23 and 27 of the Original DEIR.
- (2) Revised analysis of land use impacts, which supersedes and replaces in full Section IV.G, Land Use, of the Original DEIR.
- (3) Revised archaeology section that discusses the preservation in place of Native American resources in accordance with Guidelines section 15126.4, subdivisions (a)(1)(B) and (b)(3), which supersedes and replaces in full Section IV.P.2, Cultural Resources, of the Original DEIR.
- (4) Revised wastewater section that identifies the intended and likely measures to dispose of the Proposed Project's wastewater and analyzes the environmental impacts of employing those measures to dispose of the wastewater generated by the Proposed Project, including any cumulative impacts to the Santa Monica Bay, which section supersedes and replaces in full Section IV.N.2, Wastewater, of the Original DEIR.

In addition to the above sections required to address deficiencies in the Original FEIR, this RS-DEIR contains an analysis of the Proposed Project's impacts regarding global climate change. While neither the appellate opinion nor the writ of mandate directed the City to include such an analysis, California has adopted new legislation since the certification of the Original FEIR that requires State agencies to implement regulations designed to address climate change by, among other things, reducing the amount of greenhouse gases emitted. In addition, the research and public interest regarding this subject matter has advanced to the point where many lead agencies are now including analyses of the topic in CEQA documents. Therefore, even though not required by the Court of Appeal's decision and case law concerning the effect of that decision, the City has analyzed global climate change in this RS-DEIR for the Proposed Project given the recent State legislation and regulations concerning climate change and the absence of any analysis of climate change in the Original FEIR. The discussion of global climate change may be found in Section II.D. of this RS-DEIR.

All of the potential impacts with regard to the four issues analyzed in this RS-DEIR (including Land Use, Archeology, Wastewater and Global Climate Change) are concluded to be less than significant,

except that the projects contribution to cumulative archeological resources impacts is concluded to be significant and cumulatively considerable

DOCUMENT REVIEW AND COMMENT:

Please submit any comments on the RS-DEIR, in writing and reference the EIR file number above, by April 30th, 2009 to David J. Somers, City Planning Department, Room 750, City Hall, 200 N. Spring Street, Los Angeles, CA 90012, or email david.somers@lacity.org. Copies of the documents referenced in the RS-DEIR, and the RS-DEIR, are available for review in the City Planning Department. Copies of the RS-DEIR are also at the following branch libraries: (1) Central Library: 630 W. Fifth St, Los Angeles, CA 90071; (2) Culver City Library: 4975 Overland Ave, Los Angeles, CA. 90230; (3) Westchester/Loyola Village Library: 7114 W. Manchester Ave., Los Angeles, CA 90045; (4) Mar Vista Library: 12006 Venice Blvd., Los Angeles, CA 90066; (5) Venice Library: 501 S. Venice Blvd., Venice, CA 90291 (6) Marina del Rey Library: 4533 Admiralty Way, Marina del Rey, CA 90292; (7) UCLA Library: Reference Department, A4510 Young Research Library, Los Angeles, CA 90095; and (8) Playa Vista Branch Library: 6400 Playa Vista Dr., Los Angeles, 90094

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CopyPage,
5418 McConnell Ave.
(310) 822-1640

A price list to purchase the RS-DEIR is as follows:

Hard Copy:

Volume 1: RS-DEIR (Main Document): \$35
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CD:

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Vincent P. Bertoni, AICP
Deputy Director


David J. Somers, EIR Unit
Division of Land/Environmental Review



Legend



Proposed Village at Playa Vista

12200 West Jefferson Blvd., Los Angeles, CA 90094
 12680 West Jefferson Blvd., Los Angeles, CA 90094
Cross-streets: Jefferson Blvd. and Campus Center Dr.
 Jefferson Blvd. and Beethoven Ave.



Source: Playa Capital Company, 2003.



Figure II.A-4
 Surrounding Land Uses

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AND
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March 16, 2009

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IMPACT REPORT NO.
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Deputy Director



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Legend



Proposed Village at Playa Vista

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March 16, 2009

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RS-DEIR SECTIONS AND SIGNIFICANT EFFECTS: In accordance with the California Court of Appeal's opinion and the Superior Court's writ of mandate, the City has prepared and circulated this RS-DEIR pursuant to CEQA Guidelines section 15088.5, subdivision (c) and (g). This RS-DEIR contains the following revised and updated sections to be recirculated for public comment:

- (1) An Executive Summary for the RS-DEIR, which includes a revised Introduction and summary of the Proposed Project's potential impacts on land use, archaeological resources, and wastewater, including cumulative impacts to the Santa Monica Bay. This Executive Summary replaces and supersedes Sections I.A and I.G-9, 23 and 27 of the Original DEIR.
- (2) Revised analysis of land use impacts, which supersedes and replaces in full Section IV.G, Land Use, of the Original DEIR.
- (3) Revised archaeology section that discusses the preservation in place of Native American resources in accordance with Guidelines section 15126.4, subdivisions (a)(1)(B) and (b)(3), which supersedes and replaces in full Section IV.P.2, Cultural Resources, of the Original DEIR.
- (4) Revised wastewater section that identifies the intended and likely measures to dispose of the Proposed Project's wastewater and analyzes the environmental impacts of employing those measures to dispose of the wastewater generated by the Proposed Project, including any cumulative impacts to the Santa Monica Bay, which section supersedes and replaces in full Section IV.N.2, Wastewater, of the Original DEIR.

In addition to the above sections required to address deficiencies in the Original FEIR, this RS-DEIR contains an analysis of the Proposed Project's impacts regarding global climate change. While neither the appellate opinion nor the writ of mandate directed the City to include such an analysis, California has adopted new legislation since the certification of the Original FEIR that requires State agencies to implement regulations designed to address climate change by, among other things, reducing the amount of greenhouse gases emitted. In addition, the research and public interest regarding this subject matter has advanced to the point where many lead agencies are now including analyses of the topic in CEQA documents. Therefore, even though not required by the Court of Appeal's decision and case law concerning the effect of that decision, the City has analyzed global climate change in this RS-DEIR for the Proposed Project given the recent State legislation and regulations concerning climate change and the absence of any analysis of climate change in the Original FEIR. The discussion of global climate change may be found in Section II.D. of this RS-DEIR.

All of the potential impacts with regard to the four issues analyzed in this RS-DEIR (including Land Use, Archeology, Wastewater and Global Climate Change) are concluded to be less than significant,

except that the projects contribution to cumulative archeological resources impacts is concluded to be significant and cumulatively considerable

DOCUMENT REVIEW AND COMMENT:

Please submit any comments on the RS-DEIR, in writing and reference the EIR file number above, by April 30th, 2009 to David J. Somers, City Planning Department, Room 750, City Hall, 200 N. Spring Street, Los Angeles, CA 90012, or email david.somers@lacity.org. Copies of the documents referenced in the RS-DEIR, and the RS-DEIR, are available for review in the City Planning Department. Copies of the RS-DEIR are also at the following branch libraries: (1) Central Library: 630 W. Fifth St, Los Angeles, CA 90071; (2) Culver City Library: 4975 Overland Ave, Los Angeles, CA. 90230; (3) Westchester/Loyola Village Library: 7114 W. Manchester Ave., Los Angeles, CA 90045; (4) Mar Vista Library: 12006 Venice Blvd., Los Angeles, CA 90066; (5) Venice Library: 501 S. Venice Blvd., Venice, CA 90291 (6) Marina del Rey Library: 4533 Admiralty Way, Marina del Rey, CA 90292; (7) UCLA Library: Reference Department, A4510 Young Research Library, Los Angeles, CA 90095; and (8) Playa Vista Branch Library: 6400 Playa Vista Dr., Los Angeles, 90094

The RS-DEIR is also available online at the Department of City Planning's website [<http://cityplanning.lacity.org/> (click on "Environmental" and then "Draft Environmental Impact Reports")]. To purchase the RS-DEIR on cd-rom, or hard copy contact:

CopyPage,
5418 McConnell Ave.
(310) 822-1640

A price list to purchase the RS-DEIR is as follows:

Hard Copy:

Volume 1: RS-DEIR (Main Document): \$35
Volumes 2 and 3 (Technical Appendices): \$120

CD:

Volumes 1 through 3 (All Documents): \$7.50

If a public hearing is required for the proposed Project, a separate hearing notice will be mailed at a later date for such purpose.

Vincent P. Bertoni, AICP
Deputy Director



David J. Somers, EIR Unit
Division of Land/Environmental Review



Legend

Proposed Village at Playa Vista



12200 West Jefferson Blvd., Los Angeles, CA 90094
 12680 West Jefferson Blvd., Los Angeles, CA 90094
 Cross-streets: Jefferson Blvd. and Campus Center Dr.
 Jefferson Blvd. and Beethoven Ave.



Source: Playa Capital Company, 2003.



Figure II.A-4
 Surrounding Land Uses

DEPARTMENT OF CITY
PLANNING

200 N. SPRING STREET, ROOM 525
LOS ANGELES, CA 90012-4801
AND
6262 VAN NUYS BLVD., SUITE 351
VAN NUYS, CA 91401

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COMMISSION EXECUTIVE ASSISTANT
(213) 978-1300

CITY OF LOS ANGELES
CALIFORNIA



ANTONIO R. VILLARAIGOSA
MAYOR

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(213) 978-1274
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DEPUTY DIRECTOR
(213) 978-1273
FAX: (213) 978-1275
INFORMATION
(213) 978-1270
www.planning.lacity.org

March 16, 2009

NOTICE OF COMPLETION AND AVAILABILITY OF
RECIRCULATED SECTIONS OF DRAFT ENVIRONMENTAL
IMPACT REPORT NO.
ENV-2002-6129-EIR
STATE CLEARINGHOUSE-NO. 2002111065

To: Owners of Property and Occupants and other interested parties

Project Name: The Village at Playa Vista Project

SITE LOCATION: Westchester - Playa Del Rey Community, Los Angeles, CA 90094

PROJECT BACKGROUND: The City of Los Angeles, as the lead agency, prepared this document, entitled "Recirculated Sections of Draft Environmental Impact Report" (RS-DEIR), to analyze potential environmental impacts of the Village at Playa Vista project.

In 2004, the City initially approved the Village at Playa Vista project (the "Proposed Project") and certified a Final Environmental Impact Report (EIR), which included the Original Draft EIR prepared for the Proposed Project in 2003. This Recirculated Sections of Draft EIR replaces certain sections of the Original Draft EIR in response to the California Court of Appeal's ruling in the consolidated cases of *City of Santa Monica v. City of Los Angeles and Ballona Ecosystem Education Project v. City of Los Angeles* that the Original Final EIR contained legal deficiencies with respect to the analysis of land use impacts, archaeological resources and wastewater impacts. The City is recirculating this RS-DEIR pursuant to California Environmental Quality Act ("CEQA") Guidelines section 15088.5, subdivision (c), which requires the modified sections of an EIR to be recirculated. As CEQA Guidelines section 15088.5, subdivision (f)(2) permits, the City requests that reviewers limit the scope of their comments to that material which is within the text of the revised sections and the appendices included in the RS-DEIR. The full Original

Final EIR is available at the Department of City Planning, Room 720 City Hall, 200 North Spring St., Los Angeles, CA 90012, or on-line at <http://cityplanning.lacity.org/>.

PROJECT DESCRIPTION: The Village at Playa Vista consists of the following two components: (1) a mixed-use community ("the Urban Development Component"); and (2) a Riparian Corridor and restoration and maintenance of a portion of the Westchester Bluffs adjacent to the Riparian Corridor (the "Habitat Creation/Restoration Component").

The Urban Development Component would enable the development of a master planned community composed of 2,600 dwelling units, 175,000 square feet (sq.ft.) of office space, 150,000 sq.ft. of retail space, and 40,000 sq.ft. of community-serving uses. This development would occur on an approximately 99.3-acre site consisting of 87.5 acres of development, 11.4 acres of parks, and 0.4 acre of other passive open space. The Urban Development Component also would provide a comprehensive program of parks and open space areas that would contribute to the aesthetic character of the area and complement the land use program described above. An Equivalency Program is proposed to allow a limited exchange of office uses for retail and/or assisted living uses in order to meet future needs, within the framework of a balanced Project consistent with the Project's mixed-use concept. Under the proposed Equivalency Program, a maximum of 125,000 sq.ft. of office development may be exchanged for up to 56,832 sq.ft. of retail uses or up to 200 assisted living units, or a combination thereof (e.g., an increase of both retail and assisted living development). Land uses may be exchanged based on specific equivalency factors and subject to the limits set forth above.

The Habitat Creation/Restoration Component includes a total of 11.7 acres, of which the Riparian Corridor involves approximately 6.7 acres, with the restoration of the adjoining portion of the Westchester Bluffs occurring over the remaining 5 acres. The construction of the Riparian Corridor would complete a 25-acre riparian corridor that also includes sections east and west of the Riparian Corridor, ultimately feeding into the Playa Vista First Phase Freshwater Marsh.

PROJECT LOCATION: The Village at Playa Vista is comprised of 111.0 acres located within the Westside area of the City of Los Angeles, approximately two miles inland from Santa Monica Bay. The Proposed Project site is generally bounded by the adjacent Playa Vista First Phase Project to the east and west, Jefferson Boulevard to the north, and the Westchester Bluffs to the south, and located at 33° 58' 35.14"N Latitude and 118° 24' 58.95"W Longitude. The Westchester Bluffs rise approximately 120 feet above the Proposed Project site.

In a larger context, the Proposed Project is surrounded by the existing City of Los Angeles communities of Westchester on the south, Del Rey to the northeast, Venice/Mar Vista further to the north and Playa del Rey further to the west. The Los Angeles County community of Marina del Rey lies further to the northwest, and the City of Culver City further to the east.

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except that the projects contribution to cumulative archeological resources impacts is concluded to be significant and cumulatively considerable

DOCUMENT REVIEW AND COMMENT:

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CopyPage,
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CD:

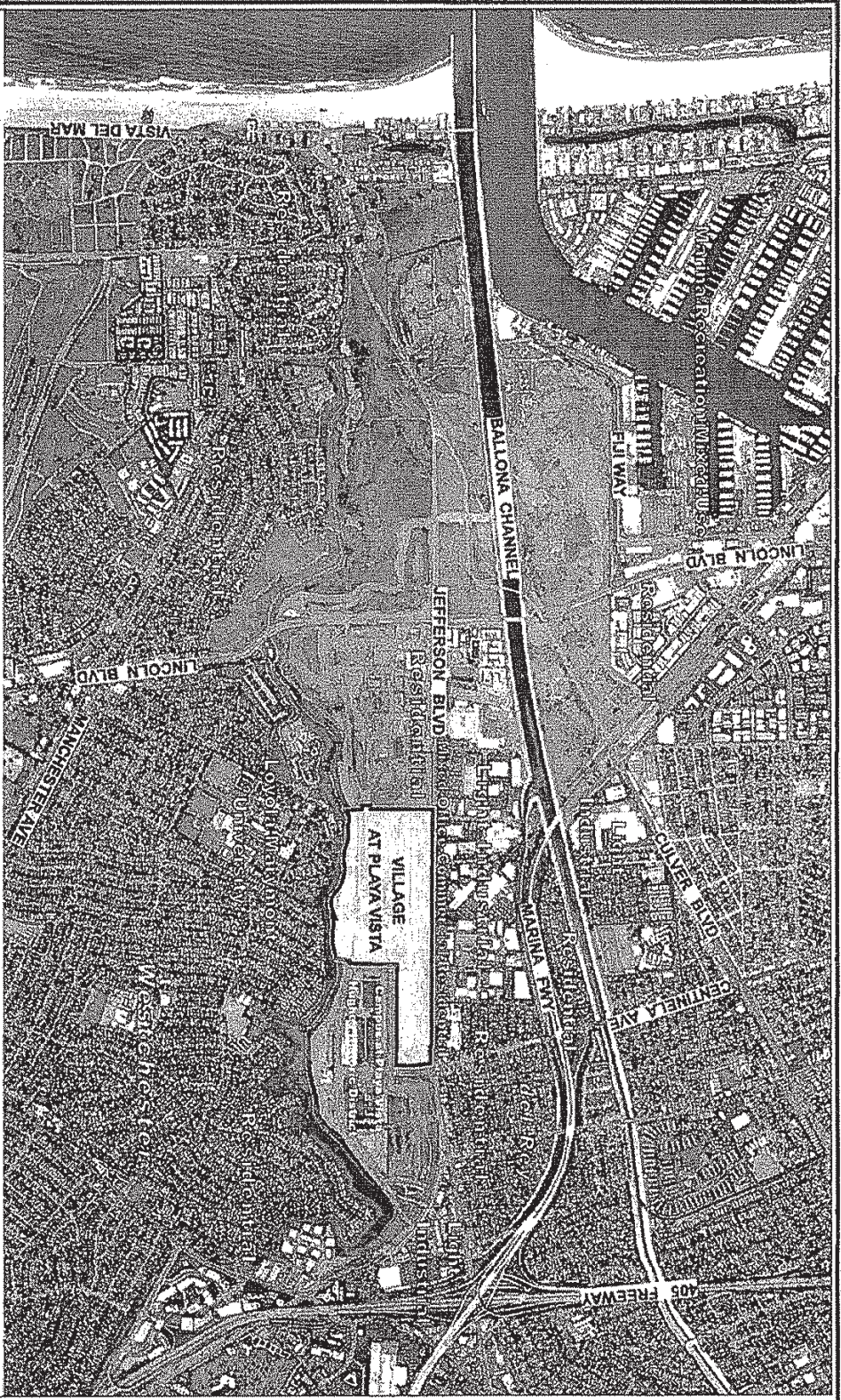
Volumes 1 through 3 (All Documents): \$7.50

If a public hearing is required for the proposed Project, a separate hearing notice will be mailed at a later date for such purpose.

Vincent P. Bertoni, AICP
Deputy Director



David J. Somers, EIR Unit
Division of Land/Environmental Review



Proposed Village at Playa Vista



Legend

12200 West Jefferson Blvd., Los Angeles, CA 90094
 12680 West Jefferson Blvd., Los Angeles, CA 90094
 Cross-streets: Jefferson Blvd. and Campus Center Dr.
 Jefferson Blvd. and Beethoven Ave.

Source: Playa Capital Company, 2003.



Figure II.A-4
 Surrounding Land Uses

Letter No. 19

RECEIVED
CITY OF LOS ANGELES

APR 24 2009

ENVIRONMENTAL
UNIT

NOTICE OF COMPLETION OF RECIRCULATED SECTIONS OF RS-DEIR

To: STATE OF CALIFORNIA
OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET
SACRAMENTO, CA 95814

FILED

MAR 16 2009

DEAN G. LOGAN
REGISTRAR-RECORDER/SAN DIEGO COUNTY, CLERK
[Signature]
L. ARTERBERRY DEPUTY

Project Title
The Village at Playa Vista Project

Case No.
ENV-2002-6129-EIR
SCH No. 2002111065

Project Location – City
Los Angeles

Project Location – County
Los Angeles

Description, Nature, Purpose and Beneficiaries of Project

The Village at Playa Vista Project consists of the following two components: (1) a mixed-use community ("the Urban Development Component"); and (2) a Riparian Corridor and restoration and maintenance of a portion of the Westchester Bluffs adjacent to the Riparian Corridor (the "Habitat Creation/Restoration Component").

The Urban Development Component would occur on an approximately 99.3-acre site and includes 2,600 dwelling units, 175,000 square feet (sq.ft.) of office space, 150,000 sq.ft. of retail space, and 40,000 sq.ft. of community-serving uses. An Equivalency Program is proposed to allow a limited exchange of office uses for retail and/or assisted living uses in order to meet future needs, within the framework of a balanced Project consistent with the Project's mixed-use concept. Under the proposed Equivalency Program, a maximum of 125,000 sq.ft. of office development may be exchanged for up to 56,832 sq.ft. of retail uses or up to 200 assisted living units, or a combination thereof (e.g., an increase of both retail and assisted living development). Land uses may be exchanged based on specific equivalency factors and subject to the limits set forth above.

The Habitat Creation/Restoration Component includes a total of 11.7 acres, of which the Riparian Corridor involves approximately 6.7 acres, with the restoration of the adjoining portion of the Westchester Bluffs occurring over the remaining 5 acres. The project is located at 33° 58' 35.14"N Latitude and 118° 24' 58.95"W Longitude.

Project Background: In 2004, the City initially approved the Village at Playa Vista project and certified a Final Environmental Impact Report (EIR), which included the Original Draft EIR prepared for the Proposed Project in 2003. This Recirculated Sections of Draft EIR replaces certain sections of the Original Draft EIR in response to the California Court of Appeal's ruling in the consolidated cases of City of Santa Monica v. City of Los Angeles and Ballona Ecosystem Education Project v. City of Los Angeles that the Original Final EIR contained legal deficiencies with respect to the analysis of land use impacts, archaeological resources and wastewater impacts. The City is recirculating this RS-DEIR pursuant to California Environmental Quality Act ("CEQA") Guidelines section 15088.5, subdivisions (c), which requires the modified sections of an EIR to be recirculated. As CEQA Guidelines section 15088.5, subdivision (f)(2) permits, the City requests that reviewers limit the scope

09 0033546

THIS NOTICE WAS POSTED
ON MAR 16 2009
UNTIL APR 15 2009
REGISTRAR-RECORDER/COUNTY CLERK

of their comments to that material which is within the text of the revised sections and the appendices included in the RS-DEIR. The full Original Final EIR is available at the Department of City Planning, Room 720 City Hall, 200 North Spring St, Los Angeles, CA 90012, or on-line at <http://cityplanning.lacity.org/>.

Lead Agency City of Los Angeles, Department of City Planning	Division Division of Land
---	-------------------------------------

Address Where Copy of RS-DEIR is Available:
Office of the City Clerk, Room 395, City Hall, 200 N. Spring Street, Los Angeles, CA 90012

Review period (Calendar Dates)	Ending Date:
Starting Date: January 29, 2009	April 30, 2009

Contact Person David J. Somers	Title Planning Assistant	Area Code/Phone 213-978-1355
--	------------------------------------	--

(Send to: County Clerk EIR Desk, 12400 Imperial Highway, Norwalk, CA 90650)

09 0033546



Letter No. 20

COUNTY OF LOS ANGELES

DEPARTMENT OF PARKS AND RECREATION

"Creating Community Through People, Parks and Programs"

Russ Guiney, Director

March 16, 2009

Sent via email: david.somers@lacity.org

David J. Somers
City Planning Department, Room 750
City Hall, 200 N. Spring Street
Los Angeles, CA 90012

Dear Mr. Somers:

**NOTICE OF COMPLETION AND AVAILABILITY OF RECIRCULATED SECTIONS OF
DRAFT ENVIRONMENTAL IMPACT REPORT NO. ENV-2002-6129-EIR
STATE CLEARINGHOUSE NO. 2002111065**

The Recirculated Sections of Draft Environmental Impact Report for the above project has been reviewed for potential impacts on the facilities of the Los Angeles County Department of Parks and Recreation. We have determined that the proposed project will not affect facilities under the jurisdiction of this Department.

Thank you for including this Department in the environmental review process. If we may be of further assistance, please contact me at (213) 351-5129.

Sincerely,

A handwritten signature in blue ink that reads 'Chien, Jui Ing'.

Jui Ing Chien
Park Planner

c: Parks and Recreation (N. E. Garcia, L. Hensley, J. Rupert)



Letter No. 21

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

(323) 890-4330

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN

June 2, 2009

Mr. David J. Somers
City of Los Angeles
City Planning Department
200 N. Spring Street, Room 750
Los Angeles, CA 90012

Dear Mr. Somers:

DRAFT ENVIRONMENTAL IMPACT STATEMENT, PROJECT NAME: THE VILLAGE AT PLAYA VISTA PROJECT, RECIRCULATED SECTIONS OF DRAFT ENVIRONMENTAL IMPACT REPORT, LOS ANGELES CITY (FFER #200900034)

The Draft Environmental Impact Statement has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

1. The subject property is totally within the boundaries of Los Angeles City and does not appear to have any impact on the emergency responsibilities of this Department. It is not a part of the emergency response area of the Consolidated Fire Protection District.

LAND DEVELOPMENT UNIT:

1. This project is located entirely in the City of Los Angeles. Therefore, the City of Los Angeles Fire Department has jurisdiction concerning this project and will be setting conditions. This project is located in close proximity to the jurisdictional area of the Los Angeles County Fire Department. However, this project is unlikely to have an impact that necessitates a comment concerning general requirements from the Land Development Unit of the Los Angeles County Fire Department.

SERVING THE UNINCORPORATED AREAS OF LOS ANGELES COUNTY AND THE CITIES OF:

AGOURA HILLS	BRADBURY	CUDAHY	HAWTHORNE	LA MIRADA	MALIBU	POMONA	SIGNAL HILL
ARTESIA	CALABASAS	DIAMOND BAR	HIDDEN HILLS	LA PUENTE	MAYWOOD	RANCHO PALOS VERDES	SOUTH EL MONTE
AZUSA	CARSON	DUARTE	HUNTINGTON PARK	LAKESWOOD	NORWALK	ROLLING HILLS	SOUTH GATE
BALDWIN PARK	CERRITOS	EL MONTE	INDUSTRY	LANCASTER	PALMDALE	ROLLING HILLS ESTATES	TEMPLE CITY
BELL	CLAREMONT	GARDENA	INGLEWOOD	LAWNDALE	PALOS VERDES ESTATES	ROSEMEAD	WALNUT
BELL GARDENS	COMMERCE	GLENDORA	IRWINDALE	LOMITA	PARAMOUNT	SAN DIMAS	WEST HOLLYWOOD
BELFLOWER	COVINA	HAWAIIAN GARDENS	LA CANADA-FLINTRIDGE	LYNWOOD	PICO RIVERA	SANTA CLARITA	WESTLAKE VILLAGE
		LA HABRA					WHITTIER

Mr. David J. Somers
June 2, 2009
Page 2

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

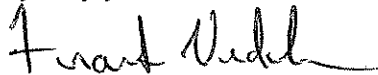
1. The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance.
2. Due to the limited amount of information included in your request, we are unable to respond to specific potential impacts.

HEALTH HAZARDOUS MATERIALS DIVISION:

1. We have no comments at this time.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,



FRANK VIDALES, ACTING CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

FV:lj

Letter No. 22



JONATHAN E. FIELDING, M.D., M.P.H.
Director and Health Officer

JONATHAN E. FREEDMAN
Chief Deputy Director

ANGELO J. BELLOMO, REHS
Director of Environmental Health

ALFONSO MEDINA, REHS
Director of Environmental Protection Bureau

Environmental Hygiene Program

Cole Landowski, MS, CIH, REHS, Head
5050 Commerce Drive
Baldwin Park, California 91706
TEL (626) 430-5430 • FAX (626) 813-3025

www.publichealth.lacounty.gov

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CITY OF LOS ANGELES

MAY 19 2009

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UNIT**



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Second District

Zev Yaroslavsky
Third District

Don Knabe
Fourth District

Michael D. Antonovich
Fifth District

April 18, 2009

David J. Somers
City Planning Department, Room 750
City Hall
200 N. Spring Street
Los Angeles, CA 90012

**RE: RECIRCULATED SECTIONS OF DRAFT ENVIRONMENTAL IMPACT
REPORT NO. ENV-2002-6129-EIR, STATE CLEARINGHOUSE NO. 2002111065**

Mr. Somers:

This is to inform you that upon review of all documents forwarded to our program by you and upon visiting the proposed project site location on the Westside area of the City of Los Angeles, it appears that the proposed construction project **will have a significant noise impact** upon the surrounding community during the construction and operational phases.

The potential noise impacts associated with the Project's Urban Development Component were identified as the result of project generated vehicular traffic and increased point sources within the site.

The following mobile noise sources were identified as having on-site impacts:

1. Traffic noise: Projected noise levels along south Jefferson Boulevard and north of Bluff Creek Drive would exceed the 65 dBA CENL. Mitigation engineering controls are recommended by this office in order to minimize this impact.

2. Helicopter and aircraft noise: Two small helistops may be located east of the site with projected 200 operations (takeoff and landing) per month between the hours of 7:00 A.M. and 10 P.M. Heliport consultants calculated noise levels using Heliport Noise Model database provided by the Federal Aviation Administration. Helicopter noise will affect land uses located within portions of the adjacent Playa Vista First Phase development.
3. LAX noise associated with its expansion will be very minor according to the calculations provided by the consultants.
4. Threshold levels associated with operational traffic on off site noise sensitive locations are not considered significant based on the projected 2010 baseline traffic noise and the existing roadway traffic volumes with and without the project.

The stationary noise sources were identified as follows:

1. Roof top heating, ventilating and air conditioning (HVAC) units. Noise levels associated with the operation of these units should comply with general construction standards and the city noise ordinance. The city noise ordinance limits noise levels to 50 dBA Leq (7 A.M. through 7 P.M.) and 40 dBA Leq (7 P.M. to 7 A.M.).

All noise impacts associated with the construction and operation of this project were identified as significant without the mitigation. Therefore, we recommend the implementation of the mitigation measures presented in the Draft EIR in pages 583-584.

We appreciate the opportunity to be of service on this project and look forward to working with you in the future. If you have any questions please contact Evenor Masis at (626)430-5430.

Sincerely,

A handwritten signature in black ink, appearing to read 'Cole Landowski', written in a cursive style.

Cole Landowski, MS, CIH
Head, Environmental Hygiene Program

Letter No. 23

From: Wills, Mark [MWILLS@rcflood.org]
Sent: Tuesday, March 24, 2009 10:26 AM
To: david.somers@lacity.org
Cc: Tung, Teresa
Subject: NOA/C: Recirculated Sections DEIR No. ENV-2002-6129-EIR

David,

Just wanted to let you that RCFC&WCD will not be commenting on the recirculated sections of the DEIR. West Los Angeles is well outside the District's service area and we do not foresee any impacts to District facilities, programs, etc. Also, you may want to re-examine your mailing process/list as we received five identical copies of the subject notice.

Best Regards,

Mark H. Wills
Chief of Regulatory Division
Riverside County Flood Control &
Water Conservation District
951.955.8411

Note new e-mail address: mwills@rcflood.org

Letter No. 24

Airport Marina Counseling Service

airportmarina.org



Board of Governors

Kathleen Hannon Aikenhead

Gregory Soukup, Esq.

Board of Directors 2008 - 2009

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Mental Health Guild*

Monica Kahn

Dan Nelson, Esq.

Rev. John-David Webster

Kathleen O'Leary Lefferman, M.A.
Executive Director

Nancy Iben, MFT
Clinical Director

April 22, 2009

David J. Somers
City Planning Department
Room 750, City Hall
200 N. Spring Street
Los Angeles, CA 90012

Subject: The Village at Playa Vista

Dear Mr. Somers:

On behalf of the Board of Directors of the Airport Marina Counseling Service, I am writing to express our organization's support of The Village at Playa Vista. We have reviewed the re-circulated sections of the EIR, and find that the City's analysis fully and fairly deals with the outstanding issues. We urge you to quickly approve The Village.

The Village at Playa Vista provides significant benefits to the area. This last and final phase of Playa Vista includes a new neighborhood retail center, new public parks and 2,600 new residential units. The Village also includes state-of-the-art traffic improvements that will increase the safety and efficiency of traffic flow in the region, and it will also realize a sustainable, urban infill vision for our city.

In addition, construction of The Village would quickly create thousands of construction jobs and ultimately create millions of dollars in new city tax revenues annually. Given the current economic environment, these benefits cannot be overstated.

With any new development there will be some environmental impacts, but the benefits of building The Village are clear. It's time to complete Playa Vista.

Sincerely,

Kathleen O'Leary Lefferman
Executive Director

RECEIVED
CITY OF LOS ANGELES

APR 28 2009

ENVIRONMENTAL
UNIT

The mission of Airport Marina Counseling Service is two-fold: to provide affordable, community-based mental health services and to train mental health therapists.

Letter No. 25

From: Rex Frankel <rexfrankel@yahoo.com>
To: <david.somers@lacity.org>
CC: <brianacree@earthlink.net>
Date: 4/30/2009 4:59 PM
Subject: Playa Vista RS-DEIR comment letter

Comment letter on Playa Vista Phase 2 RS-DEIR from the Ballona Ecosystem Education Project

ENV 2002-6129 EIR, Clearinghouse number 2002111065

From Rex Frankel
6038 west 75th Street
L.A. CA 90045
April 30, 2009

To David Somers, david.somers@lacity.org

My comment letter is organized with the quoted section from the RS-DEIR first, then my response.

Comment 1:

Page I-9 Executive Summary

“As CEQA Guidelines Section 15088.5, Subdivision (f)(2) permits, the City requests that reviewers limit the scope of their comments to that material which is within the text of the revised sections and the appendices included in the RS-DEIR. The City also requests that reviewers not make new comments on old matters not included in this RS-DEIR....

...Further, with respect to the matters and potential impacts now covered by Sections II.A. through II.D of this RS-DEIR, in accordance with CEQA Guidelines Section 15088.5(f)(2)(ii), written responses will be prepared only to comments received on this RS-DEIR on such topics.”

The city is attempting to improperly limit the public's opportunity to comment on this document by “asking that comments be limited to the revised DEIR only”. As the entire EIR was decertified by the Appeals Court, the public is entitled to challenge any portion of the EIR for compliance with CEQA. Only after the lead agency responds to all comments relating to the legal sufficiency of this EIR can the City properly re-certify the revised CEQA documents. The public notice inviting comments on this RS-DEIR is thus legally inadequate as it discourages public review and comment on the entire document that is under review, contrary to CEQA's goal of encouraging public review of this type of project.

Comment 2:

Page I-6 Executive Summary

“Documents attached to the Original DEIR as Appendices O(1), O(2), and O(4) and the Original Appendices J(1)-J(4) are also attached as Appendices C.vi-C.xii, respectively, to this RS-DEIR.”

Appendices C.vi-C.xii are not attached, and are not on the city's website for the RS-DEIR.

Comment 3:

Page I-7 Executive Summary

“ It should be noted that the revisions to the land use section in this RS-DEIR do not trigger the need to revise other Proposed Project impact discussions in the Original FEIR because those impact analyses utilized the appropriate baseline (i.e., undeveloped land) and actual Proposed Project development uses and figures (i.e., square feet, unit numbers, etc.).”

Page I-10:

“Finally, with regard to Sections I.B (The Proposed Project), I.C (Project Location), I.D (Project Background), I.E (Areas of Controversy), and I.F (Alternatives) of the Executive Summary in the Original DEIR, this RS-DEIR does not revise those sections and the reader is referred to the Original DEIR for the information contained in those sections.”

We strongly disagree with this assumption. The false and misleading land use analysis and baseline in the 2003 EIR irreparably tainted the analysis of alternatives. By falsely stating that the land was already entitled to massively more development than the applicant was seeking, this caused the range of alternatives to reflect this false assumption. Therefore, while in truth all alternatives but the 2 no-project alternatives featured a massive upzoning, the public was told the exact opposite..

Because the project was falsely described as a subdivision of land that was already entitled to such massive density, rather than a subdivision of land and a massive upzoning of this land, nearly all of the 8 projects considered in the alternatives review (the applicant's proposal and 7 alternatives) except the 2 no-project alternatives featured massively greater entitlements than the correct existing zoning would allow, ranging from 2 ½ times the existing to 25 times the existing zoning.

This falsely stated baseline tainted the public's review of reasonable alternatives because the intentionally misleading land use description caused the decision-makers to believe that to deny approval of the project which the developer claimed was only a fraction of the size of the project they were otherwise already permitted to build, would either 1) result in exponentially larger environmental impacts if the developer chose to proceed instead with the enormously larger project they claimed they were entitled to build, or 2) could lead to a “takings” lawsuit by Playa Capital. This false land use baseline led decision makers and the public to believe that any lesser impacting alternative would require a downzoning of the property and would result in a denial to Playa Capital of their rightful zoning entitlements.

Because the applicant is not legally entitled to any upzoning, a reasonable range of alternatives should have included alternatives to the discretionary “upzoning” portion of the project. Alternative entitlement caps should not just be numerical, but also acreage-based. Therefore, one upzoning alternative could include upzoning half of the land, while leaving the other half at the existing zoning. Another could be upzoning ¼ of the land, while leaving the rest at the existing zoning. Another range of alternatives could include 108,050 square feet of retail space, and another could be 108,050 square feet of residential space. There is no question that these alternatives would be per se “feasible” based on the fact that they are similar to the zoning entitlement the applicant now has on the property.

Moreover, a challenge to the adequacy of the revised EIR is ripe now because the false and misleading land use baseline made it impossible for the public to even recommend alternatives to the upzoning, as we were continuously told that no upzoning was part of the project. As CEQA cases show, there is no environmental impact from downzoning property. But there can be significant environmental impact from upzoning land. (for analogy, see Mountain Lion Foundation v. California Dept. of Fish and Game, protecting an endangered species does not create an impact, but un-protecting that endangered species does create an impact under CEQA). When a project contains a massive upzoning as this project does, once the lead agency admits that this what they are doing, then the alternatives must take into account a reasonable range of alternatives to the upzoning along with alternatives to the subdivision of the land. If the only range of potentially feasible alternatives is artificially designed as 2.5 times existing zoning to 25 times bigger, this is hardly a reasonable range.

Comment 4:

Page I-35 Executive Summary

“Under Options 3 or 4, the Bluff Restoration area would be isolated, fragmenting the overall habitat corridor,”

I believe this is in error. Only Option 4 would result in the riparian corridor being separate from the bluff face habitat area. Regardless, this would only result in a very small portion of the bluff face being separate from the riparian corridor, as there would be no disconnection for the remaining 1 ½ miles of the corridor. Therefore, inclusion of this as a “problem” or negative impact to rule out this alternative is extreme nitpicking.

If one examines the big picture, as CEQA requires, Playa Capital has already completed the damage to this cultural resource. The evidence cited in the RS-DEIR shows that none of the Options could be more damaging to this resource than what Playa Capital has already done. It is notable that the RS-DEIR points out no benefits to the 4 different locations for the riparian corridor, only negative impacts.

It is stunningly biased that this project has so subjectively slanted the analysis of significant issues to favor the applicant’s project, allowing them to falsely create this rosy positive image of their project, while when ordered to do so by the court, they present an overwhelmingly negative picture of all possible alternatives, both to the location of the riparian corridor, and to any alternative design of the entire project.

Comment 5:

Page II.A-44—Land Use section

“However, since the Proposed Project is consistent with the policies, goals, and objectives in the applicable federal, state, and local plans, the Proposed Project is not considered to be inconsistent with any applicable land use plans, particularly in light of the proposed amendments to the General Plan and Area D Specific Plan, which as discussed above will ensure consistency with all elements of those plans.”

In fact, the proposed project is not consistent with the Playa Vista Specific Plan, which is by definition a local plan. So to claim that this massive upzoning is consistent with a plan only because you intend to change the plan along with the upzoning does not make the project consistent with the “baseline” of the plans.

Impacts and conclusions in an EIR must be measured from the existing conditions, not some possible new baseline after the project is approved. Therefore, the conclusion that there will be no land use impacts is incorrect. In fact, it is highly likely that the land use impacts are significant. If so, the applicant must mitigate those impacts if feasible, as CEQA requires. One way to mitigate those impacts is to dedicate open space to the City in compensation for this upzoning. The land use impacts must be mitigated on their own, and Playa Capital should not be allowed to claim that traffic mitigation also mitigates these added land use impacts. These land use impacts are completely separate from all other areas of impacts and require mitigation solely for their own area of impact

Finally, this new EIR attempts to claim no land use impacts by claiming the proposed project will comply with general goals and policies of various plans. The error here is that compliance with some generalized “goals or policies” of the existing plans is a lot different than compliance with the specific entitlements granted by those plans for the purpose of determining significance of impacts. Therefore, the reasoning claiming no inconsistency on page Page II.A-51 is erroneous.

PRE

LIMINARY WORKING DRAFT

Comment 6:

PROBLEMS WITH SECTIONS OF THE EIR THAT WERE NOT RECIRCULATED:

Finally, since the Land Use section of the EIR has been changed to so that it now correctly describes the zoning and entitlement changes sought by the developer, other sections of the EIR also needed to be updated to reflect the corrected information. The revised EIR contains no indication at all as to whether the City has reviewed the unchanged sections of the EIR to determine if the substantial change to the project description would affect the analysis in any other section of the EIR. Among the sections that certainly are affected by the change are the Alternatives and the executive summary of the alternatives, but the City should perform its own review of sections that need to be changed and comment thereon.

The alternatives sections need to be changed in a number of respects to reflect the corrected Land Use analysis. First, the sections should explicitly identify Alternative 2 as being a No Project alternative. Alternative 3 should be eliminated since 1) it is not a development that could legally be constructed on the phase 2 site without massive changes in zoning, and 2) it was simply a "straw man" No-Project alternative to support the argument made by the developer in that the project they were proposing was "substantially less than the project they were otherwise entitled to build", an argument that was rejected by the court as so misleading that it rendered the EIR deficient as an informational document.

Also, the executive summary of the alternatives contains misstatements about the traffic impacts and the environmental impacts of the "no project" and lower density alternatives, specifically by incorrectly stating that Alternative 2 would have "significant" traffic, waste, and other environmental impacts when the studies on which those conclusions were based specifically found that there would be no significant impacts.

Letter No. 26

April 29, 2009

Playa Vista Phase 2 RS-DEIR Comments

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MAY 01 2009

ENVIRONMENTAL
UNIT

Mr. David Somers
Los Angeles City Planning Dept. Room 750
200 No. Spring St., Los Angeles, CA 90012

Dear Mr. Somers:

Following are supplemental comments to those submitted by the Ballona Ecosystem Education Project.

Regarding the Playa Vista Phase 2 RS-DEIR – it is defective and not compliant under CEQA. A Supplemental or Subsequent EIR needs to be done. These are some of the reasons for the RS-DEIR being defective:

- 1) There is a lot of new information that was not known at the time of its approval on September 29, 2004. Some of this new information is regarding the gas problem at Playa Vista (see comments of Grassroots Coalition). This information needs to be examined under CEQA and a supplemental or subsequent EIR needs to be done, for everyone's health and safety. This is especially important since LAUSD is proposing to put an elementary school near the site.
- 2) Other new information is that oceans have become much more polluted, and there is a greater need for saving wetland ecosystems along the coast to help clean up polluted streams such as Centinela Creek and Ballona Creek (the largest polluter of Santa Monica Bay). These wetland/upland systems are MUCH MORE valuable for these purposes, than as more development in-fill.
- 3) A cost analysis needs to be done with other alternatives, such as keeping this 111 acres open space. The cost of developing it will include expensive infrastructure costs on a wetland area. A study done in Fresno in the 1990's showed that open space development costs local governments much more in infrastructure maintenance than it gets in new tax revenues. This would be especially so in a wetland/liquefaction/high gas area.

On the other hand, if the City acquired the 111 acres for a treatment wetland to help clean up Centinela Creek, and to restore upland habitat, it could actually pay off the costs over time.

- 4) Other very important new information that has occurred since the approval of the EIR on Phase 2 is that the State of California has stated that their preferred restoration plan for the wetlands west of Lincoln Blvd. (that were acquired by the State in 2003) is to bulldoze a significant portion of the upland habitat and turn it into water habitat. Therefore, this makes the 111 upland area east of Lincoln much more valuable as upland habitat to support the Ballona wetlands. Many of the insects, birds, and mammals of Ballona need upland habitat.

What happens to this land is crucial, as it represents part of the last remaining 5% of LA County's wetlands, and 5% of the state's coastal wetlands.

- 5) Leaving this area open space will also benefit current residents/workers at Phase I of Playa Vista. It will give the high gas amounts below ground more area to dissipate, making the area safer. Also, it will give more open space for the residents/surrounding community/school children to have sports. Currently, the Phase 1 playing fields are on a shared basis between the residents and the proposed school.

An educational native plant garden could be put there and land set aside for the indigenous Native Americans (who had all of their land taken away from them in the 1700's).

- 6) Although Playa Capital has said that the 111 acre Phase 2 site is needed to complete the Phase 1 site, they argued and won in Court in 1994 against environmentalists who said that the massive Playa Vista project was being illegally piece-mealed in its approval process. Playa Capital argued that Phase 1 was a "stand alone" project, and did not need Phase 2 to be complete. Now they are saying that Phase 1 needs the shopping areas of Phase 2 to be complete. It cannot be both ways.
7. Finally, due to the major upzoning that was hidden from the public in the previous EIR, some of these issues and other issues may not have surfaced or been obvious previously. They should be allowed to be commented on at this time.

Attached is a photo showing the Ballona wetlands approximately 80 years ago. It can be seen that the ecosystem that supported California Gray Whales, halibut, and other marine/terrestrial life was much larger – approximately 2100 acres of wetlands and 6,000 acres of uplands. The destruction of this ecosystem is happening very fast – within one lifetime. It is critical that we save and clean up every section that is left.

Thank you very much,



Kathy Knight,

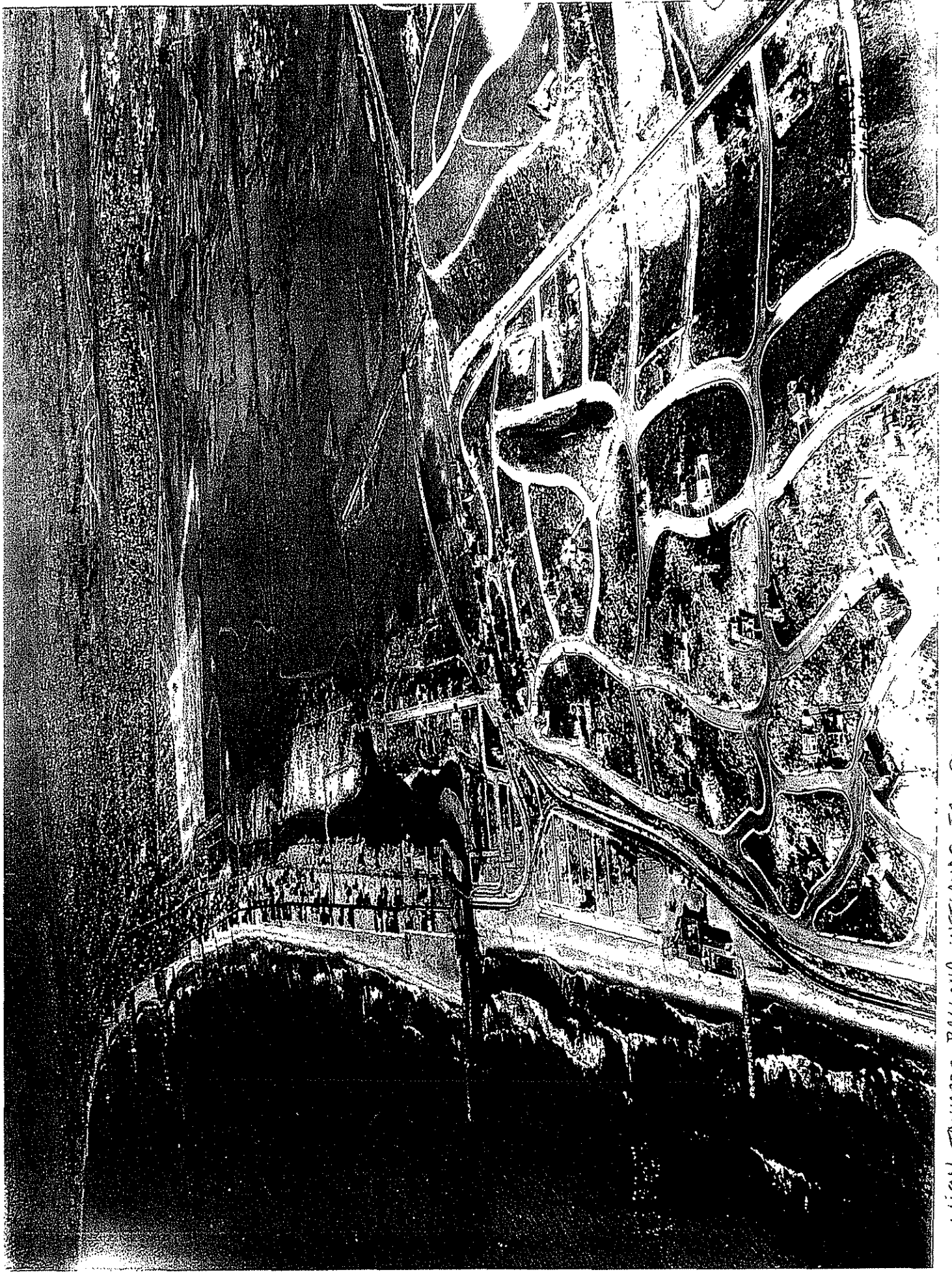
Board Secretary,

Ballona Ecosystem Education Project (B.E.E.P.)

P.O. Box 451153, Los Angeles, CA 90045-1153

(310) 450-5961

*ATTACHMENT: 1928 PHOTO OF BALLONA WETLANDS FROM
SPENCE COLLECTION AT UCLA*



Palisades del Rey
2-14-28

VIEW TOWARDS BALLONA WETLANDS ECO-SYSTEM
(FROM SPENCE COLLECTION, UCLA)

Letter No. 27

PHONE: (213) 482-4200
FACSIMILE: (213) 482-4246

LAW OFFICES OF SABRINA VENSUS

EMAIL:
VENSUS@LAWSV.COM

171 PIER AVENUE, SUITE 204
SANTA MONICA, CALIFORNIA 90405

March 5, 2009

VIA FACSIMILE to (213) 978-1275,
ELECTRONIC MAIL to david.somers@lacity.org
and U.S. MAIL

David J. Somers
City Planning Department
Room 750
City Hall
200 N. Spring Street
Los Angeles, CA 90012

**RE: Request to extend comment period on the Village at Playa Vista RS-DEIR
(Case No. ENV-2002-6129-EIR) due to City's failure to notify interested
parties**

Dear Mr. Somers:

This letter is submitted by the Ballona Wetlands Land Trust (BWL). BWL was a commenter on the original Draft Environmental Impact Report for the above-referenced Village at Playa Vista project (hereinafter "Project"), as well as one of the successful petitioners/appellants in *City of Santa Monica, et al. v. City of Los Angeles, et al.*, (L.A.S.C., Case No., BS093502).

On January 29, 2009, the City of Los Angeles issued a "Notice of Completion and Availability of Recirculated Sections of Draft Environmental Impact Report No. ENV-2002-6129-EIR," ("Notice"). However, numerous interested parties that commented on the prior EIR on the Project did not receive this Notice. Additionally, the Notice is not available to the public on the planning department's website, www.lacity.org/pln, in either the Public Notices section or the Notice of Preparation section.

I am informed by Ms. Sylvia Schweri at BWL that she contacted numerous organizations and individuals who commented on the prior EIR and many informed her they did not receive the Notice. These parties include Heal the Bay, Sempra Energy Utilities, Natural Resources Defense Council (NRDC), Friends of Sunset Park, and Koreh LA. In addition, Ms. Marcia Hanscom of Ballona Institute and Wetlands Action Network (also a commenter on the prior EIR) informed me that neither she nor her organizations received the Notice. There are likely other interested parties who similarly failed to receive the Notice.

In failing to provide these interested organizations and individuals said Notice, the City has violated CEQA Guidelines, Section 15088.5, subdivision (f)(3), which provides:

As part of providing notice of recirculation as required by Public Resources Code Section 21092.1, the lead agency shall send a notice of recirculation to every agency, person, or organization that commented on the prior EIR.

Because the City failed to give proper notice of the RS-DEIR's completion and availability for review, BWLT requests the City re-issue the Notice in accordance with CEQA Guidelines Section 15088.5 and further extend the public comment period on the RS-DEIR an additional 45 days from the date of Notice re-issuance in order to provide the public adequate time to review the RS-DEIR and comment thereupon.

The failure to extend the comment period will severely prejudice these parties from adequately reviewing and responding to the revised sections of the DEIR, thus preventing the public and decision makers from receiving vital input on the RS-DEIR. (See *Save our Peninsula Committee v. Monterey County Board of Supervisors* (2001) 87 Cal.App.4th 99.) The revised EIR "must be subjected to the same 'critical evaluation that occurs in the draft stage,' so that the public is not denied an 'opportunity to test, assess, and evaluate the data and make an informed judgment as to the validity of the conclusions to be drawn therefrom.'" (*Id.* at p. 131, quoting *Sutter Sensible Planning, Inc. v. Board of Supervisors* (1981) 122 Cal.App.3d 813, 822.)

Meaningful public review of the RS-DEIR can only occur with sufficient notice to the public and agencies of the RS-DEIR's completion and availability, and sufficient time to draft comments after receipt of such notice. Please confirm in writing that the RS-DEIR Notice will be re-issued and the comment deadline extended 45 days.

Please contact me if I can be of assistance in supplying the Department of Planning a list names and contact information of interested parties.

Sincerely,

/S/ Sabrina Venskus

Sabrina D. Venskus, Esq.
LAW OFFICES OF SABRINA VENSKUS
Attorney for Ballona Wetlands Land Trust

cc: Honorable City Councilman Bill Rosendahl (via facsimile)
Mr. Michael LaGrande, Chief Zoning Administrator, City Planning Department (via mail and facsimile)

Letter No. 28

PHONE: (213) 482-4200
FACSIMILE: (213) 482-4246

LAW OFFICES OF SABRINA VENSUS
171 PIER AVENUE, SUITE 204
SANTA MONICA, CALIFORNIA 90405

EMAIL:
VENSUS@LAWSV.COM

March 13, 2009

VIA FACSIMILE to (213) 978-1343,
ELECTRONIC MAIL to david.somers@lacity.org,
david.weintraub@lacity.org

David J. Somers
City Planning Department
Room 750
City Hall
200 N. Spring Street
Los Angeles, CA 90012

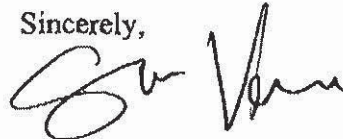
RE: Reply to March 12, 2009 letter granting extension of comment period on the Village at Playa Vista RS-DEIR (Case No. ENV-2002-6129-EIR)

Dear Mr. Somers:

We received your letter wherein you informed us that you are issuing a new Notice and extending the comment period to April 30, 2009. As requested, attached please find contact information for the groups who did not receive the January 29, 2009 Notice, as well as other interested parties and agencies who should receive the new Notice.

Thank you for your attention to this matter. Please contact me if I may be of any further assistance.

Sincerely,



Sabrina D. Venskus, Esq.
LAW OFFICES OF SABRINA VENSUS
Attorney for Ballona Wetlands Land Trust

cc: Honorable City Councilman Bill Rosendahl (via facsimile)
Mr. Michael LaGrande, Chief Zoning Administrator, City Planning Department (via facsimile)

**LIST OF INTERESTED PARTIES WHO SHOULD RECEIVE NEW NOTICE OF
COMPLETION OF VILLAGE AT PLAYA VISTA RS-DEIR**

Organizations Named in Ballona Wetlands Land Trust's March 5, 2009 Letter

Wetlands Action Network
P.O. Box 1145
Malibu, CA 90265
Attn: Marcia Hanscom

Ballona Institute
322 Culver Blvd., Ste. 17
Playa del Rey, CA 90293

Friends of Sunset Park
P.O. Box 5823
Santa Monica CA 90409

Heal the Bay
1444 9th Street
Santa Monica, CA 90401
Attn: Kerstin James

Koreh LA
6505 Wilshire Boulevard, #900
Los Angeles, CA 90048
Attn: Elaine Albert

NRDC (National Resources Defense Council)
1314 Second Street
Santa Monica, CA 90401
Attn.: Damon Nagami

Southern California Gas Company
Sempra Energy Utilities
Mailbox: GT 16G3
555 West 5th Street
Los Angeles, CA 90013
Attn: James Chuang

Other Interested Groups/Individuals

CLEAN ~ Coastal Law Enforcement Action Network
322 Culver Blvd., Ste. 17
Playa del Rey, CA 90293

Sierra Club Ballona Wetlands Restoration Committee
322 Culver Blvd., Ste. 317
Playa del Rey, CA 90293

Sierra Club, Airport Marina Group
Joe Young
3435 Wilshire Blvd #320
Los Angeles, CA 90010-1904

Laura Silagi and/or David Ewing
Venice Community Coalition
1033 Nowita Pl.
Venice, CA 90291

Denny Schneider
Osage Neighborhood Association
7929 Breen Ave
Westchester, CA 90045-3357

Betsey Landis
California Native Plant Society, Santa Monica Chapter
3908 Mandeville Canyon Road
Los Angeles, CA 90049

David Barish
We Are Marina del Rey
PO Box 9096
Marina del Rey, CA 90295

Kathy Knight
1122 Oak Street
Santa Monica, CA 90405

Joe Geever
California Policy Coordinator
Surfrider Foundation
8117 W. Manchester Ave., #297
Playa del Rey, CA 90293

Dean Francois
Friends of the South Bay Bicycle Path
PO Box 808
Hermosa Beach, CA 90234

Agencies/Entities

Los Angeles Regional Water Quality Control Board
DTSC (Department of Toxic Substances Control)
OEHHA (Office of Environmental Health Hazard Assessment)
Native American Heritage Commission
SHPO (State Historic Preservation Office)
MTA (Metropolitan Transportation Authority)
CalTrans
City of Santa Monica
City of El Segundo
Culver City
City of Manhattan Beach
Department of Fish and Game
California Coastal Conservancy

Neighborhood Councils

Venice Neighborhood Council
PO Box 550
Venice, CA 90294

Mar Vista Community Council
P.O. Box 66871
Mar Vista, 90066

Neighborhood Council of Westchester/Playa del Rey
8726 S. Sepulveda Blvd. PMB A191
Westchester, CA 90045

Del Rey Homeowners and Neighbors Association and
Del Rey Neighborhood Council
PO Box 661450
Los Angeles, CA 90066

Letter No. 29

From: "Emilee Moeller" <EMoeller@lawsv.com>
To: "David Somers" <David.Somers@lacity.org>
CC: "Sabrina Venskus" <venskus@lawsv.com>
Date: 4/30/2009 4:59 PM
Subject: Ballona Wetlands Land Trust Comment Letter on the Village at Playa Vista RS-DEIR (Case No. ENV-2002-6129-EIR).
Attachments: Revised EIR 4-30-2009.pdf

Dear Mr. Somers:

Attached please find Ballona Wetlands Land Trust Comment Letter on the Village at Playa Vista RS-DEIR (Case No. ENV-2002-6129-EIR).

The comment letter includes numerous exhibits, amounting to hundreds of pages. As such, we are not able to email them as attachments along with the comment letter itself (the pdf files would be too large).

These exhibits, along with the original comment letter are being sent to you via U.S. Mail today.

Thank you,

Emilee Moeller

Emilee Moeller

Associate Attorney

Law Offices of Sabrina Venskus

phone: (213) 482-4200

facsimile: (213) 482-4246

web: www.lawsv.com

Office Address:

1055 Wilshire Boulevard

Suite 1660

Los Angeles, CA 90017

Mailing Address:

171 Pier Avenue, #204

Santa Monica, CA 90405

Confidentiality Notice: This e-mail message may contain confidential or privileged information. If you have received this message by mistake, please do not review, disclose, copy, or distribute the e-mail. Instead, please notify me immediately by replying to this message. Thank you.

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PHONE: (213) 482-4200
FACSIMILE: (213) 482-4246

LAW OFFICES OF SABRINA VENSUS

171 PIER AVENUE, SUITE 204
SANTA MONICA, CALIFORNIA 90405

EMAIL:
VENSUS@LAWSV.COM

April 30, 2009

VIA ELECTRONIC MAIL
to david.somers@lacity.org
and U.S. Mail

David J. Somers
City Planning Department
Room 750
City Hall
200 N. Spring Street
Los Angeles, CA 90012

**RE: Ballona Wetlands Land Trust Comment Letter on the Village at Playa Vista
RS-DEIR (Case No. ENV-2002-6129-EIR)**

Dear Mr. Somers:

The following comments on the Revised Draft Environmental Impact Report ("RS-DEIR" or "EIR") for the Village at Playa Vista are submitted by the Law Offices of Sabrina Venskus on behalf of our client, the Ballona Wetlands Land Trust (BWL). Founded in 1994, BWLT is a non-profit community organization dedicated to the acquisition, restoration and preservation of the entire Ballona Wetlands ecosystem. BWLT was a commenter on the original Draft Environmental Impact Report for the above-referenced Village at Playa Vista project (hereinafter "Proposed Project" or "Phase II"), as well as one of the successful petitioners/appellants in *City of Santa Monica, et al. v. City of Los Angeles, et al.*, (L.A.S.C., Case No., BS093502).

I. INTRODUCTION

It bears mentioning the context in which the Proposed Project is presented to the public and decision-makers. Playa Capital, L.L.C., the Proposed Project proponent requests a significant up-zoning of the 111-acre parcel, variously known as Ballona Southeast, which is currently entitled for a maximum of 108,000 square feet of office/light industrial use. In other words, Playa Capital, L.L.C., requests an up zoning of **40 times what is allowable** under current zoning. **The Proposed Project, if approved, represents a \$145,600,000.00 gift in land value**

to the land owners¹ -- a Wall Street investment consortium whose majority owner is Goldman-Sachs.

Regrettably, despite the lengthy page count, the RS-DEIR is merely a *pro forma* documentation of effects of a proposed project already assumed to be approved. In summary, the City must revise its RS-DEIR to comply with CEQA and to provide the public and decision makers with adequate information regarding the true environmental impacts of the Proposed Project and propose alternatives and mitigation measures that would lessen those impacts.

The RS-DEIR appears to have addressed some of the issues required to be discussed by the Court of Appeals' opinion, as ordered by writ of mandate by the trial court in *City of Santa Monica, et al. v. City of Los Angeles, et al.*, (L.A.S.C., Case No., BS093502).² However, as discussed below, the RS-DEIR fails to satisfy the requirements of CEQA.³ The analysis of wastewater impacts is incomplete, overlooking adverse impacts on water quality. In addition, the RS-DEIR violates the court-ordered requirement to discuss and consider preservation in place according to CEQA Guidelines §15126.4. The RS-DEIR provides no real, good faith discussion of Proposed Project design options that would allow the archaeological resources excavated in violation of CEQA to be returned in their original place. With respect to land use impacts, the RS-DEIR fails to discuss the inconsistencies between the Proposed Project and the General Plan's Framework Element. Finally, the RS-DEIR section on Global Climate Change is inadequate as it fails to properly analyze greenhouse gas ("GHG") emissions.

The RS-DEIR also completely ignores other potentially significant impacts, including impacts relating to water supply, and methane-related impacts, as well as fails to analyze environmentally superior alternatives. CEQA requires these issues be addressed due to changed circumstances and new information of substantial importance since the original 2004 EIR certification.

CEQA requires that an EIR be recirculated for public comment and agency consultation whenever "significant new information" regarding a "substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative)." (Pub. Res. Code, § 21092.1; CEQA Guidelines, §15088.5.) Examples of circumstances requiring recirculation include, but are not limited to,:

- (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

¹ Exhibit A-3

² Exhibit A-1, Court of Appeal Opinion, 2007 WL 2677035 (Cal.App. 2 Dist.) [hereinafter "Opinion"].

³ Despite BWLT's prior written request, the City inexplicably failed to post the Notice of Preparation on its website to inform the general public of the opportunity to comment on the RS-DEIR. (See Exhibit A-2.)

- (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
- (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.
- (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

BWLT's comments address archaeology, wastewater/water quality, water supply, safety/risk of upset (methane), climate change, land use, and feasible alternatives to the Proposed Project. BWLT respectfully requests the City direct Playa to revise its RS-DEIR in the manner discussed below and recirculate the DEIR for public review and comment. Only then can the public and decision-makers be assured that the environmental consequences of the Proposed Project and alternatives thereto are fully addressed and that the City is equipped to make a fully informed decision with respect to approval or disapproval of the Proposed Project as currently presented.

II. ARCHAEOLOGY

A. Introduction

For many Native Americans, preservation of ancestral burial sites is an essential value for a group that "define[s] themselves through time and place as forever linked to ancestors, environment, and the earth."⁴ Most Native Americans believe that the spirit of an ancestor is released when their remains are uncovered and separated from sacred burial objects. The unreleased spirit of an ancestor remains at unrest until the skeletal remains are returned to the earth.⁵

"Native Americans approach [preservation] issues from cultural, religious, and historical perspectives that transcend the concern that scientific data will be lost...Most Native Americans desire that their ancestors' remains stay undisturbed...For many Native Americans, showing respect for the remains of ancestors is far more important than any scientific study of those remains."

⁴ Riley, "Straight Stealing": *Towards an Indigenous System of Cultural Property Protection* (2005) 80 Wash. L.Rev. 69, 115.

⁵ Marsh, *Walking the Spirit Trail: Repatriation and Protection of Native American Remains and Sacred Cultural Items* (1992) 24 Ariz. L.Rev 79, 84.

The Gabrielino-Tongva Tribe in particular believes it is important for disturbed remains to be placed in their original resting place. As Anthony Morales, Tribal Chief, put it: “The ancestors that were uncovered in Phase II need to be reburied in their original place so they can continue their eternal rest. We are the voices of our ancestors. No archaeological or scientific theory can dictate our culture to us. It is very significant that this request be honored by the developed because it is very sacred, spiritual, and cultural.”

The project proponent, Playa Capital, L.L.C. (hereinafter “project proponent” or “Playa”) has stubbornly refused to comply with CEQA’s preservation in place requirement throughout its history of treatment of Native American remains and cultural objects in Phase I and Phase II of the Playa Vista development. While the original draft EIR was being circulated on the Phase II project, Playa exhumed nearly 400 Native American human remains to make way for the adjacent Phase I project.

Playa’s treatment of those ancestors created a public outcry (including dismay from some archaeologists) and demonstrated that the so-called “mitigation” of data recovery provided no safeguards to protect and preserve sacred Native burials and cemeteries. Playa’s Phase I data recovery plan allowed the Project Proponent to dig up and store these human remains with impunity. Despite numerous requests from the public and the Native American Heritage Commission (NAHC), the city refused to require Playa to amend its similarly defective treatment plan for potential Phase II burials, nor even provide a discussion in the EIR of the possibility of preserving burials in place. The NAHC advocated a mitigation measure to preserve in place future discoveries in Phase II. Such a request was ignored and Phase II was approved with the same data recovery as used in Phase I.

After Petitioners in *City of Santa Monica, et al. v. City of Los Angeles, et al.* filed a petition for writ of mandate and request for preliminary injunction, challenging the Phase II EIR, Playa proceeded with its Phase II project. As litigation progressed, Petitioners learned of discoveries of human burials in Phase II, where Playa was excavating its Riparian Corridor. Petitioners filed a temporary restraining order as well as a request for the trial court to rule immediately on their request for preliminary injunction. The city and Playa vigorously opposed these requests by petitioners to cease disturbance of archaeological sites pending proper environmental review. After the trial court denied both requests, Petitioners sought a writ of supersedeas in the Court of Appeal. Playa and the city once again opposed this request, knowing that Playa had expeditiously removed human burials from the area during litigation. According to the RS-DEIR, by the time the Court of Appeal invalidated the EIR in 2007, Playa had progressed the project to such an extent that the archaeological sites were substantially impacted by the field work for the data recovery process.⁷

⁶ The RS-DEIR apparently refers to these discoveries as “300 burial features” and fails to state plainly exactly how many intact human remains were exhumed. (RS-DEIR, at p. II-C-31 to 32.)

⁷ See Preliminary Report on Data Recovery within the Phase 2 Project Area at CA-LAN-62, Locus D, and CA-LAN-211H, Playa Vista, California, Appendix to RS-DEIR, at p. 1, and 8-14 [describing excavation].

The effect of Playa's refusal to halt project activities impacting archaeological sites has been to perpetuate conflict with Native religious or cultural values and the disassociation between archaeological discoveries and their context. (See CEQA Guidelines, §15126.4, subd. (b)(3)(A).) Despite the fact that Playa was the cause of its own predicament (i.e., the disturbance of the archaeological sites without proper environmental review), Playa now claims that there is no such thing as preservation in place in this context and the RS-DEIR bases its faulty environmental review on that assumption. To add insult to injury, Playa's entire analysis piles on as many drawbacks to requiring preservation in place without mentioning (other than that it is court-ordered) the potential benefits, as recognized by CEQA. (See Guidelines, § 15126.4, subd. (b).)

B. Discussion

The RS-DEIR provides 65 pages of observations and analysis that is an apparent attempt to avoid properly addressing future mitigation measures and the option of placing exhumed Native American burials and cultural objects back in their original place. The entire analysis is constructed so as to provide justification for actions already taken in violation of CEQA. The RS-DEIR makes no real attempt to consider preservation in place. Instead, the RS-DEIR makes mere reference to the words preservation in place as if this were enough to comply with CEQA Guidelines, §15126.4. The RS-DEIR improperly constructs a new, self-serving definition of preservation in place. However, this definition does not pass the common sense test, and its use in the RS-DEIR violates CEQA.

In summary, the RS-DEIR's Archaeological Resources section is inadequate in three main respects: 1) the analysis of preservation in place violates CEQA by concocting a narrow definition of "preservation in place"; 2) the analysis of potential ways to reconfigure the Proposed Project to achieve preservation in place violates CEQA because it is an *ad hoc* rationale for an outcome predetermined by the applicant ; and 3) the RS-DEIR does not address or provide for future mitigation that accomplishes preservation in place, in violation of CEQA.

1. Analysis of "preservation in place" violates CEQA.

CEQA requires the RS-DEIR to discuss and analyze the option of preserving in place archaeological resources, including the option of placing previously excavated archaeological resources back in their original place. (CEQA Guidelines, §15126.4, subd. (b)(3)(A).) This interpretation of "preservation in place" is based in part on the description of the policy behind the preservation requirement: only preservation in place "maintains the relationship between artifacts and the archaeological context" and "*may also avoid conflict with religious or cultural values of groups associated with the site.*" (CEQA Guidelines, §15126.4, subd. (b)(3)(A) [emphasis added].)

The RS-DEIR creates a definition of "preservation in place" that *purposely excludes* the possibility of returning archaeological finds back into their original place.⁸ The RS-DEIR

⁸ RS-DEIR, at p. II.C-60; II.C-40.

essentially claims there is no such thing as preservation in place here, where items have already been illegally removed.⁹ Curiously, while quoting Guidelines §15126.4(b)(3)(A) in support of this definition, the RS-DEIR excludes and ignores the portion which states that preservation in place “may also avoid conflict with religious or cultural values of groups associated with the site.”¹⁰

The RS-DEIR’s analysis of preservation in place is thus based on a faulty and illegal definition. Because the definition of preservation in place underpins the entire analysis and conclusions in the RS-DEIR Section II.C., the entire section fails to provide the necessary analysis required by the Court. Moreover, the definition itself is evidence that the Playa never seriously considered the option of returning remains and funerary objects in their original place in order to achieve greater preservation in place.¹¹

Furthermore, the required preservation in place discussion should “ensure that the decision makers and the public give adequate consideration to both the benefits of preservation in place and potential measures to achieve that preferred goal.”¹² Here, the RS-DEIR fails to discuss *any benefits of preservation in place* because the RS-DEIR interprets “preservation in place” so as to make the public and decision makers believe there is no such thing. In fact, the RS-DEIR states that “preservation in place” of previously exhumed ancestors is “not possible.”¹³ By changing the definition of “preservation in place” in violation of CEQA, the RS-DEIR excluded an entire discussion of the benefits of placing Native American ancestors and burial objects (in addition to cultural objects) back in place. It is clear from the RS-DEIR that preservation in place was never considered as the preferred alternative to data recovery.

The archeological impacts resulting from the excavation required by the Proposed Project are admittedly significant.¹⁴ Therefore, mitigation is required. (CEQA Guidelines, §15126.4.) Playa Capital L.L.C., has two main options: (1) preservation in place; or, if that is impossible, (2) data recovery.¹⁵ As to the preservation in place option, there are several options to “achieve *greater preservation in place*, including, for example, changing the course or depth of the

⁹ *Ibid.*

¹⁰ RS-DEIR, at p. II. C-40.

¹¹ Exhibit A-1, Opinion, at p. 40.

¹² Exhibit A-1, Opinion, at p. 36.

¹³ RS-DEIR, at p. II.C-60.

¹⁴ RS-DEIR, at p. .

¹⁵ *Ibid.*

riparian corridor and *restoring archaeological resources to their prior resting places* within the excavated corridor, or restoring those items to other suitable locations on the project site.”¹⁶ The EIR must discuss, for example, “whether more archaeological resources could be preserved in place if the riparian corridor were redesigned to avoid the highest concentrations of archaeological resources or if other parts of the project were built at another location, or whether other measures might result in more preservation in place.”¹⁷ Here, the RS-DEIR fails to adequately discuss potential measures to achieve the preferred goal of preservation in place, either with regard to previously excavated remains and artifacts as well as future undiscovered resources.

2. Analysis of locating corridor/reconfiguring the Proposed Project violates CEQA.

It is difficult to understand why, after extensive and protracted litigation on the subject, the EIR would analyze options for preservation in place primarily for 2002 conditions and not present-day scenarios. As such, the RS-DEIR is merely an *ad hoc* rationale.

The options addressed by the RS-DEIR with regard to 2002 conditions were all rejected by the RS-DEIR as infeasible, essentially with the statement that “Due to the condition of the Proposed Project property, it would not have been feasible to preserve the Archaeological Sites in place.”¹⁸ This after-the-fact dismissal of preservation in place as an option is completely inconsistent with the original DEIR’s conclusion that it was infeasible to preserve in place ***because the Riparian Corridor could not function.***¹⁹ There is no evidence that remediation would be required for every preservation in place option under CEQA Guidelines, §15126.4(b). For example, the RS-DEIR states that capping could not occur because the soil underneath the resources “contained contamination and deteriorating infrastructure.”²⁰ This ignores Appendix K of the Guidelines, which provides for capping after a site is recorded and that the capping is required to be done with chemically stable soil—i.e., the soil used for capping (as opposed to the underground soil) must be chemically stable. Appendix K of CEQA Guidelines, Section II.(3) (emphasis added) provides:

“Capping” or covering archaeological sites with a layer of soil before building tennis courts, parking lots, or similar facilities. Capping may be used where:

- a. The soils to be covered will not suffer serious compaction;

¹⁶ Exhibit A-1, Opinion, at p. 40 [emphasis added].

¹⁷ Exhibit A-1, Opinion, at p. 36.

¹⁸ RS-DEIR, at p. II.C-55.

¹⁹ [Original] DEIR, at p. 1219.

²⁰ RS-DEIR, at p. II.C-55.

- b. The covering materials are not chemically active;
- c. The site is one in which the natural processes of deterioration have been effectively arrested; and
- d. The site has been recorded.

Regarding present-day options, the RS-DEIR states three main excuses for why preservation in place is “not possible”:

Reason #1: The impacts have already occurred and federal law requires Playa to follow the Programmatic Agreement requiring curation of items previously excavated.

Reason #2: Filling the riparian corridor and replacing ancestors in their resting places would have additional impacts on other nearby archaeological resources.

Reason #3: Filling in the existing Riparian Corridor to pursue any of the options “would have both temporary and permanent adverse impacts on biological resources that currently exist within the Riparian Corridor...”²¹

Reason #1 may be dispensed with rather easily. First, CEQA requires a discussion of options to preserve in place both previously excavated remains and cultural objects and future discoveries. (See CEQA Guidelines, §15126.4.) Second, following federal law is no excuse when Playa proceeded in non-compliance of CEQA at its own risk. If the City, in exercising its discretion under CEQA, requires an alternative design as a condition of project approval, Playa can seek approval of the redesigned riparian corridor from the other permitting agencies. Thus, if the Programmatic Agreement must be amended to provide for a greater degree of preservation (i.e., reinterment of remains and funerary objects and preservation in the first instance for future discoveries), the City may require it. As such, it must have been discussed as a method for implementing a preservation in place scenario. Furthermore, the RS-DEIR itself acknowledges that the Programmatic Agreement and federal requirements allow for reinterment of remains and funerary objects.²² There is no discussion of the option of returning *even these particular items* back in place.

The RS-DEIR does not fully explain, under Reason #2 regarding impacts to other portions of the preserved Archaeological Sites, whether mitigation could be provided. Furthermore, the RS-DEIR’s continual citation of runoff over archaeological sites as an unavoidable problem under any option for moving the Riparian Corridor ignores techniques that may be used to divert water or isolate its effects from the sites.

²¹ RS-DEIR, at p. I.I.C-60.

²² RS-DEIR, at p. I.I.C-57 to 58.

Finally, regarding Reason # 3, impacts on biological resources, the RS-DEIR does not explain: (1) how or why these potential impacts make preservation in place impossible or infeasible; or (2) how or why these potential impacts can or cannot be mitigated.

3. The RS-DEIR avoids the required discussion of preservation in place with regard to potential future archaeological discoveries.

The RS-DEIR states that “[i]f the Proposed is approved, the mitigation measures [adopted in 2004 and vacated in 2007] would be readopted and would be implemented with further work undertaken in connection with any future work on the Proposed Project.”²³ However, it is precisely those “mitigation measures” that the Court struck down as they do not provide an option for preservation in place. The ATPs prepared for Playa Vista Phase II do not identify any options for avoiding, minimizing, or mitigating adverse effects on CA LAN-62 and CA LAN-211/H. Data recovery was the only proposed option, yet data recovery is defined by the Federal government as an *adverse effect* in the National Historic Preservation Act (NHPA), Section 106, 800.5 (a)(1-2). Data recovery, itself an adverse effect as defined by Federal standards of preservation, is defined as the only alternative in the 1991 ATP²⁴ and the later 2003 ATP.²⁵

Mitigation measures for any future discoveries must include preservation in place.

The RS-DEIR provides no discussion of preservation in place with regard to future discoveries. It fails to acknowledge ways to achieve greater preservation in place via its federal requirements. For example, the programmatic agreement may be amended to include additional options for the mitigation such as preservation in place for archaeological sites CA LAN-62 and CA LAN-211/H or any future discoveries. According to the NHPA, Section 106, 800.6 (c) pertaining to the resolution of adverse effects, “the signatories to a memorandum of agreement may amend it.” The RS-DEIR does not discuss the option of amending the Programmatic Agreement to include preservation in place as a preferred alternative to data recovery upon future discoveries. Instead, the RS-DEIR requires the same mitigation (data recovery) that has been used in the past and that does not meet the requirements of CEQA Guidelines §15126.4(b)(3).

4. Other issues.

a. *The RS-DEIR misstates the level of previous preservation in place.*

²³ RS-DEIR, at p. II.C-62.

²⁴ RS-DEIR, Appendix D. ix, at p. 4-7.

²⁵ RS-DEIR, Appendix D.viii, at p. 249.

The EIR misstates levels of disturbance to the archaeological sites from their construction. It is stated in section II C-42 that “approximately 72 percent of CA LAN-62 Locus D and 68% of CA LAN 211/H were preserved in place under fill or left undisturbed.” Figure II. C-7 “Historic and Recent Disturbance to Archaeological Zones” states that 28% of LAN 62 is cut area, 46% is fill area, and 26% is untouched – making 74% of the site cut or filled. In the case of LAN 211, Figure II.C-7 states that 32% has been cut, 62% percent filled, and only 6% untouched – making 94% of the site cut or filled.

According to Playa Vista’s archaeological consultants Statistical Research Inc., filling requires that “existing grade will be grubbed and ripped prior to filling”. Assuming grubbing and ripping is part of the fill process, “nearly all portions of LAN 211-H will be severely impacted or destroyed.”²⁶ The depth of impact to LAN 211-H was estimated by the consultants to range from 3 to 20 feet across the site.²⁷ Procedures at CA LAN-62 would have been similar to those at LAN 211-H. Hence, Playa Vista’s claim that 72% of CA LAN-62 and 68% of 211/H is preserved in place is false, with percentages of 26% and 6% approaching greater accuracy. These impacts must be fully disclosed and discussed in the EIR in terms of the overall preservation in place options.

b. *The RS-DEIR must provide up-to-date data recovery information.*

Public participation is an essential part of CEQA, members of the public hold a “privileged position” in the process, which reflects both “a belief that citizens make important contributions to environmental protection...and notions of democratic decision-making...” (*Concerned Citizens of Costa Mesa, Inc. v. 32nd District Agricultural Association* (1986) 42 Cal.3d 929, 936.)

“The EIR process also informs the public of the basis for environmentally significant decisions by public officials and thereby promotes accountability and informed self-government.”²⁸ Similarly, “[A] paramount consideration is the right of the public to be informed in such a way that it can intelligently weigh the environmental consequences of any contemplated action and have an appropriate voice in the formulation of a decision.” (*Environmental Planning and Information Council v. County of El Dorado* (1982) 131 Cal.App. 3d 350, 354.) ‘An EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.’” (*Irrigated Residents, supra*, 107 Cal.App.4th at p. 1390, 133 Cal.Rptr.2d 718.)

²⁶ RS-DEIR, Appendix D.viii, “At the Base of the Bluff”, at p. 249.

²⁷ *Ibid.*, at p. 251.

²⁸ Exhibit A-1, Opinion, at p. 13, citing *Laurel Heights Improvement Assn’ v. Regents of the University of California* (1988) 47 Cal.3d 376, at p. 392 and *Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935-936.)

Playa must be more forthcoming in the EIR with information about prior field work and data recovery. The RS-DEIR apparently refers to the exhumed ancestors in Phase I as “300 burial features” and fails to state plainly exactly how many intact human remains were exhumed.²⁹ The EIR must provide this information to the public to obtain a complete picture of the status of the archaeological treatment at the development, since the treatment plans for Phase I and Phase II are interconnected, as well as to provide government accountability. (See *Laurel Heights Improvement Assn’ v. Regents of the University of California* (1988) 47 Cal.3d 376, at p. 392 and *Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935-936.) Furthermore, CEQA Guidelines, §15126.4(b)(3)(C) requires that studies from any data recovery be deposited with the California Historical Resources Regional Information Center.

The RS-DEIR states that “all data recovery work at the Proposed Project has been completed.”³⁰ The Programmatic Agreement requires public disclosure of data reports produced pursuant to the data recovery plan. While the RS-DEIR does provide a preliminary report on data recovery in Phase II, it does not provide any final data recovery reports,³¹ on either Phase I or Phase II. There is no explanation in the RS-DEIR why the Phase II report(s) are not included. Furthermore, the excavations in Phase I impacted the work plans for data recovery in Phase II, and as such, must be provided to the public in order to fully assess the significant impacts to these resources (including cumulative impacts) and the adequacy of any proposed mitigation.

III. WASTEWATER/WATER QUALITY

A. Introduction/Overview

CEQA requires the RS-DEIR to use updated, accurate information in order to fully inform decision makers and the public of the environmental consequences of the Proposed Project. (*County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 193 (“An accurate, stable and finite project description is the Sine qua non of an informative and legally sufficient EIR.”) An EIR must fully analyze a project’s impacts on wastewater treatment capacity and also on water quality related to its discharge. (See *Santa Clarita Organization for Planning the Environment v. County of Los Angeles* (2003) 106 Cal.App.4th 715, 723 and *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412 (*Vineyard Area Citizens*)). Although the RS-DEIR commendably provides more detail than the original EIR, it ultimately fails to undertake an adequate analysis of how much wastewater treatment the city can actually deliver given past, present and future growth. Since the answer

²⁹ RS-DEIR, at p. II-C-31 to 32.

³⁰ RS-DEIR, at p. II.C-37.

³¹ The preliminary report (at App. D.ii.), states that fieldwork for Phase II was completed in 2005, nearly four years ago.

to this question invariably bears on the Proposed Project's potential impacts, its omission renders the EIR inadequate as an informational document. In addition, the RS-DEIR ignores the obvious future impacts to water quality due to increased wastewater discharge from the project, both individually and cumulatively.

B. Sewer Capacity

Although the Court opinion did not specifically state that impacts to *sewer lines* be addressed, it did state that impacts due to wastewater be addressed. Since sewer line capacity is relevant here (especially with respect to sewage spills in the area due to stormwater and sewage overflow³²), it must be properly addressed in the EIR.

The RS-DEIR does not address the Proposed Project's flow in relation to Ballona creek sewage spills.³³ The RS-DEIR left out an analysis of wet-weather events entirely, which prevents the public and decision makers from addressing the ultimate impacts from the Proposed Project's flows, since both wet-weather flows and dry-weather flows make up the total flow from the Proposed Project. This information is vital given the proximity of the Proposed Project to the Santa Monica Bay and Ballona Creek, an area of confluence that is integral to the health and safety of the city's beaches.³⁴

Furthermore, it is evident from other EIRs for projects proposed within the city that the City's overall practice of assessing sewer capacity and wastewater treatment capacity remains an ad hoc process of reviewing capacity only after projects are approved. This is impermissible (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412 (*Vineyard Area Citizens*)) and compromises the integrity of any capacity analysis, direct or cumulative, that is put forth for public review on any project proposed for consideration and approval.

Finally, the RS-DEIR also states that the 42-inch Marine Interceptor Sewer has already been constructed and connected to the Proposed Project's sewer lines.³⁵ The RS-DEIR must also disclose whether or not this sewer was constructed outside project boundary lines in anticipation of the project's approval. In other words, did the City construct off-site sewer infrastructure in order to accommodate the Proposed Project's anticipated flow? If so, such construction should be considered part of the Proposed Project as a whole and the impacts addressed.

³² See Exhibit B-1, "L.A. Admits Sewer Spills", Los Angeles Times, April 23, 2003.
<http://articles.latimes.com/2003/apr/23/local/me-sewer23>.

³³ See, e.g., Exhibit B-2, Public notice of Aug. 06 beach closure due to Ballona Creek sewage spill:
<http://lapublichealth.org/docs/beachclosure02142007.pdf>

³⁴ *Ibid.*

³⁵ RS-DEIR, at p. 34.

C. Wastewater Treatment Capacity

The California Supreme Court held that an EIR's failure to analyze direct, indirect and cumulative environmental impacts related to supplying water to a development project is legal error. (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435 (*Vineyard Area Citizens*)). Relying upon the Supreme Court's reasoning, the California Court of Appeal held that the City of Los Angeles must include in its EIR on the Proposed Project an analysis of direct, indirect and cumulative impacts related to treating wastewater of this large development project.³⁶

The RS-DEIR provides an incomplete picture of wastewater treatment capacity. Based upon a review of the current RS-DEIR and other city documents, it is impossible to determine whether in fact Hyperion Treatment System has sufficient long-term capacity for the Proposed Project and related projects.

1. The RS-DEIR's capacity calculations are flawed

There are several areas in which the RS-DEIR's analysis of capacity is flawed, including an improper disclosure of Hyperion Treatment Plant ("HTP" or "Hyperion") capacity, a failure to disclose the city's method of tracking remaining capacity, and a failure to properly calculate remaining capacity.

First, RS-DEIR states that Hyperion has a "design" treatment capacity of 450 mgd³⁷, when in fact the City has reported that HTP is not operating at design capacity and would require plant enhancements in order to do so:

Design/construction of secondary clarifiers at Hyperion to provide operational performance at 450 mgd: The existing secondary clarifiers at Hyperion are performing below their rated capacity of 450 mgd. Staff is currently investigating ways to optimize the existing secondary clarifiers to get them operating up to 450 mgd. If these options prove to be unsuccessful, then new secondary clarifiers will be needed to provide operational performance at 450 mgd.³⁸

Future plans include possibly converting the balance, or a part thereof, of the remaining oxygen reactors to the anaerobic selector design. The City has prepared an Integrated Resource Plan (IRP), dated December 2006, which gives consideration to the option of implementing additional clarification capacity in two distinct stages; ***an additional 100 mgd to bring the capacity in line with projected plant flows of up to 450 mgd***, and a

³⁶ Exhibit A-1, Opinion, at p. 80.

³⁷ RS-DEIR, at p. II.B-13 [emphasis added].

³⁸ Exhibit B-3, IRP Work Paper, at p. 15 [noting Hyperion capacity without improvements].

further 50 mgd to accommodate the estimated plant ultimate influent flow of 500 mgd. Based on the selected alternative presented in the IRP, the additional clarifiers have been categorized as "proceed if triggered". This means that design and construction of additional clarifiers will only be done if certain circumstances occur. These triggers include: population growth, specific increases in influent flow and groundwater and/or regulatory issues."³⁹

In fact, a 2009 report suggests that Hyperion has a capacity of 413 mgd, with a maximum daily flow of 409 mgd, for a potential balance of 4 mgd remaining capacity.⁴⁰ Another recent report suggests a maximum daily flow average of 416 mgd, 3 mgd over the 413 mgd capacity stated in the 2009 report.⁴¹ Because it is unclear what the actual, operational (as opposed to "design") capacity, the RS-DEIR must provide evidence of the actual current treatment capacity at HTP.⁴²

Second, the RS-DEIR makes a false comparison between its average dry weather flows (0.47 mgd) to the remaining HTP capacity during *peak* flows, making its contribution appear substantially lower than if it had properly compared its peak flow (1.53 mgd).⁴³ In addition, the RS-DEIR fails to disclose the Proposed Project's wet-weather flows (as opposed to merely peak day dry weather flows).⁴⁴ This omission renders the RS-DEIR's capacity analysis incomplete because HTP must handle both dry weather and wet-weather flows.⁴⁵ The RS-DEIR must address stormwater flows (i.e., wet weather flows) from the Proposed Project and how those flows impact HTP's capacity and discharge into Santa Monica Bay. The city is consistently allocating treatment capacity that was meant in part for stormwater—how is Hyperion going to deal with stormwater flows in addition to the increasing waste loading? This question was left unanswered in the RS-DEIR. As such, there is no substantial evidence to support the conclusion that "Since the Proposed Project's wastewater will not contribute to a capacity shortfall at

³⁹ Exhibit B-4, Bureau of Engineering TOS 15, at p. 2.

⁴⁰ Exhibit B-5, Hyperion Report, 2009.

⁴¹ Exhibit B-6, December, 2008 Monthly Performance Report, Hyperion Treatment Plant.

⁴² Appendix C.ii of the RS-DEIR, Table 5 lists HTP as a "rated" capacity of 450 mgd. The footnote thereto does not explain what this means, nor whether HTP has demonstrated this full capacity since the publication of the IRP.

⁴³ RS-DEIR, at p. II.B-17.

⁴⁴ RS-DEIR, at p. II.B-17 and p. II.B-11, nt. 20 [definition of peak wet weather flows].

⁴⁵ RS-DEIR, at p. II.B-13.

Hyperion Treatment Plant even during peak flow months, the Proposed Project will not cause a significant impact, individually or cumulatively to the City's wastewater treatment systems."⁴⁶

Furthermore, the RS-DEIR describes the Sewer Allocation Ordinance without ever explaining how or if it was used to determine sufficient capacity for this project.⁴⁷ It states that 1.725 mgd (1,725,000 gpd) per year is allocated to priority projects, which would, if applicable, be almost totally consumed by the Proposed Project's peak flow of 1.53 mgd.⁴⁸ The Proposed Project's average day dry weather flow (.47 mgd) would comprise approximately 20% of the monthly allotment for non-priority projects (239,583 gpd).⁴⁹ Nevertheless, the RS-DEIR fails to explain how the Ordinance applies to the Proposed Project.

The RS-DEIR goes on to state that the city's "tracking of actual wastewater flows indicates that actual flows are substantially less than the projections in the 2006 IRP."⁵⁰ However, the RS-DEIR fails to identify the method the city is currently using to track project-related wastewater flows, nor provide the tracking data to support this statement.⁵¹ If the City is currently tracking remaining treatment capacity according to the Sewer Allocation Ordinance or some other method, the EIR must disclose and explain the city's methodology. (See *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 515.) Moreover, despite the RS-DEIR's statement that "[a] substantial amount of the projected unused treatment capacity identified in Tables II.B-7 and II.B-8 is anticipated to be available at the [HTP] given the current unused capacity..." the RS-DEIR provides no evidence that actual flows would continue to be less than projected.

On the other hand, there is evidence that the city is not in fact tracking capacity as it is approving development after development, consistently reducing the remaining treatment capacity at HTP. Aside from the question of what plant upgrades are needed to achieve HTP's "design" capacity; or what is HTP's current operating capacity (which could be as low as 345 mgd⁵²), the RS-DEIR does not take into account the fact that the City is in the process of

⁴⁶ RS-DEIR, at p. II.B-29.

⁴⁷ RS-DEIR, at p. II.B-5.

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ RS-DEIR, at p. II.B-17.

⁵¹ RS-DEIR, at p. II.B-17.

⁵² See Exhibit B-3, at p. 15.

approving many other residential and commercial projects that contribute to the wastewater treatment requirements of the City. These projects' flows are not factored into what the city terms the "remaining capacity" of the HTP. For instance, the Wetherly Project's EIR represents HTP's "remaining capacity" at 88 mgd, with the project in that case representing 0.4 percent of the "remaining capacity."⁵³ Another recent EIR estimates that the Metro-Universal project is expected to add another .331 mgd, which exceeds the monthly allotment of .2 mgd for "non-priority" projects.⁵⁴ The EIR for the Lexington project (which would add 786 more residential units), includes no analysis of additional sewage discharge into the Hyperion Treatment System. The Paseo Plaza Hollywood EIR estimates that that Project plus related projects would result in an increase in wastewater discharge of 1.14 mgd.⁵⁵ The 959 Seward Project estimates cumulative wastewater generation of 1.66 mgd.⁵⁶ The city has typically used the same or similar "remaining capacity" for numerous EIRs.⁵⁷ The present RS-DEIR does not appear to take into consideration the reduction in HTP capacity caused by the "unrelated" projects such as those described above.

The City appears to be using potentially inflated numbers for HTP's "remaining capacity" in its environmental analysis for each and every project EIR, without taking into account the aggregate amount of available treatment capacity. Applying the City's reasoning and using that math, never will a cumulative impact result regardless of how many individual project EIRs the City of Los Angeles prepares and approves in a given year, even though each project incrementally reduces total remaining HTP capacity. Taking into consideration just the projects identified above, (which comprise only a few of the publicly-available EIRs on the City's website⁵⁸) in conjunction with the proposed project, HTP capacity will be reduced by close to 4 million gallons per day. To put it in context, 4 mgd comprises 80% of the Los Angeles Sewer Allocation Ordinance's annual limit of 5 mgd and over 5 % of the so-called 81 mgd "remaining capacity" for 2020 depicted in the RS-DEIR.⁵⁹ In light of the fact that Hyperion may not be currently operating at design capacity and the City has yet to disclose at what capacity Hyperion is currently operating, the RS-DEIR must be revised to reflect a true accounting of cumulative wastewater impacts.

⁵³ Exhibit B-7, The Wetherly Project, Draft Environmental Impact Report, at p. IV.M-21.

⁵⁴ Exhibit B-8, Metro Universal DEIR, at p. IV.J-59.

⁵⁵ Exhibit B-9, Paseo Plaza Hollywood DEIR, at p. IV. M-7.

⁵⁶ Exhibit B-10, 959 Seward DEIR, at p. IV.L-3.

⁵⁷ Exhibits B-7 through B-10 [ranging from 88 mgd to 100 mgd remaining capacity].

⁵⁸ See Exhibit B-13 [list of EIRs].

⁵⁹ RS-DEIR, at p. II.B-28, Table II.B-8.

Compounding the information gap is the fact that the EIR does not refer to any Annual Report on Growth and Infrastructure indicating that there is sufficient wastewater infrastructure and capacity for the project in combination with other users or with present or future projects. As such, the public does not know whether wastewater treatment capacity and demand is adequately assessed and therefore whether a project's incremental impacts are cumulatively considerable.

D. Water Quality Impacts Due to Increased Wastewater Flows Into Santa Monica Bay

The RS-DEIR concludes that impacts to Santa Monica Bay's water quality from the Proposed Project's wastewater discharge are less than significant because HTP will comply with its Clean Water Act NPDES permit.⁶⁰ The RS-DEIR states, "Types of potential effects on the Bay from discharge of treated wastewater from the [HTP] ...are regulated by the NPDES permit."⁶¹ By limiting potentially significant impacts to only those currently regulated under HTP's temporary NPDES permit, the RS-DEIR omits a discussion of significant water quality impacts because HTP's discharges cause significant degradation outside permit limitations. (See 33 U.S.C. §1365(a); 40 CFR §122.41(a).))

The Proposed Project's 1.53 mgd contribution to HTP's wastewater effluent stream is significant and must be mitigated to a level of insignificance. The treated and untreated discharge through HTP's 5-mile outfall represents a serious impact on water quality in the Santa Monica Bay. Although the majority of the discharge appears to be treated in accordance with an NPDES permit, there have been significant permit violations in the past.⁶² In addition, recent Regional Water Board monitoring reports show high levels of ammonia, a substance not treatable under HTP's secondary treatment system, nor required to be treated by the NPDES permit.⁶³

Furthermore, HTP's NPDES permit's dilution ratio applies only to some pollutants.⁶⁴ Thus, relying on HTP's permit requirements for a finding of no significant impact is inappropriate for a number of reasons, including for the reason such an approach ignores the notorious threat posed by emerging contaminants, for which there is evidence showing potentially significant harm to biota in the Santa Monica Bay.

⁶⁰ RS-DEIR, at p. II.B-44.

⁶¹ RS-DEIR, at p. II.B-43.

⁶² Exhibit B-11, HTP NPDES Permit Reports.

⁶³ Exhibit B-12, HTP NPDES Reports excerpts.

⁶⁴ RS-DEIR, at p. II.B-42, [stating NPDES permit limitations for "major pollutants of concern"].

According to the U.S. Geological Survey (USGS) ““Emerging contaminants’ can be broadly defined as any synthetic or naturally occurring chemical or any microorganism that is not commonly monitored in the environment but has the potential to enter the environment and cause known or suspected adverse ecological and(or) human health effects.”⁶⁵ Such contaminants are often unregulated as there are potentially thousands of emerging contaminants or “contaminants of emerging concern” (“CECs”) in wastewater and they are found in such low concentrations that analytical methods with adequate detection limits are frequently unavailable. Hyperion’s current NPDES permit does not address contaminants of emerging concern (CECs). These constituents are often found in treated wastewater because they are continually input, are sometimes recalcitrant, and require high level treatment methods for removal.⁶⁶

CECs exist in the environment in small amounts, but even these small amounts can have significant effects on beneficial uses. Studies suggest that a number of these substances pose a threat to human health, marine ecosystems, and other wildlife. For instance, research suggests that pharmaceuticals and personal care products (PPCPs) are very important contributors to toxicity in wastewater⁶⁷. In addition, the synergistic effects of multiple contaminants on beneficial uses are only beginning to be explored. Significant amounts of PPCPs enter the environment from various inputs, including wastewater treatment plants that treat residential, commercial, and/or industrial wastewater⁶⁸. Numerous studies have shown detrimental impacts of PPCPs on wildlife. For example, studies have shown that certain synthetic musks found in fragrances (commonly found in perfumes, shampoos, and lotions) have been found to cause mutation in lab rats⁶⁹, and to inhibit the toxin defense system of certain marine mussels⁷⁰. Studies performed in California have demonstrated evidence of exposure and effects of emerging contaminants on marine life on a local basis. According to study performed by the Pacific Estuarine Ecosystem Indicator Research Consortium (PEEIR), reproductive abnormalities and endocrine disruption is evident in longjawed mudsucker (*Gillichthys mirabilis*), a salt marsh fish

⁶⁵ Exhibit B-14, U.S. Geological Survey (USGS) Toxic Substances Hydrology Program. Research Project-Emerging Contaminants. Last Modified 10 Oct. 2008 <<http://toxics.usgs.gov/regional/emc/>> Accessed Nov. 5, 2008

⁶⁶ Ibid.

⁶⁷ Exhibit B-15, Munoz, I. et al. (2008) Ranking potential impacts of priority and emerging pollutants in urban wastewater through life cycle impact assessment. posted Science Direct. Oct. 2008

⁶⁸ Exhibit B-21, Daughton, T. (1999). Pharmaceuticals and personal care products in the environment: agents of subtle change? *Environmental Health Perspectives*, December 1999, Vol. 107.

⁶⁹ Ibid.

⁷⁰ Exhibit B-16, Luckenbach, Epel (2005). Nitromusk and Polycyclic Musk Compounds as Long-Term Inhibitors of Cellular Xenobiotic Defense Systems Mediated by Multidrug Transporters. *Environmental Health Perspectives*. Jan 2005. Vol. 113, No. 1, p. 17-24.

considered a sentinel species, at five wetland sites along California's coast where runoff and sewage treatment effluent are discharged⁷¹.

Studies in southern California have revealed hormone alterations, and reproductive abnormalities in coastal flatfish near treatment plant outfalls due to exposure to emerging contaminants. Gender ratios of the hornyhead turbot (*Pleuronichthys verticalis*) showed a trend toward masculinization at the Orange County Sanitation District outfall.⁷² Furthermore, endocrine disruption was potentially evident at this site as male fish were shown to have equivalent concentrations of blood egg yolk protein as those observed in female fish⁷³. These are merely a few examples of the studied impacts of emerging contaminants on the environment. There are a multitude of concerns, given existing research demonstrates how marine life is already being impacted by these contaminants. Human health may be at risk as we directly consume affected species, irrigate crops with water containing harmful levels of PPCPs, perpetuate environmental bacteria developing a resistance to antibiotics that make their way into waterways, or even drink water containing traces of these constituents. Research is currently underway near Hyperion's outfall to determine the extent to which emerging contaminants impact certain species in Santa Monica Bay.⁷⁴ One study⁷⁵ states:

It is well documented that many California coastal environments are contaminated, such as along industrialized or developed shorelines, in ports and marinas, and in regions around outfalls of publicly owned treatment works (POTWs), among others. However, it is poorly understood to what extent are existing contaminants—many with continuing inflows into the environment—impacting the biota. In the Southern California Bight (SCB), over one billion gallons of treated wastewater (effluent) are released each day into coastal waters. Such effluents are known to contain contaminants classified as endocrine-disrupting compounds (EDCs). The Endocrine Disruptor Screening and Testing Advisory Committee (EDSTAC) of the US EPA defined an EDC as an “*exogenous chemical substance or mixture that alters the structure or function(s) of the endocrine system and causes adverse effects at the level of the organism, its progeny, populations, or*

⁷¹ Exhibit B-17, PEEIR: Pacific Estuarine Ecosystem Indicator Research Consortium. Reproductive Impairment of a Salt Marsh Fish as an Indicator of Pollutant Effects Brochure. http://www.bml.ucdavis.edu/PEEIR/Brochures/Fish_Reproductive_Impairment.pdf Accessed Nov. 5, 2008

⁷² Exhibit B-18, Rempel, M. et al. (2006) Evaluation of relationships between reproductive metrics, gender and vitellogenin expression in demersal flatfish collected near the municipal wastewater outfall of Orange County, California, USA. *Aquatic toxicology* 2006, vol. 77, no.3, pp. 241-249

⁷³ Exhibit B-19, Schlenk, D. (2006). Environmental Monitoring and Assessment of Environmental Estrogens in Marine. UC Marine Council. Coastal Environmental Quality Initiative.

⁷⁴ Exhibit B-20, Kelley, Kevin M. and Jesus A. Reyes. HTP Special Study 2009-10 Characterization of the Environmental Endocrine Disruption Effects on Male Estrogen Levels and Testicular Estrogen-producing Genes in Hornyhead Turbot from the CLAEMD Outfall Monitoring Program Study Area

⁷⁵ Exhibit B-20, Kelley, Kevin M. and Jesus A. Reyes. HTP Special Study 2009-10 Characterization of the Environmental Endocrine Disruption Effects on Male Estrogen Levels and Testicular Estrogen-producing Genes in Hornyhead Turbot from the CLAEMD Outfall Monitoring Program Study Area, attached as Exhibit.

subpopulations of organisms, based on scientific principles, data, weight-of-evidence, and the precautionary principle” (EDSTAC, 1998). Putative or demonstrated EDCs include (but are not limited to) organochlorine pesticides, polychlorinated biphenyls (PCBs), surfactants, plasticizers, polycyclic aromatic hydrocarbons (PAHs), DDT and metabolites, active steroid hormones and their mimics, and a large variety of pharmaceuticals.

Hyperion treats water only up to the secondary treatment stage, at which point CECs remain in the waste stream. Because this Proposed Project consists of 2,600 residential units, multiple office and industrial spaces, the amount of CECs contributed to the wastewater stream are likely to be significant.

At the least, the City needs to conduct CEQA analysis for Hyperion’s effluent to the Bay, either in individual project EIRs or its IRP. Since the IRP EIR is devoid of such analysis, the City must require this analysis in project-specific EIRs, such as the one at issue here. It cannot simply continue facilitating increased effluent into the Bay with blinders on. An NPDES permit does not supplant or discharge the requirement to conduct CEQA review with respect to cumulative impacts on the Bay.

IV. WATER SUPPLY

The City of Los Angeles obtains its water supply primarily from local groundwater basins, the Los Angeles Aqueducts and purchases from the Metropolitan Water District of Southern California (MWD). Additional water supply comes from recycling wastewater for reuse. Approximately 85 percent of the City’s current water supply comes from imported sources.⁷⁶

The RS-DEIR must address whether sufficient water supply is available for the Proposed Project and the impacts from supplying that water. (*Vineyard Area Citizens, supra.*) Since the Original Draft EIR came out in 2003, there have been significant developments presenting challenges to the City’s ability to obtain an adequate water supply. As aptly stated by Los Angeles Department of Water and Power’s (LADWP) CEO and general manager David Nahai, “There are no more rivers to tap or aqueducts to build from hundreds of miles away.”⁷⁷ Governor Schwarzenegger recently called the drought a “crisis” and in February, 2009, declared a state of emergency.⁷⁸ Given the finite water resources available, the 8-year drought described

⁷⁶ Exhibit C-1, Westchester Community Plan Update DEIR, at p. 4.41

⁷⁷ Exhibit C-2, LADWP Article, at <http://www.ladwpnews.com/go/doc/1475/241803/>.

⁷⁸ Exhibit C-3, Governor Press Release, at <http://gov.ca.gov/index.php?/pressrelease/9796/>.

as “most critical drought in the State’s modern history,”⁷⁹ groundwater contamination, and the recent federal court decision that curtailed water deliveries from northern California due to environmental factors in the Sacramento-San Joaquin Delta, and other circumstances, such as the low Sierra Nevada snow-pack,⁸⁰ and the impacts of global warming, the RS-DEIR is deficient for failing to provide an updated assessment of the availability of water for the Proposed Project both individually and cumulatively. As the Second District Court of Appeals has stated: “An environmental impact report for a housing development must contain a thorough analysis that reasonably informs the reader of the amount of water available.” (*Santa Clarita Organization for Planning the Environment v. County of Los Angeles* (2003) 106 Cal.App.4th 715, 717.)

The City must require a new water supply assessment for the Proposed Project under SB 610. The Proposed Project’s July 28, 2003 water supply assessment (“WSA”) is now stale. The city must determine whether the water demand associated with the project was included as part of the most recently adopted Urban Water Management Plan (“UWMP”). (Wat. Code, § 10910, subd. (c)(2).) The 2003 WSA relied on the 2000 UWMP, which predates the most recent UWMP (2005).⁸¹ More importantly, circumstances have drastically changed since the March, 2003 MWD report on water supplies relied upon in the 2003 WSA. The recent three year cumulative water deficit is so large there is only a 15 percent chance that California will replenish its water supply this year.⁸² The Department of Water Resources (DWR) recently stated, “A survey of California’s water scene yields an assortment of existing crises.”⁸³

MWD had at the time of the original DEIR more than 2 million acre feet in storage.⁸⁴ MWD is now reporting that as of January, 2009, its reserves are approaching a “depleting” stage at 1,770,00 A/F and expects further reductions from the Delta.⁸⁵ The MWD’s water supply alert is at condition 2, which requires “extraordinary conservation.”

⁷⁹ Exhibit C-4, 2009 IEA Survey of DWP [excerpts], found at http://www.lacity.org/ctr/audits/2008_DWP_IEA_Survey.pdf, at p. 4-188.

⁸⁰ Exhibit C-5, L.A. Times Article, at <http://www.latimes.com/news/local/la-me-snowpack30-2009jan30,0,260986.story>.

⁸¹ Original DEIR, App., WSA.

⁸² Exhibit C-3, at p.2 [emphasis added].

⁸³ Exhibit C-6, DWR Water Plan Update (2009), Chapter 4, California’s Water Today, at p. 4-6.

⁸⁴ Original DEIR, App., Water Supply Assessment (WSA), at p. 11.

⁸⁵ See Exhibit C-7, MWD Water Alert, at <http://www.mwdh2o.com/mwdh2o/pages/yourwater/WaterAlert/levels.html>.

The MWD describes the changed conditions as follows:⁸⁶

A federal court has curtailed water deliveries from northern California due to environmental factors in the Sacramento-San Joaquin Delta. And, after a record dry spring that dramatically curtailed snow runoff from the Sierra Nevada mountains, Governor Schwarzenegger declared an official statewide drought on June 4, 2008.

Following the Governor's action, the Metropolitan board of directors issued a Water Supply Alert on June 10 for its six-county service area, urging local jurisdictions to adopt and implement water conservation ordinances and to significantly increase efforts and programs to conserve water.

The Colorado River, the other major source of imported supplies for Metropolitan, has experienced drought conditions for eight of the last nine years.

Since the drought in the late 1980s and early 1990s, Metropolitan enacted a plan to improve water supplies during dry conditions. The Integrated Resources Plan called for increasing Metropolitan's ability to store wet-year surplus supplies from the Colorado River and Northern California's Sacramento-San Joaquin Delta.

The goal has been to increase reserves. As of 2007, enough water in reserve was available to help Metropolitan withstand up to three successive dry years.

Worsening environmental conditions in the Sacramento-San Joaquin Delta now challenge Metropolitan's ability to replenish reserves in wet years. Prolonged dry conditions in California have reduced available supplies.

Metropolitan has tapped its reserves to maintain deliveries to its 26 member agencies. But the reserves are not unlimited. With water uncertainties facing Southern California, the challenge ahead is to lower demand and stretch our reserve supplies as much as possible.

The reliability of supplies for current and future users, as well as the natural environment impacted by deliveries from the Metropolitan Water District are both currently threatened by a severe water shortage. Over half of Los Angeles' supply of water comes from MWD, which may be drastically reducing its delivery.⁸⁷ The Los Angeles City Mayor's Office stated on February 9, 2009:

⁸⁶ Exhibit C-8, MWD press release, at <http://www.mwdh2o.com/mwdh2o/pages/yourwater/WaterAlert/>.

⁸⁷ Exhibit C-9, L.A. Mayor Press Release, at p. 1.

Facing a third straight dry year and court-imposed limits on imported water, California faces significant water shortages this year. Statewide reservoir levels are their lowest since the 1976-78 drought and currently stand at only one-third of capacity. The Metropolitan Water District of Southern California (MWD), the source of more than half of the City's water, has estimated that if statewide water conditions do not improve they will need to cut deliveries by 15 to 25 percent.⁸⁸

The RS-DEIR discloses that the Proposed Project's projected water consumption equals .503 million gallons per day⁸⁹ (or 746 acre feet annually⁹⁰), and cumulative total water consumption equals 4.807 million gallons per day,⁹¹ yet there is no discussion of how or why this additional consumption/demand does or does not cause significant impacts, given the above-described circumstances.

The EIR must include a current assessment and analysis of water supply for the project and the project's impacts on the availability of future water supply. (*Vineyard Area Citizens*, supra, at p. 434; Wat.Code, §10911, subd. (b).) Assessments must accompany any environmental review for projects, as defined in Water Code section 10912, that will demand the amount of water roughly equivalent to 500 dwelling units.

Finally, as addressed in more detail below, global climate change should be considered in assessing water supply in California. The impact of climate change on California's water supply has already been acknowledged.⁹² California Department of Water Resources (DWR) prepared a July 2006 report entitled "Progress on Incorporating Climate Change into Management of California's Water Resources,"⁹³ which found that climate change may have a significant effect on California's future water resources and demand. This report also examined the potential impacts of selected climate change scenarios on operations of the State Water Project and Central Valley Project, Delta water quality, flood management and evapotranspiration. Potential issues include a reduction of Sierra snowpack and seasonal water storage. As the supply of

⁸⁸ Ibid.

⁸⁹ [Original] DEIR, at p. 1089, Table 163

⁹⁰ RS-DEIR, App. WSA, at p. 2

⁹¹ RS-DEIR, at p. 1098, Table 169.

⁹² Exhibit C-12, DWR Climate Change Report.

⁹³ Exhibit C-10.

water is intertwined with regional environmental issues,⁹⁴ the RS-DEIR must address the potential impacts of supplying water needed for the Proposed Project.

In sum, for the reasons stated above, the city cannot approve the Proposed Project without a new, detailed water supply assessment and must address the potential environmental impacts of providing this water. (See *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 434 (“The ultimate question under CEQA, moreover, is not whether an EIR establishes a likely source of water, but whether it adequately addresses the reasonably foreseeable impacts of supplying water to the project.”))

V. SAFETY/RISK OF UPSET: METHANE

New information of substantial importance showing the Project’s mitigation measures do not reduce the methane hazard to a level of insignificance has come to light since the initial EIR was certified in 2004.

Video footage of methane gas entering existing building areas at Phase I was presented to the City of Los Angeles Department of Building and Safety in 2005, approximately one year after the City approved the initial Phase 2 EIR. Subsequently, NBC Television broadcast a series of news stories named “Burning Questions” that called into question the efficacy of the Phase I mitigation measures. These news stories included testimony from City and other Governmental officials suggesting that the methane mitigation measures that were implemented at Phase I either were not fully implemented because there was no enforcement mechanism requiring Playa Capital, L.L.C., to implement them, or the mitigation measures in some respects and in some locations demonstrably did not reduce methane hazard to a level of insignificance. Members of the public, including this author, submitted this video evidence in the form of declarations and accompanying DVDs into the administrative record via the City Attorney’s office.⁹⁵

It is rather disturbing that the RS-DEIR for the Proposed Project does not include a discussion and analysis of the methane issues given the evidence in the record. Clearly the new information represented by the evidence was significant enough for the City’s Controller to commission an audit of the Playa Vista development methane mitigation measures in 2007 and recommend changes to the Playa Vista Methane, Mitigation and Monitoring Plan specifically with respect to the Proposed Project (see discussion below). The new EIR should include a discussion and analysis of the Project’s impacts with respect to methane hazards and proposed mitigation measures in light of the new information showing significant effects not known prior to the 2004 EIR certification.

⁹⁴ Exhibit C-11, LADWP Article, “Future of Water,” found at <http://www.ladwp.com/ladwp/cms/ladwp001620.jsp>.

⁹⁵ Because this evidence is already in the administrative record for this matter, BWLT is not providing additional copies of the DVD and declarations with these comments. Should the City require another copy of the DVD and declarations, BWLT will provide them upon the City’s request. The request should be made to the undersigned.

The Los Angeles City Controller's June 2007 Audit on the Playa Vista Development's methane mitigation program call into question the feasibility, effectiveness and enforceability of the methane mitigation measures relied upon in the initial Phase 2 EIR for a finding of no significant impact.⁹⁶ A joint response to the Controller was submitted by the Director of City Planning, Chief of the Fire Department and General Manager of the Department of Building & Safety in July 2007 promising some improvements and acknowledging the Controller's findings.⁹⁷ A subsequent letter sent by the Controller evaluating the joint response articulated the need for immediate action, stating:

"I accept some of the planned actions. Your response, however, does not recognize the seriousness of the issues identified and the urgency needed to resolve them and affect change prior to the start of Phase II."⁹⁸

This new information should be included as part of the CEQA environmental review and the City Controller's recommendations for enforceable mitigation measures implemented as part of the conditions of approval and mitigation monitoring plan for the Project.

VI. LAND USE

The City is charged under the California Government Code with preparing, updating and implementing a "General Plan", which governs all land use approvals within the City. As the Los Angeles Planning and Zoning Code's introduction states,

The [Planning Department] is charged with the responsibility of preparing, maintaining and implementing a General Plan for the development of the City. The General Plan consists of the Framework Element, which provides overall guidance for the future of the City, various other citywide elements including the state-mandated elements such as the Transportation, Open Space and the Land Use among others. The Land Use Element is largely made up of the community plans that fall for a range of allowable land uses and intensities of uses as well as other matters relating to the use of land unique to each of the City's many communities." (Los Angeles Municipal Code, Chapter 1, General Planning Information).

In order to determine whether City infrastructure and services (such as wastewater treatment, water supply and transportation infrastructure) are meeting the City's current and near-future population growth's needs (and thus whether and how development should be approved), the City's General Plan, Framework Element (hereinafter "Framework Element,"), requires the City to analyze: (1) population projections provided by Southern California

⁹⁶ Exhibit D-1

⁹⁷ Exhibit D-2

⁹⁸ Exhibit D-3

Association of Governments (“SCAG”); and (2) the City’s own actual monitoring of the City’s population growth, infrastructure and services to gauge the appropriateness of the estimates and provide for their modification over time, so that actual growth can be accommodated when and if it should occur. (Framework Element, Executive Summary, at p. 2.)

The Framework Element, Executive Summary states: “A system for the annual monitoring of growth, infrastructure, and services, used as the basis to guide future capital investments and development decisions, [will be] used as a mechanism to gauge the appropriateness of the estimates and provide for their modification over time.” (Framework Element, Executive Summary, at p. 2.) As such, the Framework Element requires the City to systematically monitor its actual population growth (as opposed to merely “projected” population growth as reported by SCAG), sufficiency of City infrastructure and services, and periodic reporting of the data collected as a result of said monitoring. The data is then to be reported to the City decision makers, (including the City Council) for the express purpose of informing all development decisions within the City. This monitoring and data collection tells the City whether population growth is outpacing infrastructure and services, and whether development approvals should be focused, limited or delayed based on the City’s ability or inability to timely accommodate its population growth with the necessary infrastructure and services required to support residents, workers, and business owners.

The city’s monitoring and data collection duties are outlined in Items P42, P43, and P44 of the Framework Element. The City has failed to fully perform its duties to monitor and report on population growth and infrastructure and services as required by the City’s own General Plan. The City’s failure to perform the required monitoring and reporting while still continuing to approve massive development at break-neck speed (including the Proposed Project), threatens the health, safety and welfare of the residents, workers and business owners of Los Angeles.

The last published Annual Report on Growth and Infrastructure was in 2000. Without the required monitoring and reporting, City decision makers cannot know whether the population growth facilitated by the sheer enormity of development approved within the last 10 years and continuing, is overburdening or will likely overburden current infrastructure capacity and services delivery. Without the required monitoring and reporting, neither can City decision makers determine whether planned infrastructure capacity and services delivery will come online in time to accommodate the inevitable near-term increase in population that will result from development already approved but not yet built.

State law requires that, because the general plan is the “constitution” for the City’s future development, any decision affecting land use and development must be consistent with the General Plan. (See *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 570-71.) A project must be compatible with and not frustrate the general plan’s goals and objectives. (*Napa Citizens for Honest Government v. Napa County Board of Supervisors* (2001) 91 Cal.App.4th 342, 378.) **The proposed project is inconsistent with the General Plan because it would undermine the attainment of the Framework Element’s goals and policies that require the City be fully informed of the demand and supply of infrastructure and population figures prior to making any land use decisions.**

Any development project approved in the absence of growth and infrastructure monitoring and reporting is not compatible with the Framework Element objective that such monitoring and reporting inform land use decisions. The Framework Element recognizes that restrictions on development must occur if the Framework Element is not implemented via monitoring: “the linkage between future growth and services will occur through the implementation of a monitoring program that provides information regarding ‘real’ demands and service levels in order to guide public decisions regarding infrastructure and service investments. Successful application of this system would mitigate the need to restrict development to ensure adequate level of service.” (Framework Element, at p. 9-1.)

Despite the City’s failure to perform the mandatory duties set forth in Framework Elements P42, P43, and P44, to prepare annual reports, establish monitoring and collect data intended to inform the General Plan’s implementation, the City continues to approve development, such as the proposed project, in favor of up zoning land, thereby increasing population growth and density.

The City has issued millions of construction permits for new buildings since the last published Annual Report in 2000. In the second quarter of fiscal year 2008 alone, the city issued 1,981,509 construction permits for new buildings. (See City of LA website for construction permit reporting.) Approvals of zoning ordinances, specific plan amendments, general plan amendments, development agreements, and tentative subdivision maps, any and all of which vest applicants with a property right to develop their land, while the duties mandated by the General Plan’s Framework Element remain unperformed, are *per se* inconsistent with the General Plan.

Thus, the proposed project cannot be approved prior to the performance of the city’s duties under P42, P43, and P44 of the Framework Element. If approved, it would be void *ab initio*. (*Leshar Communications, Inc. v. City of Walnut Creek* (1990) 52 Cal.3d 531.) At the very least, the Project’s inconsistency with the General Plan must be discussed in the RS-DEIR.

VII. GLOBAL CLIMATE CHANGE

A. Introduction

The debate at this point in time is not whether climate change is happening or how it is happening, but whether we as a society can reverse the trend in time. In order to meet state and local objectives, we must *reverse* the trend of climate change and to reduce greenhouse gas emissions to a small fraction of the present levels. The Project as proposed will have an adverse effect on the city and state’s ability to reverse current trends of global warming and, as addressed below, will result in a significant increase in greenhouse gas emissions.

In summary, the RS-DEIR erroneously concludes that the Proposed Project’s impacts are not significant and fails to provide full disclosure of all impacts and impose enforceable mitigation measures.

B. Analysis of significant impacts

The RS-DEIR states that the Proposed Project will add 41,825 metric tons per year of carbon dioxide equivalent GHGs.⁹⁹ The RS-DEIR then concludes that project impacts would not be significant.¹⁰⁰ This conclusion is erroneous because the Proposed Project's GHG emissions are significant under any potential threshold of significance (including the one employed by the RS-DEIR).

Potential thresholds of significance for GHG emissions under CAPCOA (California Air Pollution Control Officers Association), CARB (California Air Resources Board), the State OPR (Office of Planning and Research) and air district resources include (a) a numerical standard; (b) zero threshold: i.e., any additional emission is significant; (c) percentage reduction from business as usual; and (d) the project would conflict or interfere with GHG reduction plans. In this case, a zero threshold should have been applied because any additional emission is significant in order to meet the goals set out in AB 32 and LA Green Plan. Nevertheless, the project's impacts are significant under all non-numerical thresholds:

-Zero Threshold: the Proposed Project is adding GHGs, so it exceeds the zero threshold.

-Percentage reduction from business as usual: the Proposed Project does not reduce its contribution by 30% of business as usual (to meet AB 32 goals).

-Conflict with GHG reduction plans: the Proposed Project would interfere with the GHG reduction plans in that it would increase GHG load significantly.

LA Green Plan's stated goal is to reduce emissions to 35% below 1990 levels by 2030.¹⁰¹ This is a bold, ambitious goal. There is no way this goal can be met with business as usual practices, which this project represents. Similarly, the goal of AB 32 is to reduce statewide emissions to 1990 levels by 2020, a 15% decrease from current levels, and 30% reduction from 2020 levels on current trajectory. The long term goal of AB 32 is to provide a further reduction of 80% from 1990 levels by 2050. Thus, to achieve these goals, **any addition of GHGs should be considered significant** and mitigation required. Some lead agencies have explicitly determined that any increase in GHG above existing levels is a significant impact under CEQA because the legislature has determined that California's current greenhouse gas baseline is so high that it requires significant reductions, and any additional emissions will exacerbate existing conditions. Thus, any source, even a small one, would be considered significant.

Considering these goals, only *de minimus* project additions of GHGs should be considered potentially insignificant. A massive development, adding 2600 housing units, requiring .503 mgd of water, consuming 99.3 acres of open space, and requiring over 5200

⁹⁹ RS-DEIR, at p. II.D-32.

¹⁰⁰ RS-DEIR, at p. II.D-47.

¹⁰¹ Exhibit E-1, LA Green Plan, http://www.lacity.org/ead/EADWeb-AQD/GreenLA_CAP_2007.pdf.

residents to travel by car to their jobs does not meet this test, not to mention methane and life-cycle of materials issues ignored by the RS-DEIR.

Nevertheless, the RS-DEIR adopts a threshold where the Proposed Project would cause a significant impact if it is inconsistent with goals and policies of applicable GHG regulations, including those under AB 32 and the LA Green Plan.¹⁰² The RS-DEIR then concludes that the Proposed Project is consistent with GHG reduction policies, for a variety of reasons, including project design features. However, this conclusion is completely contradicted by the evidence. (Again, if the regulatory goals are to reduce emissions drastically, then any amount of GHG addition would be significant.) Here, the city proposes to approve an addition of 41,825 metric tons per year of carbon dioxide equivalent GHGs.¹⁰³ In addition, the city, in its environmental review of other projects listed on its website,¹⁰⁴ is proposing to approve other projects in a similar fashion, adding significant amounts of carbon dioxide equivalent GHGs. The majority of these EIRs provide the same faulty analysis, making it clear that the city has no intention of following the goals and policies as set out in AB 32 and the LA Green Plan. It is numerically impossible for the city to drastically cut emissions while at the same time approving projects at break-neck speed and employing a “business as usual” approach.

The RS-DEIR also states that the project would contribute “a very small amount to the overall climate change issue.”¹⁰⁵ The present EIR must assess the cumulative impacts of the project in combination with other sources. (See *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692.) The RS-DEIR gives too much weight to the statement that “not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment.”¹⁰⁶ Not only have the courts rejected the notion that an individual project’s impact is not cumulatively significant “because it is so small that it would make only a de minimus contribution to the problem as a whole,” agencies have reiterated the notion that any increase in GHG should be considered a significant impact under CEQA.¹⁰⁷ Furthermore, the RS-DEIR derives its percentage contribution of projected GHG emissions from a comparison of its emissions in 2010 to California’s, the United States’ and the World’s 2004

¹⁰² RS-DEIR, at p. II.D -21.

¹⁰³ RS-DEIR, at p. II.D-32.

¹⁰⁴ See, e.g., Exhibit B-13, at DEIR website at <http://cityplanning.lacity.org/eir/TocDeir.htm> and FEIR website at <http://cityplanning.lacity.org/eir/TocFeir.htm>.

¹⁰⁵ RS-DEIR, at p. II.D.-33.

¹⁰⁶ RS-DEIR, at pp. II.D-20.

¹⁰⁷ See Marin Countywide Plan Update DEIR, 2007; San Diego Ass’n of Governments Regional Transportation Plan DEIR, 2007.

emissions.¹⁰⁸ It is unclear as to why the RS-DEIR uses 2004 to compare its project's 2010 emissions.

The RS-DEIR fails to provide the required significant impact analysis, drawing the impermissible conclusion that "Since no numeric thresholds exist to assess the GHG emissions of the Proposed Project, the quantitative analysis does not indicate a significant impact."¹⁰⁹ Similarly, the RS-DEIR bases its method of determining significant impacts on the reasoning that "no air agency or municipality [has] yet established project level significance thresholds for GHG emissions"¹¹⁰ The lack of a numeric threshold does not justify a finding of no significant impact. A lead agency must still meaningfully attempt to quantify a particular impact and determine whether a particular impact is significant, even absent any adopted thresholds or methodologies. (See *Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners* (2001) 91 Cal.App.4th 1344, 1370-71.)

The RS-DEIR states that the project is "consistent" with the state and local plans in their general "goals, strategies, and control measures."¹¹¹ However, it seems rather miraculous that a massive-scale residential project designed in the mid-1990s is completely consistent with each and every recent policy, objective, and standard of GHG reductions sufficient to deem project impacts insignificant.¹¹² The RS-DEIR's analysis of consistency with the LA Green Plan is flawed in that it does not account for the fact that the Proposed Project contributes, as opposed to reduces, GHG emissions. The net effect of the Proposed Project needs to be taken into account.¹¹³ For example, the RS-DEIR claims it would promote the objective of open space,¹¹³ but the Proposed Project would actually allow development of the largest privately owned undeveloped tract of land in the city's jurisdiction. In other words, it is misleading at best to say that the Proposed Project will "provide open space" when in fact it will develop over open space.¹¹⁴

Furthermore, there is no support for the RS-DEIR's statement that the Proposed Project would facilitate the LA Green Plan's goal of locating residential neighborhoods next to employment sources—the mere fact that the Proposed Project is close to two arterials that allow residents to travel to their jobs outside of the area of the project provides no evidence to support

¹⁰⁸ RS-DEIR, at p. II.D-33, Table II.D-7.

¹⁰⁹ RS-DEIR, at p. II.D-63.

¹¹⁰ RS-DEIR II.D-19.

¹¹¹ RS-DEIR II.D-24.

¹¹² See RS-DEIR, at pp. II.D-34 to 44.

¹¹³ RS-DEIR, at p. II.D- 45.

¹¹⁴ RS-DEIR, at p. II.D-45.

the city's conclusion. The EIR must provide data and studies in support of this allegation. In addition, the EIR compares its jobs to housing ratio to the standards in an outdated SCAG guideline.¹¹⁵

Likewise, the RS-DEIR fails to, but must, fully disclose and analyze the GEG emissions from the Proposed Project's off-site improvements and life-cycle of materials (i.e., materials used to build the Proposed Project). All GHG emissions occurring from the development and operation of the project must be taken into account in order to sufficiently analyze the Proposed Project's impact to climate change. Contrary to the RS-DEIR's representations, the California Air Pollution Control Officers Association (CAPCOA) report cited does not support the EIR's conclusion that CEQA does not require consideration of GHG emissions from the Proposed Project's manufacture, transport, and end-of-life of construction materials. An EIR must inventory all possible sources of GHG emissions, direct and indirect, that a project will produce during all of its phases.¹¹⁶

This inventorying includes GHG emissions produced from the manufacture and transport of building materials. To conduct such an analysis, the RS-DEIR should use tools that organizations such as the CARB, CCAR, CEC, USEPA, IPCC, and others have developed to assist in measuring a project's GHG emissions in all of its phases. Private businesses do this as a matter of course in this day and age. There is no reason why Playa and its developers cannot perform the same analysis.

Finally, excluding from its analysis GHG emissions, direct and indirect, that occur prior to the build out of the project undermines the determination of significance. Courts and agencies have been clear that CEQA requires agencies to disclose in an EIR, their project's contributions to any significant environmental problem. (See *Kings County, supra*.)

The RS-DEIR must also quantify the GHG emissions that will be produced by the Project with respect to methane venting required by the methane mitigation measures. If the project site is left undeveloped and maintained in a natural state, or made into treatment wetlands, then methane venting is unnecessary (see correspondence between LADBS and Dr. Victor Jones of ETL, Inc., explaining that without venting the underlying methane into the atmosphere a "dangerous condition" exists to Project residents and workers). Because methane venting is necessary to make the Proposed Project safe for human habitation, methane vented must be considered in the Project's GHG emissions evaluation since methane gas is a greenhouse gas. Since the Phase I Project has operated with methane vent risers and the Phase I Methane, Mitigation and Monitoring Program purportedly tracks the levels of methane that are released into the atmosphere, it should be relatively simple to extrapolate the Phase I methane emissions to arrive at an estimation for Phase II methane emissions.

¹¹⁵ RS-DEIR, at p. II.D-24.

¹¹⁶ Exhibit E-2, Letter from Edmund G. Brown, Jr., Attorney General, Office of the Attorney General, State of California, to Nancy Fong, Community Development Director, City of Diamond Bar, Notice of Preparation of Draft Program Environmental Impact Report for Aera Master Planned Community, 14, April 2008. March 2009. http://ag.ca.gov/globalwarming/pdf/comments_Aera.pdf. pp. 2.

C. Failure to require enforceable mitigation measures

The RS-DEIR's failure to make a significance determination has "serious and practical consequences."¹¹⁷ "Under CEQA, a project proponent is required to mitigate all significant impacts to the extent feasible. If an EIR fails to find that impacts from GHG emissions are significant, the EIR is not required to propose any enforceable mitigation measures for those impacts."¹¹⁸ Thus, because the RS-DEIR failed to identify significant impacts, the city failed to require enforceable mitigation. The city cannot rely on The RS-DEIR claims that project design features are sufficient to meet the requirements under GHG reduction requirements and CEQA without determining what GHG reductions or increases would result from these design features. However, many of the proposed design features only aim to either encourage, support, or study the feasibility of making changes, or merely describe the project design. These design features do not count as adequate mitigation "because there is no certainty that the policies will be implemented."¹¹⁹ ***Because the project's impacts are significant, the EIR must commit to specific, enforceable mitigation measures.***

D. Sea Level Rise, Potential Impacts, and City Liability

Incremental effects that seem insignificant at the time of a project's development have been recognized as having the potential to become severe, some even life threatening. Section II. D. on global climate change fails to address the anticipated rise in sea-levels due to global climate change, which will inundate the Proposed Project area and cause severe environmental and fiscal damage. A recent scientific report concludes that the Proposed Project area will be underwater and recommends prohibiting further development and protecting the existing wetlands, among other things, to avoid additional impact of the sea-level rise. To approve the Proposed Project with knowledge of this anticipated impact would be irresponsible and would unfairly impact future taxpayers. At the very least, the impact of the Proposed Project in light of anticipated rising sea levels must be assessed.

California's interagency Climate Action Team (CAT) commissioned as many as 40 reports on the impact of global climate change. One notable report prepared by the Pacific Institute for CAT is entitled "The Impacts of Sea-Level Rise on the California Coast." (hereafter the "Report").¹²⁰ The Report is under peer review to be finalized next month and then CAT will

¹¹⁷ Exhibit E-3, Letter from Edmund G. Brown, Jr., Attorney General, Office of the Attorney General, State of California, to Tom Pace, City of Sacramento Planning Department, New City Hall, Draft Update to General Plan, 5, November 2008. March 2009. http://ag.ca.gov/globalwarming/pdf/comments_Sac_GP_Update.pdf. pp. 3.

¹¹⁸ Ibid.

¹¹⁹ Ibid.

¹²⁰ Exhibit E-4, Report, at www.climatechange.ca.gov/climate_action_team/reports or www.pacinst.org/reports/sea_level_rise.

present it to the Governor. This Report includes maps showing the areas impacted by a sea-level rise of 55 inches, a conservative estimate. The map covering the Proposed Project area shows it underwater.

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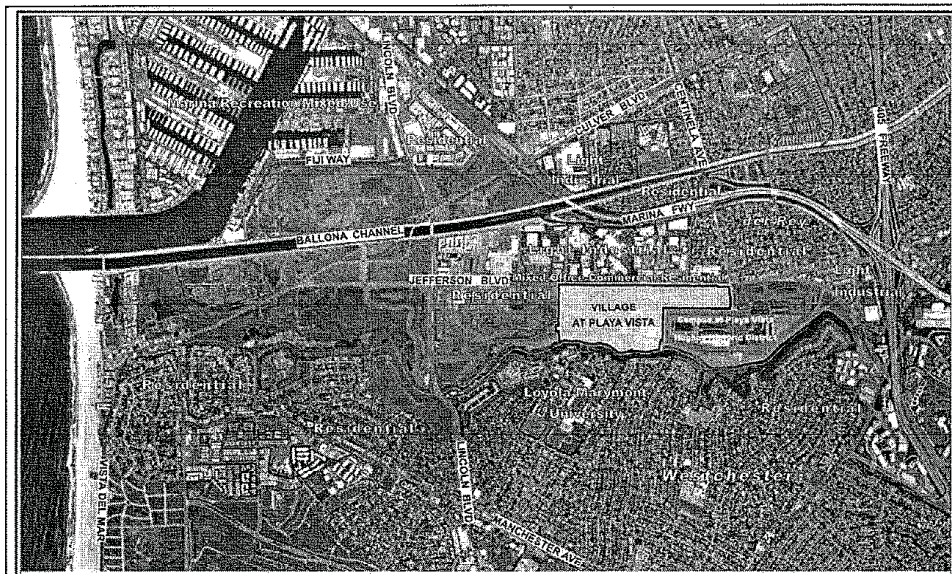
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Projected sea level rise in project area around 2100 (Pacific Institute)

RS-DEIR Fig II A4, current aerial of project area



At pages 85-88 of the Report, the Pacific Institute recommends prohibiting development on natural lands adjacent to wetlands at risk (p. 87) and limiting future development in areas at risk of rising seas, among other things. **“Future development should be limited in areas that are at risk from rising seas.** In regions at risk that are not yet heavily developed, local communities and coastal planning agencies have the opportunity to limit development and reduce future threats to life and property. Policies that maintain such low-lying areas will help to accommodate rising seas. In addition to insurance policies, discussed above, such policies may include local ordinances, statewide coastal development policies, **and explicit purchases of land for conservation purposes. This is often the least expensive option for currently undeveloped areas.**” (p.87, emphasis added) The Report even recommends that phased abandonment of existing structures be considered (pp.87-88) and any protective structures considered, must be allowed only under a “no adverse impact” scenario. **“Coastal managers should consider adopting the principles of “No Adverse Impact” when designing and permitting flood protection, beach nourishment, and other coastal protection projects.** Current coastal protection projects are often done with no regard for how they will affect adjacent portions of the coast. According to the Association of State Floodplain Managers: ‘Over the past 50 years a system has developed through which local and individual accountability has been supplanted by federal programs for flood control, disaster assistance, and tax incentives that encourage and subsidize floodplain occupation and development.’ We recommend that coastal managers consider adopting a policy similar to “No Adverse Impact” where the ‘actions of one property owner are not allowed to adversely affect the rights of other property owners’ (ASFM 2008).” (p.88, emphasis added) How can the Proposed Project be allowed even with mitigating measures when others may be asked to abandon their property? Wouldn’t any mitigating structure designed to protect the Proposed Project area necessarily adversely impact surrounding areas?

“Immediate action is needed. It will cost significantly less to combat climate change than it will to maintain a business-as-usual approach,” said Linda Adams, secretary for environmental protection, according to a Los Angeles Times article published on March 12, 2009, under the headline “California Panel Urges ‘Immediate Action’ to Protect Against Rising Sea Levels.”¹²¹ The same Article quotes Michael Woo, a Los Angeles Planning Commissioner and Urban Planning Professor at USC as saying, “The rising sea level could be California’s version of Hurricane Katrina. . . . Taxpayers and insurance ratepayers might question their responsibility to help homeowners and businesses which knowingly build in high-risk coastal areas.” Further reported in the Article is a quote from Dan Cayan, a researcher at the Scripps Institute of Oceanography and lead scientist on the state’s action plan. “The 55-inch estimate in the report is ‘probably conservative . . . As temperature climbs, melting is going to proceed at a greater pace. It is not necessarily going to proceed linearly, in the same proportions as it did in the past, because melting begets more melting.’” Additionally, the Article quotes Mary Nichols, a chairwoman of the ARB, which is charged with implementing a statewide plan to cut greenhouse gas emissions. She said of the Report, “The recommendations are sensible: Defend what is

¹²¹ Exhibit E-5, L.A. Times Article, at www.latimes.com/news/local/la-me-global-warming-searise-12-2009mar12.0.2741152.story.

worth protecting, move what can reasonably be moved, try to **avoid doing further harm**, consult affected communities, prepare to respond to emergencies.” (Emphasis added).

While the subject Report became available after the RS-DEIR was released for public review and comment, coastal sea level impacts due to global climate change have been predicted for several years. The March 2006 California Environmental Protection Agency Climate Action Team Report to the Governor, concluded at that time that a “[g]lobal sea level rise is projected to range from 4 to 33 inches during the 2000 to 2100 period.”¹²² The fact that the prediction has risen from 4-33 inches to a conservative estimate of 55 inches in a few years suggests that the estimates will continue to increase as more melting begets more melting and more is known about global climate change. This simply cannot be ignored and must be addressed in the RS-DEIR.

The RS-DEIR should address the potential for liability due to sea level rise as it must have learned from other government’s costly mistakes in approving projects threatened by potential hazards.¹²³

The Final EIR should address the following issues:¹²⁴

1. The RS-DEIR must study and then address the need to keep this land as wetlands for anticipated impacts from sea-level rises due to global climate change.
2. The RS-DEIR must study the direct and indirect, as well as long-term, environmental impacts and costs to protect or relocate the Proposed Project if developed and the sea-levels rise as anticipated.
3. The RS-DEIR must study and address the following question: If the Proposed Project is developed with measures to protect against the impact of sea-level rises on it, what are the environmental impacts on neighboring areas? The threshold for assessing the impact of later protecting the Proposed Project or allowing the Proposed Project with mitigating measures should be reviewed under a “no adverse impact” scenario as recommended by the CAT Report.

¹²² Exhibit E-6, 2006 Report Attached, at pp. 31-33. See also, www.climatechange.ca.gov/climate_action_team/reports).

¹²³ See, e.g., Exhibit E-7, La Conchita Landslide Paper, at http://www.sabo-int.org/case/la_conchita_mudslide.pdf.

¹²⁴ CEQA requires a good faith effort at full disclosure. (Cal. Code Regs., tit. 14, § 15151.) The lead agency must “use its best efforts to find out and disclose all that it reasonably can.” (*Id.*, § 15144.) Full disclosure of a project’s environmental impacts promotes a fundamental purpose of CEQA: to “inform the public and responsible officials of the environmental consequences of their decisions before they are made.” (*Laurel Heights Improvement Assn. of San Francisco v. Regents of the Univ. of Cal.* (1993) 6 Cal.4th 1112, 1123.)

VIII. PROJECT ALTERNATIVES

CEQA requires that an EIR be recirculated for public comment and agency consultation whenever there is “significant new information added to the EIR” before certification. According to CEQA, the term “information” can include changes in the project of environmental setting as well as additional data or other information. Such information may include “a feasible project alternative or mitigation measure considerably different from others previously analyzed” which “would clearly lessen the environmental impacts of the project.” (CEQA Guidelines, § 15088.5.)

Furthermore, since the circulation of the original draft EIR, “significant new information” has arisen in data and information relating to the City of Los Angeles’ Integrated Resource Plan (IRP) for water quality, funding opportunities due to the American Recovery and Reinvestment Act, lowered land values, and targeted Green Jobs programs.

With all this in mind, the Ballona Wetlands Land Trust proposes a project alternative that was overlooked in the City’s RS-DEIR, an alternative that offers substantial mitigation for Playa Vista’s environmental impacts and also furthers the goals of the City’s IRP and Green Jobs programs.

A. Project Alternative: a Natural Treatment Wetland

1. Overview

A natural treatment wetland in the Phase II area represents an environmentally friendly regional strategy to reduce pollution in Santa Monica Bay. The 111 acres located at the current proposed site for development of Playa Vista Phase II comprise the last remaining viable site for a natural treatment system of significant capacity in the lower Ballona watershed.

Natural treatment wetlands are designed and constructed to improve water quality by taking advantage of natural processes that occur in wetlands. They have been constructed in hundreds of successful programs in the United States, including in Southern California, and have been cited as preferable options by the City and County of Los Angeles as well as the Regional Board. The EPA states “the treatment of wastewater or stormwater by constructed wetlands can be a low-cost, low-energy process requiring minimal operational attention.” Located in close proximity to Centinela and Ballona Creeks, a constructed Natural Treatment Wetland at this site could draw upon existing storm drain infrastructure.

The construction of a natural treatment wetland on the Phase II land would help bring Los Angeles into compliance with existing environmental regulations, and conform perfectly with the City’s Integrated Resources Program (IRP) currently being implemented to treat urban runoff using a variety of methods.

As historical wetlands adjacent to permanently preserved Ballona Wetlands Ecological Reserve, this location provides an ideal opportunity for the establishment of a “green corridor”,

an aesthetically pleasing and ecologically sound alternative to further development. Constructed treatment wetlands would serve dual function as needed park space in a city with the lowest ratio of open space per capita of any large city in the U.S. In addition, jobs provided by the construction of a natural treatment wetland would train disadvantaged Los Angeles residents for a career in the new green economy.¹²⁵

2. Advantages

a. *Compliance with Environmental Regulations*

Impairments to the water quality of Ballona Creek are numerous. A 2002 assessment of Ballona Creek found 16 contaminants, including metals, toxic chemicals, and bacterial and viral pathogens.

The Clean Water Act (“CWA”) requires the establishment of limits on the amount of pollutants that can be discharged to Santa Monica Bay. Section 303(d)(1)(A) of the CWA requires each state to identify those waters that are not achieving water quality standards, and requires states to implement limits on pollutants for these waters, called Total Maximum Daily Loads or “TMDLs.”

The Los Angeles Regional Water Quality Control Board, vested with the responsibility of enforcing the federal Clean Water Act in the Los Angeles region, is in process of establishing TMDLs to address all water quality impairments. To date, TMDLs have been established for trash, copper, lead, selenium, zinc, and bacteria. These regulations require reductions of as much as 70 percent in measured effluent pollutant content.

Meeting the TMDL goals and avoiding liability will require major pollution abatement efforts by the City of Los Angeles. Already the City of Los Angeles has been directed by California’s Regional Water Quality Control Board to make drastic improvements in the quality of runoff entering the Santa Monica Bay. Failure to comply is grounds for severe financial liabilities. On March 4, 2008, the Regional Water Quality Control Board issued violation notices to 20 cities and Los Angeles County. The Regional Board is requiring municipal violators to provide documentation of the causes of the violations, and detailed descriptions of remedial actions already attempted and planned for the future. Cities and counties face fines of \$10,000 a day per violation per pollutant for noncompliance.¹²⁶

Treatment wetlands have proven effective in treating municipal wastewater (sewage), agricultural wastewater and runoff, industrial wastewater, and storm water runoff from urban, suburban and rural areas. Treatment wetlands treat contaminants through processes such as

¹²⁵ Exhibit F-1, “Natural treatment wetlands at Ballona Southeast: a better solution for urban runoff in the Ballona watershed.” Ballona Wetlands Land trust, 2008.

¹²⁶ Exhibit F-2, California Regional Water Quality Control Board Violation Notice and Exhibit F-3, Order to City of Los Angeles, March 4, 2008.

sedimentation, filtration, adsorption, volatilization, and bacterial degradation.

b. Consistent with City of Los Angeles' IRP Program

The City of Los Angeles has initiated an Integrated Resources Program ("IRP") that outlines a plan for catching and treating urban runoff as mandated by the Clean Water Act. The plan calls for an integrated approach to the treatment of polluted run-off, including source reduction ("non structural BMPs", or Best Management Practices) and structural BMPs, which include bio-retention and filtration areas of all sizes. Natural treatment wetlands have been identified as ideal regional components of the IRP Plan, dovetailing with smaller scale natural treatment areas and mechanical treatment facilities to comprise a comprehensive solution for the treatment of the City of Los Angeles' wet and dry weather water runoff¹²⁷.

Indeed, maps developed by the Watershed Protection Division and their project consultants, CDM, showed the Phase II land to be a regional "priority catchment" site: an area seen as an opportunity as a treatment area due to its size, current land use, and proximity to storm drains¹²⁸.

c. More Economical and Environmentally Sound than Mechanical Treatment Facilities

The construction of a treatment wetland is a far more economical approach than new mechanical treatment plant construction, existing mechanical treatment plant enhancements, or additions. Construction and operational costs are relatively low, and auxiliary benefits to the value of local communities are high. Even when factoring the cost of acquisition of property, a large-capacity treatment wetland is a regional solution that ultimately pays for itself in the long run, saving billions of taxpayer dollars over the alternative. A 2006 study by the Los Angeles Department of Public Works assessing strategies for treatment of polluted runoff found that a centralized greenway system consisting of detention basins and constructed treatment wetlands was by far the most affordable option. A citywide greenway system was estimated to cost around \$26 million, compared to two scenarios with greater mechanical components at \$47 million and \$53 million, respectively.¹²⁹

Mechanical treatment plants are also energy-intensive, producing greenhouse gas emissions, and rate a poor investment at a time when energy costs are escalating. A treatment wetland at Ballona Southeast could serve as a keystone of Mayor Antonio Villaraigosa's stated

¹²⁷ Exhibit F-4, "Integrated Resources Plan (IRP): A New Strategy for LA's Water Infrastructure" Fact Sheet. City of Los Angeles, January 2006.

¹²⁸ Exhibit F-5, Los Angeles County-Wide Structural BMP Prioritization Methodology, Ballona Creek Watershed Demonstration Updated Summary Report. County of Los Angeles Department of Public Works, Heal the Bay, and City of Los Angeles Bureau of Sanitation; prepared by Geosyntec Consultants, June 2006, pp. 16, 20.

¹²⁹ Exhibit F-6, Los Angeles Department of Public Works. "Greater Los Angeles County Integrated Regional Water Management Plan (IRWMP)." PowerPoint presentation. Los Angeles, California, August 2006.

intent to transform Los Angeles into “the greenest big city in America,” an alternative to energy-intensive, greenhouse gas-emitting mechanical treatment plants.

d. Numerous Targeted Funding Sources Available

City, state, federal, and non-profit funding is available for public acquisition of some or all of the Phase II land and to construct a natural treatment wetland project. Despite the state of the economy, the arrival of funds from the American Recovery and Reinvestment Act (H.R. 1, Titles IV and VII), better known as ‘the stimulus bill’, to many state and federal agencies makes this an opportune time for funding a project with such positive environmental and economic goals.¹³⁰

Additionally, City funding is available through Proposition O. In November 2004, voters of the City of Los Angeles passed the Proposition O - Clean Water Bond, authorizing \$500 million of general obligation bonds for projects addressing pollution in the City’s rivers, lakes, and beaches. The funding source is intended to enable the City of Los Angeles to meet Federal Clean Water Act requirements. Proposition O funding is currently supporting similar projects that protect water quality, provide flood or habitat protection, increase water conservation, and create open space. Currently, Prop O is funding the land purchase and construction of the 9-acre South Los Angeles Wetlands Park (estimated project cost: \$25,000,000). Prop O funding has also been approved for land acquisition for two parks along the Los Angeles River with significant storm water purification or retention elements: the 254 acre Albion Dairy Park (\$5,000,000 allocation approved to date) and the 100-acre Taylor Yard Park project (\$25,000,000 approved to date).¹³¹

State funding is currently available through the Clean Water State Revolving Fund (CWSRF) Program, with increased opportunities in this category due to an injection from the federal stimulus package. The CWSRF Loan Program provides low-interest loans for the implementation of non-point source (storm water runoff) treatment projects. The CWSRF recently received \$280 million from the federal stimulus package, creating increased opportunities for funding through this source.¹³²

Federal funding for similar projects is also increasingly available from the Environmental Protection Agency through the Clean Water Act Section 319 (h-i), which targets non-point source management programs led by state agencies.¹³³ Federal funding for coastal habitat

¹³⁰ “The American Recovery and Reinvestment Act of 2009”. H.R. 1., Sec. VII. United States Congress.

¹³¹ Exhibit F-7, “Proposition O – Clean Water Bond Program March 2009 Monthly Report.” City of Los Angeles Bureau of Engineering, pp. 5, 11, 14-15.

¹³² Exhibit F-8, “American Recovery and Reinvestment Act Funds CWSRF Fact Sheet,” California State Water Resources Control Board, March 2009.

¹³³ Federal Clean Water Act, 33 U.S.C. et seq., Section 319, pp. 173-80.

restoration projects has also been made available through the National Oceanic and Atmospheric Organization (NOAA) under the federal stimulus bill. Awarded projects must achieve significant ecological benefits and maximize job creation or preservation - both criteria met by the proposed natural treatment wetlands project.¹³⁴

e. Lowered Land Values

Real estate values have plummeted locally and nationally due to the subprime market crisis, which took palpable effect in early 2008 and continues to negatively impact the economy. In Los Angeles County, the median home price has fallen 34% since March 2008 and the median price for condos has fallen 21%.¹³⁵ Nationwide sales of new single-family homes were down 31% in March 2009 from a year ago.¹³⁶ Unfinished projects and vacancies plague developers: by the end of the 3rd quarter of 2008, 102 detached subdivisions in Los Angeles County had 608 homes for sale and 3,257 undeveloped lots.¹³⁷

Vacancy rates have been on the rise in office and industrial markets as well, with Los Angeles County office vacancy rates climbing from 9.7% to 11% in the 4th quarter of 2008, setting a new record in annual vacancy rates. Industrial vacancies climbed from 1.5% to 2.2% over the same time period.¹³⁸ In addition, the greatest part of these vacancies were located in West Los Angeles and Downtown, indicating particular market weakness in terms of commercial and industrial space within the project's region.¹³⁹

Lowered demand across the board negatively affects land values. A recent study of the British land market found that developable urban land values outside of London had fallen 33% on average over 2008. Land values within London fell 10% in value, and land in suburban

¹³⁴ Exhibit F-9, "NOAA Seeks Proposals That Will Restore Coastal Habitat, Create Jobs, Stimulate Economy." NOAA News, March 23, 2009. http://www.noaaneews.noaa.gov/stories2009/20090323_proposals.html

¹³⁵ Exhibit F-10, Southern California Home Resale Activity in L.A. Times Sunday Edition Charts - Data for March 2009. DQnews.com: <http://www.dqnews.com/Charts/Monthly-Charts/LA-Times-Charts/ZIPLAT.aspx>

¹³⁶ Exhibit F-11, "New Residential Sales in March." U.S. Census Bureau News Joint Release, U.S. Department Housing and Urban Development, April 24, 2009, p. 1.

¹³⁷ Exhibit F-12, "Lots of Lots," Los Angeles Business Journal, January 26 -February 1, 2009.

¹³⁸ Exhibit F-13, Los Angeles County Office and Industrial Market Data, Los Angeles Business Journal, January 26 -February 1, 2009.

¹³⁹ Exhibit F-14, "Is Anybody Home? Offices Empty Out, Setting Q4 Record. Westside and Downtown are Hit Hardest," Los Angeles Business Journal, January 26 -February 1, 2009.

London fell 15%.¹⁴⁰

It is safe to say that the value of the Phase II land is significantly less in 2009 than it was throughout the project's development, and that this lower valuation constitutes important new information. Were the land to be evaluated again for sale in today's market, it would likely be priced within reach of local government utilizing funding sources described above. The potential acquisition of the 111 acres is more possible than ever, and should be considered at this point in assessing the treatment wetlands alternative.

f. Provides Needed Green Space and Green Jobs

Los Angeles has devoted less land to parks than all other major American cities, with only 3% of its land used for parks (as opposed to 17% in New York and 9% in Boston). Only one third of children in Los Angeles have immediate access to a park.¹⁴¹ Recognizing the key role public green space plays in the life of cities, Mayor Villaraigosa pledged in 2005 to "create an emerald necklace of parks along the [Los Angeles] river, and dot our neighborhoods with new emeralds neighborhood parks."¹⁴² The effort and investment put into the Los Angeles River Revitalization Master Plan by the City of Los Angeles is evidence that the development of public green space is increasingly a policy priority.¹⁴³

In tandem with the provision of needed green space, the construction of a natural treatment wetland would provide green jobs, or jobs tied to the development of environmentally beneficial projects. National and local governments have recently acted in favor of supporting the provision of green jobs. The Green Jobs Act ("New Direction for Energy Independence, National Security, and Consumer Protection Act") (H.R. 3221, Title I), passed by Congress in August 2007 authorizes up to \$125 million in funding to establish job training programs in green industries such as energy efficient buildings and construction, renewable electric power, energy efficient vehicles, and biofuels development.¹⁴⁴ In April 2009, the Los Angeles City Council signed a "green ordinance", which calls for the green retrofit of city buildings, as well as career

¹⁴⁰ Exhibit F-15, "New study finds value for developable land off more than 30 percent in many areas of U.K.," New York Times, February 24, 2009.

¹⁴¹ Exhibit F-16, "Parks and Wreck: L.A.'s Fight for Public Green Space," LA Weekly, July 16, 2008.

¹⁴² Ibid.

¹⁴³ Exhibit F-17, "The Los Angeles River Revitalization Master Plan", City of Los Angeles, May 2007. <http://www.lariverrmp.org/CommunityOutreach/pdf/02Chapter1-Inspiration42407.pdf>

¹⁴⁴ Exhibit F-18, HR 3221, "New Direction for Energy Independence, National Security, and Consumer Protection Act", passed as H.R.6 and made Public Law 110-140. United States Congress, December 2007. <http://thomas.loc.gov/cgi-bin/bdquery/z?d110:h.r.03221>.

training and placement for local, low-income and underemployed workers.¹⁴⁵ Jobs generated by the construction of natural treatment wetlands would benefit the economic health of the greater Los Angeles community, and training for those jobs would likely be underwritten by the legislation and programs described above.

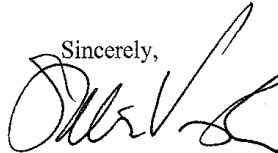
3. Summary

The natural treatment wetlands project alternative would benefit the Los Angeles community in numerous ways, providing low cost water treatment, green space, and green jobs. The project is consistent with the City's current water infrastructure program, and its construction could draw from numerous funding sources targeted to projects of this nature. The economic and social advantages provided by natural treatment wetlands have generated great interest, and proposal has received strong public support to date.¹⁴⁶ Rather than adding more development and density to the last remaining natural wetlands in Los Angeles, the project alternative preserves open space, adds to quality of life, and benefits both the neighborhood and the region. In examination of this RS-DEIR, decision makers should understand that issues at hand such as wastewater, land use, and global climate change are connected to and addressed by this project alternative. It is within their power to determine if natural treatment wetlands on the Phase II land will be considered as an option, and it is hoped they will now take this opportunity to consider it seriously.

IX. CONCLUSION

BWLT respectfully requests the City direct Playa to revise its RS-DEIR in the manner discussed above and recirculate the DEIR for public review and comment. Only then can the public and decision-makers be assured that the environmental consequences of the Proposed Project and alternatives thereto are fully addressed and that the City is equipped to make a fully informed decision with respect to approval or disapproval of the Proposed Project as currently presented.

Sincerely,



Sabrina D. Venskus, Esq.
LAW OFFICES OF SABRINA VENSUS
Attorney for Ballona Wetlands Land Trust

¹⁴⁵ Exhibit F-19, "LA Apollo Helps City Adopt Landmark Green Jobs Ordinance," <http://apolloalliance.org/what%E2%80%99s-new/la-apollo-alliance-helps-city-los-angeles-adopt-landmark-green-jobs-ordinance/>.

¹⁴⁶ Over 800 community members signed a petitions and sign-on letters in favor of the natural treatment wetlands alternative in 2008. See attached sign-on letter, Exhibit F-20.

EXHIBIT A -1

NOT TO BE PUBLISHED IN THE OFFICIAL REPORTS

California Rules of Court, rule 8.1115(a), prohibits courts and parties from citing or relying on opinions not certified for publication or ordered published, except as specified by rule 8.1115(b). This opinion has not been certified for publication or ordered published for purposes of rule 8.1115.

IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA
SECOND APPELLATE DISTRICT
DIVISION THREE

CITY OF SANTA MONICA et al.,

Plaintiffs and Appellants,

v.

CITY OF LOS ANGELES,

Defendant and Respondent;

PLAYA CAPITAL COMPANY, LLC,

Real Party in Interest and
Respondent.

B189630

(Los Angeles County
Super. Ct. No. BS093502)

BALLONA ECOSYSTEM EDUCATION
PROJECT,

Plaintiff and Appellant,

v.

CITY OF LOS ANGELES et al.,

Defendants and Respondents;

PLAYA CAPITAL COMPANY, LLC,

Real Party in Interest and
Respondent.

B189722

(Los Angeles County
Super. Ct. No. BS093507)

City of Santa Monica, Ballona Wetlands Land Trust, Anthony Morales, and Surfrider Foundation (collectively Petitioners) and Ballona Ecosystem Education Project (BEEP) challenge the certification by City of Los Angeles (City) of an environmental impact report (EIR) and the City's approval of phase two of the Playa Vista development project. They appeal a judgment denying their petitions for writ of mandate in two consolidated cases. Petitioners challenge the adequacy of the EIR and the City's findings under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) with respect to historical archaeological resources, methane gas, wastewater, transportation, and alternatives to the project. BEEP challenges the adequacy of the EIR as to its project description and also challenges the EIR and the City's findings with respect to land use, transportation, project alternatives, and the statement of overriding conditions. We conclude that the EIR was deficient in its analysis of land use impacts, mitigation of impacts on historical archaeological resources, and wastewater impacts. We therefore reverse the judgment with directions to the superior court to issue a peremptory writ of mandate ordering the City to vacate its certification of the EIR and its project approvals and make appropriate revisions to the EIR.

FACTUAL AND PROCEDURAL BACKGROUND

1. Playa Vista Development Site and Phase One

The Playa Vista development site is located in the City of Los Angeles generally south of Ballona Creek, east of Lincoln Boulevard, west of Interstate 405, and north of the Westchester bluffs. The Playa Vista development was approved in two phases. The

development of only 108,050 square feet of office and light industrial use (M(PV)) on the phase two site.

2. *Phase Two Draft EIR*

Playa Capital, as the owner, proposed the development of Playa Vista phase two, known as the Village at Playa Vista, consisting of 2,600 residential units, 175,000 square feet of office space, 150,000 square feet of retail space, and 40,000 square feet of community-serving uses. Phase two also includes the construction of a riparian corridor, including native vegetation, traversing the site from east to west and the restoration of portions of the Westchester bluffs. The riparian corridor would connect with sections previously constructed on the phase one site to the east and west of phase two and would drain into a freshwater marsh constructed on the phase one site.

The City circulated a draft EIR for the phase two project in August 2003. The City extended the period for public review and comments from 60 days to 120 days, ending on December 22, 2003.

3. *Final EIR, Public Hearings, and Project Approval*

The City completed a final EIR for the phase two project in April 2004. The City's deputy advisory agency, planning commission, and planning and land use committee conducted public hearings on and recommended approval of the project. The City of Los Angeles City Council (City Council) at its meeting on September 22, 2004, considered the approval of a vesting tentative map, adoption of a resolution amending the general plan, adoption of ordinances amending the specific plan, and adoption of an ordinance authorizing a development agreement and heard comments by

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tentative decision as its statement of decision and entered a judgment denying the petitions in January 2006.

Petitioners and BEEP separately appealed the judgment. We have consolidated the two appeals.

CONTENTIONS

Petitioners contend (1) the EIR was required to discuss preservation in place as a means to mitigate significant impacts on historical archaeological resources, but failed to do so; (2) the evidence does not support the City's finding that the mitigated impact on historical archaeological resources will be less than significant; (3) the EIR improperly failed to discuss a proposed alternative that would relocate or redesign the riparian corridor to avoid disturbing historical archaeological resources; (4) the City's responses to comments concerning historical archaeological resources were inadequate; (5) the City was required to revise and recirculate the EIR to include significant new information discovered during the public review period concerning the extent of Native American burial sites on the phase one property, but failed to do so; (6) the City never seriously considered recommendations by the Native American Heritage Commission (NAHC) concerning historical archaeological resources and therefore failed to consult with NAHC as required; (7) the City improperly delegated its responsibility under the general plan to protect historical archaeological resources to other public agencies, and the EIR failed to discuss this inconsistency with the general plan, as required; (8) the methane gas testing was clearly inadequate, the responses to comments so stating were inadequate, and the EIR improperly deferred further testing and the determination of

methodology, resulting in undercounting and a deficient analysis; (20) the analysis of traffic impacts on secondary streets in Los Angeles was faulty and misleading; and (21) activity on the project should be stayed until the City certifies a valid EIR in accordance with CEQA.

BEEP contends (1) the project description in the EIR was misleading because it failed to disclose that the project required zoning changes that would dramatically increase the amount of development permissible on the phase two site; (2) there is no provision for adequate funding of the additional Culver City buses to be provided in connection with the project, so there is no substantial evidence to support a finding that the mitigation measure is feasible or enforceable and no evidence to support the City's finding that traffic impacts will be mitigated to an insignificant level; (3) the City failed to determine whether condition 116 of the phase one project approval was satisfied before approving the phase two project, contrary to the terms of the condition; (4) the analysis of a "no project" alternative in the EIR was misleading because it falsely stated that the remediation of soil and groundwater contamination at the site would not continue if there were no project; (5) the analysis of a second "no project" alternative in the EIR was misleading as to traffic impacts because it stated, contrary to Playa Capital's own traffic study, that development under the then-existing entitlements would result in significant traffic impacts; (6) the analysis of the second "no project" alternative in the EIR was misleading as to solid waste impacts because it characterized both the impacts of the alternative and the vastly greater impacts of the project as significant and because it failed to account for recycling as mitigation; (7) the statement

how those impacts can be mitigated or avoided, and identify and analyze alternatives to the project, among other requirements. (Pub. Resources Code, §§ 21100, subd. (b), 21151; Guidelines, §§ 15124, 15125, 15126.6.) “The purpose of an environmental impact report is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project.” (Pub. Resources Code, § 21061.)

The lead agency must notify the public of the draft EIR, make the draft EIR and all documents referenced in it available for public review, and respond to comments that raise significant environmental issues. (Pub. Resources Code, §§ 21092, 21091, subds. (a), (d); Guidelines, §§ 15087, 15088.) The agency also must consult with and obtain comments from other agencies affected by the project and respond to their comments. (Pub. Resources Code, §§ 21092.5, 21104, 21153; Guidelines, § 15086.) The agency must prepare a final EIR including any revisions to the draft EIR, comments received from the public and from other agencies, and responses to comments. (Guidelines, §§ 15089, subd. (a), 15132.)

An agency may not approve a project that will have significant environmental effects if there are feasible alternatives or feasible mitigation measures that would

environmental effects (Pub. Resources Code, § 21081, subd. (b)) is known as a statement of overriding considerations. (Guidelines, § 15093.)

Thus, a public agency is not required to favor environmental protection over other considerations, but it must disclose and carefully consider the environmental consequences of its actions, mitigate or avoid adverse environmental effects if feasible, explain the reasons for its actions, and afford the public and other affected agencies an opportunity to participate meaningfully in the environmental review process. The purpose of these requirements is to ensure that public officials and the public are aware of the environmental consequences of decisions before they are made. (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564 (*Goleta Valley*)).) The EIR process also informs the public of the basis for environmentally significant decisions by public officials and thereby promotes accountability and informed self-government. (*Laurel Heights I, supra*, 47 Cal.3d at p. 392; *Concerned Citizens of Costa Mesa, Inc. v. 32nd Dist. Agricultural Assn.* (1986) 42 Cal.3d 929, 935-936.) Before approving the project, the agency must certify that its decisionmaking body reviewed and considered the information contained in the EIR, that the EIR reflects the agency's independent judgment and analysis, and that the EIR was completed in compliance with CEQA. (Pub. Resources Code, § 21082.1, subd. (c); Guidelines, § 15090.)

“We have repeatedly recognized that the EIR is the ‘heart of CEQA.’ [Citations.] ‘Its purpose is to inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made. Thus, the EIR

determination must be made “by examining the whole record before the lead agency.” (Guidelines, § 15384, subd. (a).) “Substantial evidence is not argument, speculation, unsubstantiated opinion or narrative, evidence that is clearly inaccurate or erroneous, or evidence of social or economic impacts that do not contribute to, or are not caused by, physical impacts on the environment.” (Pub. Resources Code, § 21080, subd. (e)(2); accord, *id.* § 21082.2, subd. (c); see also Guidelines, § 15384, subd. (a).)

2. *Standard of Review*

The standard of review of an agency’s decision under CEQA is abuse of discretion. Abuse of discretion means the agency failed to proceed in a manner required by law or there was no substantial evidence to support its decision. (Pub. Resources Code, §§ 21168, 21168.5; *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 945.) Whether the agency failed to proceed in a manner required by law is a question of law. A court determines de novo whether the agency complied with CEQA’s procedural requirements, “ ‘scrupulously enforc[ing] all legislatively mandated CEQA requirements’ (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564 [276 Cal.Rptr. 410, 801 P.2d 1161]).” (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 435 (*Vineyard Area Citizens*)).) The failure to provide information required by CEQA in an EIR is a failure to proceed in a manner required by law. (*Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 118.) The failure to comply with CEQA’s procedural or information disclosure requirements is a prejudicial abuse of discretion if the decision makers or the public is deprived of

be built on the phase two site. Approval of the phase two development consisting of 2,600 residential units, 175,000 square feet of office space, 150,000 square feet of retail space, and 40,000 square feet of community-serving uses therefore required amendments to the specific plan to allow the additional development beyond only 108,050 square feet of office and light and industrial space. The proposed additional development was a large increase in the amount of development allowed on the phase two site.

b. *CEQA Requirements*

The purpose of an EIR is to inform the public and decision makers of the environmental consequences of public agencies' decisions before they are made. (*Laurel Heights II, supra*, 6 Cal.4th at p. 1123.) An EIR “ “protects not only the environment but also informed self-government.” [Citations.]’ To this end, public participation is an ‘essential part of the CEQA process.’ [Citations.]” (*Ibid.*) In determining whether an abuse of discretion is established, “ ‘The court does not pass upon the correctness of the EIR’s environmental conclusions, but only upon its sufficiency as an informative document.’ [Citation.]” (*Laurel Heights I, supra*, 47 Cal.3d at p. 392.) Technical perfection and an exhaustive analysis are not required, but an EIR must “reflect a good faith effort at full disclosure.” (*Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 712; accord, Guidelines, § 15151.)

“The preparation and circulation of an EIR is more than a set of technical hurdles for agencies and developers to overcome. The EIR’s function is to ensure that

development from only 108,050 square feet of office and light industrial space to 2,600 residential units, 175,000 square feet of office space, 150,000 square feet of retail space, and 40,000 square feet of community-serving uses.

A subsection of the project description section discussed the “history and evolution” of the entire Playa Vista project. It stated that, compared with prior development proposals, “The Proposed Project greatly reduces the scale of the Playa Vista development by limiting development to the remaining portion of Area D, on approximately 111 acres adjacent to the Playa Vista First Phase Project.”⁶ The project description did not acknowledge that the project would greatly increase the amount of development compared with the development permissible under the existing specific plan.

The executive summary section also stated that the project reduced the scale of development compared with prior proposals and, for the most part, failed to acknowledge that the project would dramatically increase the amount of development permissible on the phase two site. The second sentence of the executive summary stated, “As described more fully in Section I.D., the Proposed Project greatly reduces the scale of development in comparison to previous proposals within the larger area

⁶ The original proposed Playa Vista project area included areas denoted A, B, C, and D. The developer later limited the proposed development to Area D and a small part of Area B.

The EIR's full analysis of the project's land use impacts graphically illustrated this misleading and unstated assumption. The analysis stated that table 85 showed "the remaining development allowed under the existing Specific Plan, taking into account the previously approved development within the Playa Vista First Phase Project." Table 85, entitled Development Allowed Under Existing Playa Vista Area D Specific Plan, showed the area of office space,⁹ number of residential units, area of retail space, and number of hotel rooms allowed in all of Area D under the specific plan (column one), the amounts of each included in the phase one development (column two), and the amounts "Remaining" (column three). As to each category, the amount "Remaining" was simply the difference between the number in column one and the number in column two, without regard to whether the specific plan allowed that land use on the phase two site. Considered together with the accompanying text, the table purported to show that the remaining development allowed on the phase two site under the specific

zone boundaries precisely coincide with future street, alley or lot lines." Thus, the specific plan provided for interpretation of the approximate zone boundaries shown on the map and for minor adjustments consistent with the overall land use plan, but did not allow for large-scale changes in the land use plan of the type made here. We take judicial notice of the specific plan enacted in 1985 (L.A. Ord. No. 160523), as amended in 1996 (L.A. Ord. No. 170785). (Evid. Code, § 452, subd. (b).)

⁹ Table 85 stated that the office space figure included both office and light industrial zones (M(PV) and M2(PV)) and regional mixed commercial zones (C2(PV)).

an increase in the number of residential units allowed and a reduction of 1,583,050 square feet of office space, a reduction of 465,000 square feet of retail space, and a reduction of 600 hotel rooms from the amounts that could be developed on the phase two site under the specific plan: “As additional housing is not permitted by the existing Area D Specific Plan, development of the proposed 2,600 housing units would require a Specific Plan Amendment. *The Proposed Project’s office, retail and community serving uses could be developed as proposed, pursuant to the provisions of the existing Specific Plan.* However, the Applicant is proposing an amendment to the Area D Specific Plan to eliminate the office, retail and hotel uses that could occur beyond the development of the Proposed Project and previously approved Playa Vista First Phase Project. This would result in the following: a reduction of 1,583,050 sq. ft. of office space, a reduction of 465,000 sq. ft. of retail space, and a reduction of 600 hotel rooms. The exchange between housing uses in place of office, retail and hotel uses is offered in the context of an overall planning concept for the Proposed Project.” (Italics added.) The italicized sentence was untrue because the office, retail, and community serving uses of the proposed phase two project could not be “developed as proposed” on the phase two site under the existing specific plan due to the plan’s zoning restrictions. The purported reductions were illusory because they were calculated based on office space, retail space, and hotel rooms that could not be developed on the phase two site under the existing specific plan.

Only the EIR’s discussion of alternatives, and a brief summary of that discussion in the executive summary, disclosed that the phase two project represented an increase

square feet of retail space, and an increase of 40,000 square feet of community-serving space.

A comment to the draft EIR stated that the summary of the project description in the executive summary “should state that the applicant is seeking an increase in entitlements—about 20 times what the current zoning allows under the Specific Plan.” The City responded: “The statement in this comment regarding the increase in development density is not accurate. As compared to the existing amounts of development described in the Specific Plan, the Proposed Project would increase the amount of development for residential use by 2,600 units, but would also reduce the amount of development for retail uses by 465,000 sq. ft. (76 percent less than allowed under the current Specific Plan), and the amount of development for office uses by 1,583,050 sq. ft. (90 percent less than allowed under the current Specific Plan). . . . Also, 600 hotel rooms permitted under the Specific Plan would not be built (a 100% reduction).” Thus, the City persisted in describing the project as a reduction in the amount of development allowed in theory in Area D as a whole rather than an increase in the amount of development actually allowed on the phase two site. Another comment and response were similar.

The City’s CEQA findings with respect to land use similarly stated that the specific plan amendments would allow the development of residential units in lieu of office, retail, and hotel uses allowed under the specific plan: “The Specific Plan amendment and zone changes would enable the Project’s proposed development of housing uses in place of office, retail, and hotel uses allowed under the existing Specific

erroneous information rendered an EIR insufficient as an informational document].)

The City must revise the analysis of land use impacts in the EIR. (See section 10, *post.*)

Environmental Planning & Information Council v. County of El Dorado (1982)

131 Cal.App.3d 350 involved a similar problem. The projects in that case were amendments to two area plans within a general plan. (*Id.* at p. 353.) The two EIR's repeatedly compared the impacts of the proposed amended plans with the impacts of full build out under the existing plans, rather than with the existing physical environment. (*Id.* at pp. 355-357.) Although the EIR's discussed some project impacts on the existing physical conditions, the court concluded that the repeated comparisons to the impacts assuming full build out under the existing area plans created illusory reductions in environmental impacts and rendered the EIR's misleading and inadequate as informational documents. (*Id.* at pp. 357-358.) The court stated, "The comparisons utilized in the EIRs can only mislead the public as to the reality of the impacts and subvert full consideration of the actual environmental impacts which would result." (*Id.* at p. 358.)

BEEP characterizes this problem as a deficient project description. An incomplete or misleading project description can improperly curtail environmental review and the consideration of mitigation measures and project alternatives. "Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal (i.e., the 'no project' alternative) and weigh other alternatives in the balance. An accurate, stable,

within the phase two project site, known as CA-LAN-62 and CA-LAN-211/H, have been determined to be contributing elements of the district and eligible for listing in the National Register of Historic Places. The two sites contain intact cultural artifacts dating back over 3,500 years and animal and human remains.

The United States Army Corps of Engineers (Corps of Engineers), Advisory Council on Historic Preservation,¹² and state Office of Historic Preservation entered into a Programmatic Agreement concerning the entire Playa Vista project site in 1991. The then-owner of the site and three individuals of Gabrielino descent also signed the agreement under the word “Concur.”¹³ The agreement stated that the parties agreed to a data recovery plan (also referred to as an Archaeological Treatment Plan) relating to portions of the project site “as a means to take into account the effects of construction of that phase of the project on historic properties.” The agreement stated further that a Research Design would “guide the evaluation of [other potential] historic properties,” that the Corps of Engineers and Office of Historic Preservation would evaluate “[t]he effects on [other] eligible properties” within the project site, and that “Treatment Plans shall be developed based on these evaluations.” The agreement stated that the treatment plans would be consistent with or take into account certain federal and state standards for archaeological research and documentation. The agreement stated that it would

¹² The Advisory Council on Historic Preservation is an independent federal agency created by the National Historic Preservation Act (16 U.S.C. § 470 et seq.).

¹³ The human remains were identified as likely ancestors of the Gabrielino (Tongva) tribe of Native Americans.

b. *CEQA Requirements*

An EIR must identify and analyze the significant environmental effects that may result from the project (Pub. Resources Code, § 21100, subs. (a), (b); Guidelines, §§ 15126.2, subd. (a), 15143; *Laurel Heights I, supra*, 47 Cal.3d at p. 396 [an EIR must analyze effects that are “a reasonably foreseeable consequence” of the project]), including impacts on historical archaeological resources (Pub. Resources Code, § 21084.1; Guidelines, § 15064.5, subd. (c)). For each significant effect, the EIR must describe and discuss feasible mitigation measures that could minimize the effect. (Pub. Resources Code, § 21100, subd. (b)(3); Guidelines, § 15126.4, subd. (a).) The EIR should discuss both measures proposed by the project proponent and measures proposed by the lead agency or other persons that, if required as conditions of approving the project, could reduce the adverse impacts. (Guidelines, § 15126.4, subd. (a)(1)(A).)

“Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way.” (Guidelines, § 15126.4, subd. (a)(1)(B).) “If the lead agency determines that a mitigation measure cannot be legally imposed, the measure need not be proposed or analyzed. Instead, the EIR may simply reference that fact and briefly explain the reasons underlying the lead agency’s determination.” (*Id.*, § 15126.4, subd. (a)(5).) Similarly, if the lead agency rejects project alternatives because they are

“(C) When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. . . .” (Italics added.)

c. *The EIR and the City’s Findings*

The EIR stated that two archaeological sites within the project site, CA-LAN-62 and CA-LAN-211/H, were determined to be eligible for listing in the National Register of Historic Places and therefore were historical archaeological resources under CEQA. The EIR stated that the Corps of Engineers, Advisory Council on Historic Preservation, and Office of Historic Preservation entered into the Programmatic Agreement in 1991 in connection with the granting of a federal permit to fill wetlands, that “two local Native American groups of Gabrielino descent . . . signed the Programmatic Agreement,” and that the agreement was extended through October 22, 2011. The EIR stated that pursuant to the agreement, the Corps of Engineers had developed Archaeological Treatment Plans for historic properties that would be adversely affected by the phase two project. It stated of the Research Design: “The Research Design presents relevant research questions, provides current knowledge of the archaeological and historical resources, describes potential impacts to prehistoric sources, and outlines future steps to mitigate potential adverse impacts of the Proposed Project on these resources.” It also stated that the Research Design “develops a program for the mitigation of impacts on significant archaeological resources resulting from the proposed development.” The EIR stated further that the author of the Research Design had prepared an update to that

insignificant level.¹⁴ The findings explained that the evaluation and treatment of any archaeological resources encountered would contribute to the body of historical knowledge, that the required protocols would avoid significant impacts from the disturbance, damage, or degradation of those resources, and that those measures and the presence of a representative of the Gabrielinos would reduce the potential impacts to an insignificant level.

d. *The EIR Failed to Discuss Preservation in Place as Required*

Petitioners contend the EIR was required to discuss preservation in place as a means to mitigate the significant effects on historical archaeological resources, but failed to do so. We agree. Guidelines section 15126.4, subdivision (b)(3) expresses a clear preference for preservation in place as the preferred manner to mitigate impacts on historical archaeological resources. To ensure that public agencies give adequate consideration to preservation in place as a mitigation measure, section 15126.4, subdivision (b)(3) expressly requires a discussion of preservation in place in the EIR. That discussion should acknowledge that preservation in place is preferred to other methods such as excavation because only preservation in place “maintains the relationship between artifacts and the archaeological context” and because preservation in place “may also avoid conflict with religious or cultural values of groups associated with the site.” (*Id.*, subd. (b)(3)(A).) The discussion should describe potential means to

¹⁴ Although the EIR stated that data recovery was the only feasible means to mitigate impacts on historical archaeological resources, the City did not expressly so find.

describe the mitigation measures considered and rejected or the reasons for rejecting those measures. The omission of that information from the EIR deprived the City Council and the public of important information concerning the preferred manner to mitigate the significant impacts on historical archaeological resources. That omission effectively precluded both meaningful public participation and informed decisionmaking with respect to the decision on mitigation measures.

We reject the argument by Playa Capital and the City that the design of the riparian corridor was “fixed” by prior federal and state permits and that any other design is legally infeasible and need not be discussed. CEQA imposes legal requirements on the City as the lead agency separate and apart from the requirements imposed on a property owner or other permit applicant under the federal Clean Water Act (33 U.S.C. § 401 et seq.) or former Fish and Game Code section 1600 et seq. The permit approvals under those laws do not supplant or supersede environmental review under CEQA or the required discussion of preservation in place. The permits issued by the Corps of Engineers and California Department of Fish and Game authorizing the construction of the riparian corridor as designed expressly state that the authority granted by the permits does not relieve the owner of the obligation to comply with any other federal, state, or local legal requirement. Moreover, the EIR does not state that any other design of the riparian corridor would be legally infeasible or briefly explain why (see Guidelines, §§ 15126.4, subd. (a)(5), 15126.6, subd. (c)), as would be required to excuse the City’s failure to discuss other designs in connection with the required discussion of preservation in place. If on remand the City, exercising its discretion under CEQA,

(2004) 116 Cal.App.4th 629, 641.) A decision vacating a project's approval and requiring the preparation or revision of an EIR could result in project modifications to mitigate or avoid significant impacts upon further environmental review in compliance with CEQA, or could result in disapproval of the project. (*Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1204; *Association for a Cleaner Environment, supra*, at p. 641.) Even if such a decision is made after the project is constructed and operating, the agency in the exercise of its discretion, as a condition of project approval, may require the project to be modified or improvements to be removed and the property restored to its prior condition. (*Bakersfield Citizens, supra*, at p. 1204; *Woodward Park Homeowners Assn. v. Garreks, Inc.* (2000) 77 Cal.App.4th 880, 888-889.) An applicant who proceeds with construction despite pending CEQA litigation does so at its own risk. (Pub. Resources Code, § 21167.3, subd. (b);¹⁶ *Bakersfield Citizens, supra*, at p. 1203.) Playa Capital's decision to proceed with construction despite the risk that this pending litigation could result in project modifications or disapproval of the project in no way moots this appeal. (*Woodward Park, supra*, at p. 890.)

The excavation work completed to this date and removal of any human remains or artifacts does not preclude the City, in the exercise of its discretion, from requiring in

¹⁶ Public Resources Code section 21167.3, subdivision (b) states that if a responsible agency approves a project after the commencement of an action or proceeding challenging an EIR or negative declaration under CEQA and no injunction or stay is ordered, "Such approval shall constitute permission to proceed with the project at the applicant's risk pending final determination of such action or proceeding."

Petitioners rely on *Architectural Heritage Assn. v. County of Monterey* (2004) 122 Cal.App.4th 1095, 1119, 1120 and *League for Protection of Oakland's etc. Historic Resources v. City of Oakland* (1997) 52 Cal.App.4th 896, 909, in which the courts reviewed decisions to adopt a mitigated negative declaration in lieu of an EIR. The standard of review of an agency's decision that no EIR is required differs from the standard of review of an agency's decision made after an adequate EIR was prepared that mitigation will reduce the impacts to an insignificant level. An EIR is required if substantial evidence in the administrative record supports a fair argument that there will be a significant environmental impact. (Guidelines, § 15064, subd. (f); *Mejia v. City of Los Angeles* (2005) 130 Cal.App.4th 322, 332.) Thus, the standard applicable to a mitigated negative declaration is virtually a mirror image of the standard applicable here. While a reasonable difference of opinion based on evidence in the record must be resolved in favor of preparing an EIR if no EIR was prepared, a reasonable difference of opinion based on evidence in the record must be resolved in favor of the agency's finding if an adequate EIR was prepared.¹⁷ In light of the differing standard of review, *Architectural Heritage* and *League for Protection* do not support the argument that the evidence here did not support the City's finding.

¹⁷ Although we conclude that the EIR was inadequate due to its failure to discuss preservation in place as required by Guidelines section 15126.4, and for other reasons discussed in this opinion, those shortcomings did not undermine the City's finding that the proposed mitigation by data recovery would reduce the impacts on historical archaeological resources to an insignificant level.

g. *The Responses to Comments Were Adequate*

Petitioners contend the City's responses to comments requesting additional information about grave sites discovered on the phase one site and questioning the EIR's reliance on data recovery in lieu of preservation in place were inadequate. An agency must evaluate and respond to timely comments on the draft EIR that raise significant environmental issues.¹⁹ (Pub. Resources Code, § 21091, subd. (d); Guidelines, § 15088.) Responses must describe the disposition of the issues raised in the comments such as, for example, revisions to the proposed project to mitigate impacts. (Pub. Resources Code, § 21091, subd. (d)(2)(B); Guidelines, § 15088, subd. (c).) If the agency rejects a recommendation or objection concerning a significant environmental issue, the response must explain the reasons why. (Guidelines, § 15088, subd. (c).) Responses must articulate "good faith, reasoned analysis," and not mere "[c]onclusory statements unsupported by factual information." (*Ibid.*; *Environmental Protection Information Center, Inc. v. Johnson* (1985) 170 Cal.App.3d 604, 628.) The level of detail required in a response depends on factors such as the significance of the issue raised, the level of detail of the proposed project, the level of detail of the comment, and the extent to which the matter is already addressed in the draft EIR or

¹⁹ An agency may, but need not, respond to comments received after the close of the public review period. (Pub. Resources Code, § 21091, subd. (d)(2)(B).) Several of the comments cited by Petitioners were made after the close of the public review period. The City had no obligation to respond to those late comments. Petitioners have not shown that the City actually responded to those comments and therefore have not shown that any response to those late comments was inadequate.

remains would be handled in accordance with the Programmatic Agreement, that the EIR described the consultation process that culminated in the Programmatic Agreement, and that the proposed mitigation measures would reduce the impacts to an insignificant level.

Petitioners contend the responses to these comments were inadequate because the EIR and the responses provided insufficient information about the significance of the discoveries on the phase one site to allow decision makers to determine whether the phase two mitigation measures were adequate. We conclude that Petitioners have shown no abuse of discretion in this regard. The responses explained in sufficient detail that the City rejected the requests for further evaluation because the City considered the mitigation measures in the Programmatic Agreement--data recovery--to be adequate. The fact that Petitioners disagree with the City's disposition of issues raised in the comments does not render the responses inadequate. In any event, the City must revise the EIR to discuss preservation in place, as we have stated.

h. *The City Was Not Required to Revise and Recirculate the Draft EIR*

Petitioners contend the City was required to revise and recirculate the draft EIR to include significant new information discovered during the public review period concerning the extent of the burials likely to be present on the phase two site. Public Resources Code section 21092.1 states that if "significant new information is added to an environmental impact report" after the agency has made the draft EIR available for public review and has consulted with other agencies but before the EIR is certified, the

included a finding that there was no significant new information in the final EIR and that recirculation was not required.²¹

The draft EIR stated that that many archaeological sites containing cultural artifacts had been identified in the area surrounding the phase two site. It stated that four such sites had been identified on the phase two site and that two of those sites were eligible for listing in the National Register of Historic Places. It stated that one of the two eligible sites, known as CA-LAN-62, measuring 45 by 30 meters and of an undetermined depth, had been found to contain human remains. The draft EIR stated that the riparian corridor in particular would impact the archaeological sites and that other construction activities could reveal new discoveries, but that the archaeological treatment plans required by the Programmatic Agreement would mitigate those impacts.

In light of the information disclosed in the draft EIR, the discovery of numerous additional human remains on the phase one site did not disclose a new environmental impact, but only provided additional information concerning the extent of a previously disclosed impact. The discovery did not undermine the City's finding that the required mitigation by data recovery will reduce the impacts to an insignificant level, and therefore did not disclose a substantial increase in the severity of an environmental impact requiring additional mitigation measures. (*Laurel Heights II, supra*, 6 Cal.4th at

²¹ Even without such an express finding, an agency that certifies a final EIR necessarily determines that there is no significant new information requiring recirculation. (*Laurel Heights II, supra*, 6 Cal.4th at p. 1134.)

with the Office of Planning and Research (Guidelines, § 15085; see Pub. Resources Code, § 21161) and must provide the draft EIR to other public agencies, ordinarily through the State Clearinghouse, for their review and comment (Guidelines, §§ 15023, subd. (c), 15087, subd. (f), 15025). Absent any other specific requirement concerning review of a draft EIR by another agency in either CEQA or the Guidelines, we conclude that to “consult with” (Pub. Resources Code, §§ 21104, subd. (a)), 21153, subd. (a)) another agency concerning a draft EIR means to provide a notice of completion and a copy of the draft EIR in order to facilitate timely review and comment by the other agency. Petitioners’ argument that the consultation requirement invites judicial review of the quality of the City’s responses to letters received after the close of the public review period by some measure other than the standard applicable to responses to comments is not supported by CEQA or the Guidelines. Petitioners have not shown that the City failed to provide the required notice and copy of the draft EIR to NAHC and therefore have not shown a failure to consult. To the extent Petitioners argue that the responses to NAHC’s late comments were inadequate, we conclude that the responses adequately explained the City’s conclusion that the data recovery plan was appropriate.

j. *The Discussion of Alternatives was Adequate with Respect to Historical Archaeological Resources*

Petitioners contend the range of alternatives discussed in the EIR was inadequate because the EIR did not discuss any alternative that would avoid historical archaeological resources by redesigning, relocating, or omitting the riparian corridor, or by reducing the size or changing the location of other portions of the development. An

subds. (a), (f); *Goleta Valley*, *supra*, 52 Cal.3d at pp. 565-566; *Laurel Heights I*, *supra*, 47 Cal.3d at pp. 406-407.)

The EIR analyzed seven alternatives to the proposed project: (1) a “no project” alternative involving no development on the phase two site; (2) a “no project” alternative involving development of the maximum square footage allowed under the existing specific plan and zoning (108,050 square feet of office space only); (3) development of the maximum square footage allowed under the specific plan if the zoning were amended (1,758,050 square feet of office space, 615,000 square feet of retail space, 20,000 square feet of community-serving uses, 600 hotel rooms, and no housing); (4) development of the same improvements as the proposed project but with a 25-percent reduction in density of each land use; (5) development of housing, park space, and community-serving uses with a 25-percent reduction in density, and no development of retail or office space; (6) development of housing with a 75-percent reduction in density, but no development of retail, office, or community-serving uses; and (7) development of the same improvements as the proposed project at an alternative site, but with no riparian corridor or bluff restoration. The EIR also briefly discussed several alternatives that were rejected as infeasible and therefore were not analyzed further in the EIR, including a regional park, public entertainment uses such as a theme park or sports stadium, light industrial uses, a transit center, and a school.

Alternatives 3 through 6 each included construction of a riparian corridor essentially identical to that in the proposed project. The two “no project” alternatives (alternatives 1 and 2) and the off-site alternative (alternative 7) included no riparian

("Consideration and Discussion of Mitigation Measures Proposed to Minimize Significant Effects") and the introductory heading in subsection (b) ("Mitigation Measures Related to Impacts on Historical Resources") both refer to "Mitigation Measures," and subsection (b)(3)(A) refers to preservation in place as "the preferred manner of mitigating impacts to archaeological sites." Guidelines section 15126.6, in contrast, is entitled "Consideration and Discussion of Alternatives to the Proposed Project," governs the discussion of alternatives to the proposed project, and does not state that the discussion of alternatives must include an alternative designed to accomplish preservation in place. Accordingly, we conclude that although an EIR must discuss mitigation measures designed to accomplish preservation in place pursuant to section 15126.4, subdivision (b)(3), it need not include in the discussion of alternatives an alternative designed to accomplish more preservation in place.

We conclude further that the failure to analyze an alternative designed to accomplish more preservation in place did not render the range of alternatives inadequate. The EIR analyzed several alternatives to the project as a whole, including three alternatives without a riparian corridor and that either would not disturb historical archaeological resources or would do so to a much lesser extent. The analysis provided a sufficient basis for comparison with the proposed project with respect to the environmental impacts as a whole and impacts to historical archaeological resources in particular. Moreover, the EIR was not required to analyze an alternative designed to reduce each individual significant impact, as we have stated.

and the City did not expressly find that the project and the adopted mitigation measures were consistent with the general plan conservation element. A court must defer to an agency's finding that a land use decision is consistent with a general plan unless there is no substantial evidence to support the conclusion, that is, unless no reasonable person could have reached the same conclusion. (*No Oil, Inc. v. City of Los Angeles* (1987) 196 Cal.App.3d 223, 243; *Greenebaum v. City of Los Angeles* (1984) 153 Cal.App.3d 391, 407-408.) *Families Unafraid to Uphold Rural etc. County v. Board of Supervisors* (1998) 62 Cal.App.4th 1332, 1341-1342, for example, held that the evidence compelled the conclusion that a subdivision project was inconsistent with a "fundamental, mandatory and specific land use policy" in the general plan's land use element, despite the board of supervisor's finding of consistency. Absent an express finding by the City to review, however, we must resort to other principles to determine whether the EIR was required to discuss the purported inconsistency.

Every county and city must adopt a "comprehensive, long-term general plan" for its physical development. (Gov. Code, § 65300.) A general plan must include "a statement of development policies and . . . objectives, principles, standards, and plan proposals." (*Id.*, § 65302.) A general plan embodies fundamental policy decisions (*Goleta Valley, supra*, 52 Cal.3d at p. 571) and serves as a "charter for future development" (*Leshar Communications, Inc. v. City of Walnut Creek* (1990) 52 Cal.3d 531, 540). "The policies in a general plan typically reflect a range of competing interests. [Citation.]" (*Federation of Hillside & Canyon Assns. v. City of Los Angeles* (2004) 126 Cal.App.4th 1180, 1194.)

regulations and procedures.” It states further that the responsibility for those programs belongs to particular City departments “and/or the []lead agency responsible for project implementation.”

Petitioners construe these general plan provisions to mean that the City has the sole responsibility to monitor and enforce mitigation measures designed to protect archaeological resources and cannot rely on the Corps of Engineers or other agencies. We do not construe the provisions so narrowly. In our view, the provisions do not impose a mandatory and specific requirement that the City monitor and enforce mitigation measures for all private development projects. A more reasonable construction of the provisions is that the City, through permit conditions, regulations, and procedures, may require project applicants to protect archaeological resources and can rely on other public agencies to ensure compliance with mitigation measures. Accordingly, we conclude that Petitioners have not shown a violation of Guidelines section 15125, subdivision (d).

5. *Methane Gas Impacts*

a. *Factual Background*

Methane, a colorless, odorless, hydrocarbon gas, occurs naturally in soils and is flammable in some concentrations, and therefore is a potential danger. Numerous soil gas surveys were conducted on the phase one site to measure methane concentrations, including surveys by Exploration Technologies, Inc. (ETI), a consultant hired by the City’s Department of Building and Safety. The soil gas surveys generally involved the insertion of a hollow metal rod into soil to a depth of three to five feet and the removal

concentrations measured. The methane mitigation measures include dewatering, an impervious membrane, and both passive and active subslab vent systems. The Playa Vista Methane Guidelines also incorporated the then-draft Methane Mitigation Standard for the City, which required the same mitigation measures. The City enacted an ordinance in February 2004 establishing methane mitigation requirements for new buildings and paved areas located in defined methane zones or methane buffer zones throughout the City, including required site testing and a series of methane mitigation measures depending on the concentrations measured. The methane mitigation system requirements under the ordinance apparently are identical to those under the Playa Vista Methane Guidelines.

b. *The EIR, Responses to Comments on Methane Gas Testing, and the City's Findings*

The draft EIR described the soil gas surveys performed on the phase two site and the prior surveys on the phase one site. It stated that high methane gas levels on portions of the phase two site were a potentially significant impact, but that the recommended mitigation measures would reduce the impact to an insignificant level. The recommended mitigation measures were those required by the Playa Vista Methane Guidelines and draft Methane Mitigation Standard, both attached as appendices to the EIR. The draft EIR stated that a methane safety plan in compliance with those requirements should be required for each building before a building permit is issued.

A written comment by Jeanette Vosburg, a local resident, attached an excerpt from ETI's report updated as of August 10, 2001, stating that further soil gas sampling

“In order to properly and accurately characterize the proposed project site’s methane contamination, the entire Playa Vista site must be properly characterized, which requires additional testing in both the Phase One development area and the proposed Phase Two development area. The DEIR fails to recognize the need for this additional precautionary investigation, and therefore, the DEIR should be revised to do so.”

The City provided topical responses to issues that were raised in several comments. The topical response on methane gas generally described the results of the testing discussed in the draft EIR and stated that additional soil gas testing would be required prior to the issuance of individual building permits. It stated further that appropriate mitigation measures would be implemented based on the test results and that methane concentrations within buildings would be monitored. The City also responded individually to the comments by Vosburg and Merschat.

The City’s response to Vosburg’s comment referred to the topical response and parts of the draft EIR discussing methane gas, and stated that the City and numerous consultants had determined in connection with the phase one methane investigation that the methane was from a thermogenic source and was not associated with a natural gas storage field nearby. The response to Merschat’s comment also referred to the topical response and parts of the draft EIR discussing methane gas. The response stated that “low methane concentrations were detected in soil gas within the Proposed Project site,” that only 10 samples collected at the phase two site had methane concentrations above the action level of 5,000 parts per million (10 percent of the lower explosive limit of

An EIR must include facts and analysis sufficient to allow the decision makers and the public to understand the environmental consequences of the project. (Guidelines, § 15151; *Laurel Heights I, supra*, 47 Cal.3d at pp. 404-405; *Napa Citizens for Honest Government v. Napa County Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 356 (*Napa Citizens*)). This does not mean that a reviewing court should weigh conflicting evidence to determine whether the information in an EIR is accurate or complete. Rather, the question for a reviewing court is whether the conclusions in an EIR are supported by substantial evidence (*Laurel Heights I, supra*, at p. 407) and whether the EIR discloses “ ‘the analytic route the . . . agency traveled from evidence to action’ ” (*Goleta Valley, supra*, 52 Cal.3d at p. 568, quoting *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 515). If an appellant challenges the EIR’s reliance on particular studies, “[T]he issue is not whether the studies are irrefutable or whether they could have been better. The relevant issue is only whether the studies are sufficiently credible to be considered *as part of* the total evidence that supports the” agency’s decision. (*Laurel Heights I, supra*, at p. 409; accord, *State Water Resources Control Bd. Cases* (2006) 136 Cal.App.4th 674, 795.)

An agency has the discretion to reject suggestions for additional testing if the EIR

changes caused by the project. For example, if the construction of a new freeway or rail line divides an existing community, the construction would be the physical change, but the social effect on the community would be the basis for determining that the effect would be significant.”)], there is ample evidence in the record that construction activities and the placement of buildings over soils containing methane could cause methane to concentrate in areas, increasing the risk of explosion, and thereby cause an adverse physical change in the environment with respect to methane.

referenced and summarized that discussion in the draft EIR. In light of the required additional testing at each building site and the specified mitigation measures to be implemented based on the test results, we conclude that the evidence supports the reasonable conclusion that the prior methane testing discussed in the EIR was sufficient to establish a general site characterization and that no additional methane testing was needed prior to project approval.²³ The responses to comments adequately explained that the City declined to require additional methane testing prior to project approval for these reasons, and therefore were sufficient under CEQA. (Guidelines, § 15088, subd. (c).)

The formulation of specific mitigation measures ordinarily should not be deferred to a time after project approval. (Guidelines, § 15126.4, subd. (a)(1)(B).)²⁴

²³ Petitioners argue that the failure to mention in the draft EIR the ETI report recommending additional soil gas testing throughout the site was misleading and that the statement in the draft EIR that some of the prior testing was done “in coordination with ETI” was false. In light of the requirement of additional testing at each building site, we conclude that the failure to mention in the EIR the City’s rejection of ETI’s recommendation did not seriously undermine the information provided in the EIR or render the EIR insufficient as an informational document. Regarding the quoted statement, a letter from Playa Capital’s environmental consultant Camp Dresser & McKee Inc. dated June 4, 2001, stated that the testing completed in January 2001 was in accordance with ETI’s request for additional samples at specified locations, which supports the statement in the draft EIR that the testing was done “in coordination with ETI.”

²⁴ “Where several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified. Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way.” (Guidelines, § 15126.4, subd. (a)(1)(B).)

- d. *The Responses to Comments Concerning Phase One Methane Mitigation Were Adequate and Petitioners Have Not Shown that the Omission of Information from the EIR Rendered the EIR Inadequate*

Petitioners contend the EIR should have disclosed available data concerning the efficacy of the phase one methane mitigation systems because those systems are similar to the phase two methane mitigation measures, the failure to disclose that information rendered the EIR inadequate, and the City's responses to comments requesting that information were inadequate.

The state Department of Toxic Substances Control stated in a written comment that the draft EIR provided no specific information on the data collected through methane monitoring in the phase one project and that such information would be useful.²⁵ Grassroots Coalition and Friends of the Children commented that the phase two methane mitigation measures were based on similar systems installed in phase one, that those systems "included multiple experimental and immature technology," and that the EIR should disclose the monitoring data collected on the phase one site. Grassroots Coalition and Friends of the Children commented further that documents in the City's possession revealed the failure or lack of implementation of some of the phase one mitigation systems.

²⁵ The comment by the Department of Toxic Substances Control stated: "The text on page 709 states that the Fountain Park Apartments on the Playa Vista phase I project is completely built. The EIR does not provide specific information on the methane controls actually installed in the Fountain Park Apartments. If monitoring has been installed it would be useful to provide data on the monitoring results."

qualified engineer to ensure their proper functioning. Further information and data concerning the efficacy of the phase one methane mitigation systems might have been useful, but was not essential to an adequate response.

We conclude further that the absence of further information and data concerning the efficacy of the phase one methane mitigation systems did not render the EIR inadequate. Petitioners have not shown that the omitted information was essential to an understanding of the phase two methane mitigation measures, that the omitted information compels the conclusion that the phase two methane mitigation systems are inadequate, or that the City could not conclude based on other information in the record that the phase two methane mitigation measures are adequate.

e. *The Evidence Supports the City's Finding on Mitigation*

Petitioners contend the evidence does not support the City's finding that the adopted mitigation measures will reduce the methane gas impacts to an insignificant level. They cite letters from ETI and the City's Department of Building and Safety dated from May 2000 to January 2001 that purportedly stressed the importance of "deep vent wells" as part of a subsurface methane venting system. In light of this evidence, Petitioners argue that the omission of "deep vent wells" from the phase two methane mitigation measures compels the conclusion that the mitigation is ineffective. We disagree. Petitioners selectively cite a series of letters written in connection with the phase one mitigation measures, but fail to discuss either the context of those letters, the differences between the phase one and phase two mitigation systems, or the evidence in the record supporting the City's finding.

fair summary of the evidence ‘grows with the complexity of the record.’ ” (*Boeken v. Philip Morris Inc.* (2005) 127 Cal.App.4th 1640, 1658.)

Petitioners have failed to set forth a full statement of the evidence that may support the City’s finding. We therefore conclude that Petitioners cannot satisfy their burden to show that the finding is not supported by substantial evidence and presume that the evidence supports the City’s finding.

6. *Wastewater Impacts*

a. *Factual Background, the EIR, and the City’s Findings*

Wastewater from the phase two project would be conveyed through existing sewers to the Hyperion Treatment Plant in Playa Del Rey. The Hyperion Treatment Plant together with two smaller wastewater treatment plants comprise the Hyperion Treatment System. After treatment at the Hyperion Treatment Plant, effluent is discharged into the Santa Monica Bay.

The City’s CEQA Thresholds Guide, which was in draft form at the time the draft EIR was circulated, stated that a project normally would have a significant wastewater impact if “The project would cause a measurable increase in wastewater flows at a point where, and a time when, a sewer’s capacity is already constrained or that would cause a sewer’s capacity to become constrained,” or if “The project’s additional wastewater flows would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the Wastewater Facilities Plan or General Plan and its elements.” (Draft L.A. CEQA Thresholds Guide, p. K.2-3.) The draft CEQA Thresholds Guide listed

The EIR stated that the existing wastewater treatment capacity in the Hyperion Treatment System was sufficient to accommodate the average daily wastewater flows expected from the phase two project through 2010. The EIR stated further that beginning in 2010, wastewater flows during peak months even without the phase two project were expected to exceed the system's existing capacity of 550 million gallons per day (mgd) by 20 mgd, and that beginning in 2010, the phase two project would contribute an additional 1.12 mgd during peak months to an already overburdened system. The EIR stated that the exacerbation of the overburdening of the wastewater treatment system was a potentially significant impact, but that the impact would be reduced to a level of insignificance by enforcement of the City's sewer permit allocation ordinance. The EIR stated that the ordinance requires a property owner to demonstrate that there is sufficient collection and treatment capacity for the property's wastewater before a building permit is issued and before the property can be connected to the municipal sewer system.²⁷ The EIR therefore concluded that the project's direct

²⁷ The sewer permit allocation ordinance (L.A. Ord. No. 166,060) establishes an "annual sewage allotment" of 5 million gallons and assigns portions of that allotment on a monthly basis to priority projects, public benefit projects, and nonpriority projects. It states that the City Council may reduce the annual sewage allotment "if the Council finds that a reduction is necessary to keep the annual sewer use within the treatment capacity of the Hyperion Treatment System." Thus, the ordinance provides that the system's limited treatment capacity can require a reduction of the annual sewer allotment. The ordinance states that the Department of Building and Safety can formally accept a set of plans and specifications for "plan checking" only after the Department of Public Works determines that "there is allotted sewer capacity available for such Project." It states further, however, that if there is no remaining monthly allotment, the project must be placed on a waiting list and that at the request of the applicant, the Department of Building and Safety "shall accept a set of plans and

increasing the system's treatment capacity, but did not state that the City had proposed or adopted any plan and did not discuss the impacts of the measures that may be required to treat the project's wastewater.

An EIR must analyze the environmental impacts of the proposed project (Pub. Resources Code, § 21100, subd. (b); Guidelines, § 15126.2), and in doing so must assume that the project will be built out and fully operational. (*Vineyard Area Citizens, supra*, 40 Cal.4th at pp. 431, 444; *Stanislaus Natural Heritage Project v. County of Stanislaus* (1996) 48 Cal.App.4th 182, 205-206 (*Stanislaus Natural Heritage*)). Both the use of water and its disposal and treatment are reasonably foreseeable activities for a land use project of this nature, so the impacts of providing water to the project and treating wastewater from the project are reasonably foreseeable consequences of the project that must be analyzed in an EIR. (*Vineyard Area Citizens, supra*, at p. 431 [water supply]; *Stanislaus Natural Heritage, supra*, at p. 206 [same]; *Napa Citizens, supra*, 91 Cal.App.4th at pp. 373-374 [water supply and wastewater treatment]; *San Joaquin Raptor, supra*, 27 Cal.App.4th at pp. 731-732 [required sewer expansion].) The failure to analyze those impacts would deprive the decision makers and the public of important information concerning the potential environmental impacts of the project.

Vineyard Area Citizens, supra, 40 Cal.4th 412 involved an EIR prepared for a community plan and a specific plan for a large, mixed-use development project. The EIR stated that the project would depend on both groundwater and surface water for its water supplies. (*Id.* at p. 423.) The projected long-term water supplies consisted of an unspecified combination of groundwater and surface water. (*Id.* at p. 440.) The EIR

Vineyard Area Citizens, supra, 40 Cal.4th 412 stated with respect to the mitigation measure to withhold entitlements: “An EIR evaluating a planned land use project must assume that all phases of the project will eventually be built and will need water, and must analyze, to the extent reasonably possible, the impacts of providing water to the entire proposed project. (*Stanislaus Natural Heritage, supra*, 48 Cal.App.4th at p. 206.)” (*Id.* at p. 431.) “[A]n EIR may not substitute a provision precluding further development for identification and analysis of the project’s intended and likely water sources. ‘While it might be argued that not building a portion of the project is the ultimate mitigation, it must be borne in mind that the EIR must address the project and assumes the project will be built.’ (*Stanislaus Natural Heritage, supra*, 48 Cal.App.4th at p. 206.)” (*Id.* at p. 444.) *Stanislaus Natural Heritage* similarly held that an EIR for a large residential community and resort project must identify and analyze the environmental impacts of the intended long-term water supplies and could not rely on a provision precluding further development in lieu of providing that analysis. (*Stanislaus Natural Heritage, supra*, 48 Cal.App.4th at pp. 205-206.)

Napa Citizens, supra, 91 Cal.App.4th 342 held that a subsequent EIR for an updated specific plan was inadequate because it failed to discuss alternative sources of water and wastewater treatment that might be needed if the anticipated but uncertain sources failed to materialize, and failed to discuss the environmental impacts of using those sources. *Napa Citizens* stated: “Because of the uncertainty surrounding the anticipated sources for water and wastewater treatment, however, the FSEIR also cannot simply label the possibility that they will not materialize as ‘speculative,’ and decline to

beginning in 2010 when the Hyperion Treatment System is projected to exceed its capacity. The EIR stated that the alternatives included increasing the capacity of the Hyperion Treatment Plant, building new reclamation capacity upstream of that plant, water conservation, and infiltration or inflow reduction. The City's draft CEQA Thresholds Guide also described potential measures to relieve a constrained wastewater treatment system. The EIR, however, failed to identify the measures intended for implementation here or analyze their environmental impacts, and failed to analyze the impacts of alternative measures to accommodate the project's wastewater. Instead, the EIR relied on enforcement of the City's sewer permit allocation ordinance to preclude the issuance of a building permit or a sewer connection if the collection and treatment capacity is insufficient.

We conclude that the City cannot rely on the ordinance in lieu of identifying and analyzing the environmental impacts of the intended measures to provide for treatment of the project's wastewater and, if those measures are uncertain, analyzing the environmental impacts of alternative measures. (Cf. *Vineyard Area Citizens, supra*, 40 Cal.4th at pp. 432, 444.) As in *Vineyard Area Citizens, supra*, 40 Cal.4th at page 444 and *Stanislaus Natural Heritage, supra*, 48 Cal.App.4th at page 206, the EIR must assume that the project will be built out and fully operational and cannot avoid analysis of significant environmental impacts by assuming that the project might not be

months. We need not decide whether it is appropriate for this court to consider that information in this appeal. In light of our conclusion that the EIR is inadequate on other grounds and that the EIR must be revised, the revised EIR should discuss and evaluate any pertinent new information.²⁹

c. *The EIR Must Discuss any Cumulative Wastewater Impacts to the Santa Monica Bay*

Petitioners contend the EIR improperly failed to analyze environmental impacts to the Santa Monica Bay as cumulative impacts resulting in part from the project's wastewater discharge. The EIR discussed potential cumulative impacts with respect to sewer capacity but did not discuss potential cumulative impacts on water quality in the Santa Monica Bay.

An EIR must discuss significant cumulative impacts to which the project contributes an incremental amount. (Guidelines, § 15130, subd. (a).) "As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts." (*Ibid.*) "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." (*Id.*, § 15355, subd. (b).) "The discussion

²⁹ Playa Capital's and the City's joint request for judicial notice of the purported new information is denied.

argue that this is so because the City's CEQA Thresholds Guide and the checklist of environmental impacts in Appendix G of the Guidelines limited the required analysis of wastewater impacts to impacts on the wastewater system capacity. We disagree. The City's draft CEQA Thresholds Guide in its Wastewater chapter described potentially significant impacts to the wastewater system capacity, but did not limit the scope of analysis of resulting environmental impacts to only impacts on the system capacity. The Surface Water Quality chapter expressly stated that water quality may be impacted by pollutants discharged directly into receiving waters, including the Santa Monica Bay, from municipal wastewater treatment plants, and that such an impact normally would be considered significant if the discharge resulted in pollution, contamination, or nuisance as defined in Water Code section 13050 or resulted in a violation of regulatory standards. (Draft L.A. CEQA Thresholds Guide, *supra*, pp. D.2-2 to D.2-4.)

Appendix G of the Guidelines contains a checklist of environmental impacts that is provided as a sample form for use in preparing an initial study. (Guidelines, § 15064, subd. (f).) In the Utilities and Service Systems category, the checklist contains questions relating to the impact of the project on wastewater treatment system capacity. (Guidelines, Appendix G, p. 11.) Those questions relating to impacts on a public utility system do not suggest any limitation on the required analysis of impacts on water quality. In the Hydrology and Water Quality category, the checklist contains questions relating to impacts on water quality standards and on water quality in general. (*Id.* at pp. 7-8.)

disadvantages of the proposed project and the environmental advantages and disadvantages that would result if the project were disapproved. (*Ibid.*; *Planning & Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892, 917-918.) To accomplish this objective, an EIR must discuss a “no project” alternative regardless of whether such an alternative is considered feasible. (*Planning & Conservation League, supra*, at pp. 917-918.) If the proposed project is the revision of an existing land use or regulatory plan, the “no project” alternative is the continuation of the existing plan into the future. (Guidelines, § 15126.6, subd. (e)(3)(A).) If the proposed project is development on identifiable property, the “no project” alternative assumes that the development will not occur. (*Id.*, subd. (e)(3)(B).)

The analysis of the “no project” alternative must include a discussion of the existing environmental conditions “as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.” (Guidelines, § 15126.6, subd. (e)(2).) “If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this ‘no project’ consequence should be discussed. In certain instances, the no project alternative means ‘no build’ wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project’s non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.” (*Id.*, subd. (e)(3)(B).)

Project, as presented in . . . the Draft EIR.” The response stated further that the project included some surface water runoff treatment in that the riparian corridor in the phase two project would drain into the freshwater marsh in the phase one project.

Petitioners contend the discussion of the first “no project” alternative was inadequate because it failed to analyze the benefits of use of the site as a treatment wetlands. They argue that use of the project site as a treatment wetlands for surface water runoff could reduce the future burden on the City’s wastewater treatment system and provide significant environmental benefits that are not discussed in the draft EIR. They contend use of the site as a treatment wetlands should have been part of the “no project” alternative because such use would be a practical result of project disapproval. Petitioners also contend the response to the comment was inadequate because the response provided no valid reason why the discussion of the “no project” alternative did not consider use of the site as a treatment wetlands and no valid reason why use of the property as a treatment wetlands was infeasible.

The discussion of alternatives in the draft EIR included a brief description of potential alternatives that were considered but rejected as infeasible (see Guidelines, § 15126.6, subd. (c)). Among the rejected alternatives was a “habitat restoration” alternative that “could include passive open space and the creation of wetlands ecosystems.” The draft EIR stated that the “habitat restoration” alternative was not analyzed further because it failed to satisfy nearly all of the project’s objectives and “there is no indication that funding for such alternative[] would be available.” In addition to the comment and response cited by Petitioners, a comment by Grassroots

at p. 407.) Petitioners cite evidence that the City considered the creation of treatment wetlands a desirable means to treat surface water runoff in lieu of relying on the wastewater treatment system, but cite no evidence that would compel the conclusion that the funds necessary to create such a wetlands at the project site--including funds to purchase or condemn the property--were available to the City. We therefore conclude that Petitioners have shown no abuse of discretion in this regard.

c. *The Analysis of the First "No Project" Alternative Was Adequate with Respect to Remediation of Contamination*

The EIR began with an executive summary, including a summary of the analysis of project alternatives. The summary stated that the first "no project" alternative would avoid impacts that would result from the proposed project, but stated further that the alternative "would produce . . . adverse environmental impacts . . . by omission of improvements associated with the Proposed Project." It suggested that the proposed project would result in the remediation of groundwater pollution that would not be remediated under the first "no project" alternative: "[T]he Proposed Project's design would result in implementation and completion of privately funded remediation of existing public safety concerns in the area (i.e., localized flooding, bluff stability, and surface and ground water pollution), which would not be implemented under the No Project Alternative."

The full discussion of alternatives in the EIR, unlike the executive summary, stated that the property was subject to a cleanup and abatement order issued by the California Regional Water Quality Control Board and that the remediation of ground

Playa Capital and the City argue that BEEP failed to exhaust its administrative remedies on this issue because no person raised this objection to the EIR during the public comment period. We disagree. Public Resources Code section 21177, subdivision (a) states that no action or proceeding can be brought to challenge a public agency's compliance with CEQA unless the alleged grounds for noncompliance were presented to the agency "by any person during the public comment period provided by this division or prior to the close of public hearing on the project before the issuance of the notice of determination." Subdivision (b) states that no person can maintain such an action or proceeding unless that person objected to approval of the project "during the public comment period provided by this division or prior to the close of the public hearing on the project before the issuance of the notice of determination." Thus, a person who objected to approval of the project during the public comment period or at any time prior to the close of the public hearing on the project and before the issuance of the notice of determination can litigate issues that were raised by that person, or by any other person, during that time. Contrary to the respondents' argument, the issues that can be litigated are not limited to issues raised during the public comment period, but include all issues raised by any person prior to the close of the public hearing on the project and before the issuance of the notice of determination. (*Bakersfield Citizens for Local Control v. City of Bakersfield*, *supra*, 124 Cal.App.4th at p. 1201; *Federation of Hillside & Canyon Associations v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1263 (*Federation of Hillsides*))

the locations impacted by the Proposed Project during the same respective peak hours.”³¹

Contrary to the traffic study, the EIR’s executive summary stated that the second “no project” alternative “would continue to generate significant impacts on traffic, regional air quality, construction noise, and solid waste disposal, although at reduced levels compared to the Proposed Project.” Similarly, the full discussion of alternatives in the EIR stated with regard to the second “no project” alternative: “Per this analysis [i.e., the traffic study], the alternative produces significant traffic impacts at approximately 1 percent and 0 percent of the analysis locations in the A.M. and P.M. peak hours, respectively, compared to 14 percent and 22 percent of the locations impacted by the Proposed Project during the same respective peak hours. Therefore, on an overall basis, this alternative would adversely impact traffic to a lesser degree than the Proposed Project.” A summary at the end of the full discussion of the second “no project” alternative also stated that the alternative “would continue to generate

³¹ The study stated further that the projected baseline conditions as of 2010 with no additional development on the site were that 84 and 104 of the intersections would operate at unacceptable levels of service (rated E or F) during morning and afternoon peak hours, respectively. It stated that the second “no project” alternative would result in 83 and 104 of the intersections operating at unacceptable service levels during those respective hours. The decrease from 84 to 83 in the number of intersections projected to operate at unacceptable service levels in the morning peak hours was due to street improvements to McConnell Avenue that were part of the phase two project and apparently were also included in the second “no project” alternative. The study stated that the proposed project would result in 90 and 108 of the intersections operating at unacceptable levels of service during the morning and afternoon peak hours, respectively.

Proposed Project.” The full discussion of alternatives in the EIR stated that the second “no project” alternative would generate 0.324 tons per day of solid waste, compared with 18.917 tons per day for the proposed project. It stated that both figures were before waste diversion and that waste diversion would substantially reduce the amount of waste requiring landfill disposal. The full discussion stated that the alternative would generate 98.3 percent less solid waste than the proposed project and stated, “As with the Proposed Project, this alternative would have a significant impact on solid waste generation.” A summary at the end of the full discussion of the second “no project” alternative also stated that the alternative “would continue to generate significant impacts on traffic, regional air quality, construction noise, and solid waste disposal, although at reduced levels compared to the Proposed Project.” A table following that summary comparing impacts of the alternative with those of the project stated that solid waste impacts of the alternative would be significant and stated, “Any exacerbation in demand is considered significant.”

BEEP contends the characterization of the solid waste impacts of both the alternative and the project as significant despite the vast difference in the degree of the impacts was misleading. We disagree. The EIR quantified the difference between the amount of solid waste that would be generated by the second “no project” alternative and the amount that would be generated by the project, consistently stated that the solid waste impacts of the alternative would be less than those of the project, and was not misleading in this regard. BEEP also argues that the percentage difference between the solid waste impacts of the alternative and those of the project were understated because

to the size of the attracting zones and inversely proportional to the distance or travel time between the zones.” Petitioners’ challenge to determinations made using the gravity model is effectively a challenge to the City’s use of that model and its reliance on the resulting data. Challenges to the methodology for studying an impact and the reliability or accuracy of the data present factual questions, so we must reject such a challenge if substantial evidence supports the agency’s decision as to those matters and the EIR is not clearly inadequate or unsupported. (*Federation of Hillside, supra*, 83 Cal.App.4th at p. 1259.) “When a challenge is brought to studies on which an EIR is based, ‘the issue is not whether the studies are irrefutable or whether they could have been better. The relevant issue is only whether the studies are sufficiently credible to be considered *as part of* the total evidence that supports the’ agency’s decision. (*Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 409 [253 Cal.Rptr. 426, 764 P.2d 278].) ‘A clearly inadequate or unsupported study is entitled to no judicial deference.’ (*Id.* at p. 409, fn. 12.) The party challenging the EIR, however, bears the burden of demonstrating that the studies on which the EIR is based ‘are clearly inadequate or unsupported.’ (*Ibid.*)” (*State Water Resources Control Bd. Cases, supra*, 136 Cal.App.4th at p. 795.)

Petitioners have not shown that the traffic study relied on in the EIR was clearly inadequate or unsupported with respect to its trip distribution analysis. Instead, Petitioners have shown only a difference of opinion that the City, rather than the courts, was entrusted to resolve. The same is true with respect to Petitioners’ related arguments that trip distribution determinations should have been based on the actual driving

was misleading because some of the information used to verify the trip distribution data was outdated and unreliable. Petitioners do not meaningfully analyze the differences between the 1994 and 2004 SCAG forecasts and have not shown that reliance on the 1994 SCAG forecast rendered the traffic study clearly inaccurate or unsupported, and therefore have not shown an abuse of discretion. (*State Water Resources Control Bd. Cases, supra*, 136 Cal.App.4th at p. 795; *Federation of Hillside, supra*, 83 Cal.App.4th at p. 1259.)

c. *Petitioners Have Not Shown that the City's Reliance on Caltrans Data Was Improper*

A table in the draft EIR stated daily freeway traffic volumes as of 2003 on eleven freeway segments. The draft EIR projected traffic conditions in 2010 and analyzed the project's traffic impacts with respect to the baseline conditions in 2010. The Department of Transportation (Caltrans) commented that the actual traffic volumes in 2003 were much higher as shown in its latest published data and suggested that the table be modified to reflect the higher volumes. The City responded that the most recent Caltrans data available at the time the draft EIR was prepared were from 2001, and that the 2002 figures that were published later did not differ significantly from the 2003 traffic volume projections stated in the draft EIR. The response stated that the 2002 Caltrans figures were greater than the projected 2003 figures stated in the draft EIR in only two of the eleven freeway segments, and that those differences were not material and did not exceed the normal yearly fluctuations in traffic volumes.

route.³³ The draft EIR stated that those mitigation measures would resolve the current operational deficiencies and would reduce the project's impacts to both individual bus lines and the bus transit system as a whole to an insignificant level.

Petitioners contend the analysis of impacts on individual bus lines was inadequate because the EIR failed to analyze whether the addition of buses to Santa Monica line 3 would alleviate the impacts of the phase two project, failed to address the current ridership of Santa Monica line 8, and failed to analyze the impacts of the phase two project on Santa Monica lines 8 and 14. We conclude that the absence of a specific discussion of those matters in the EIR did not render the analysis inadequate. The EIR and the supporting traffic study both stated that those routes were included in the overall analysis, that the transit agencies had provided the ridership figures available at the time, and that the proposed mitigation measures would reduce the project's impacts to individual bus lines to an insignificant level. The EIR provided sufficient information on this subject to serve its purpose as an informational document, and the purported deficiencies with respect to the level of detail discussed in the EIR did not render the analysis inadequate. We also reject Petitioners' argument that the EIR failed to adequately analyze the project's impacts on the bus transit system as a whole. Petitioners fail to show that the discussion in the EIR was inadequate as to either individual bus lines or the bus transit system as a whole.

³³ The City later modified the traffic mitigation measures in response to suggestions by Culver City, enhancing the required signal system improvements and reducing the total number of buses to be purchased from six to five.

ensure that feasible mitigation measures will actually be implemented as a condition of development, and not merely adopted and then neglected or disregarded. [Citation.]” (*Federation of Hillside, supra*, 83 Cal.App.4th at p. 1261, italics omitted.)

A public agency’s payment to a third party of funds needed to implement measures within the control of the third party to mitigate the environmental effects of a project can be a feasible form of mitigation. (*City of Marina, supra*, 39 Cal.4th at pp. 359-360.) The agency need pay no more than is necessary to mitigate the effects of the project and need not pay to mitigate effects caused by others. (*Id.* at pp. 361-362.) “ ‘Of course, a commitment to pay fees without any evidence that mitigation will actually occur is inadequate.’ [Citations.]” (*Id.* at p. 365.) The adequacy of such a mitigation measure, including the amount of the agency’s payment and the degree of assurance that the mitigation will actually occur, is determined by the agency subject to judicial review for abuse of discretion. (*Id.* at pp. 361, 365.)

Federation of Hillside, supra, 83 Cal.App.4th 1252 involved an amendment to the City’s general plan. The EIR described a Transportation Improvement Mitigation Plan (TIMP) proposed by the City as a program to mitigate the transportation impacts of the amended general plan’s land use and growth policies, and stated that the mitigation

substantially lessen the significant effect; (2) those measures are within the exclusive jurisdiction of another public agency and have been adopted, or can and should be adopted, by that agency; or (3) specific economic, legal, social, technological, or other considerations make the mitigation measures identified in the EIR infeasible, and specific overriding economic, legal, social, technological, or other benefits outweigh the significant environmental effects. (Pub. Resources Code, §§ 21081, 21081.5; Guidelines, § 15091, subds. (a)-(c).)

including infrastructure improvements.³⁵ (*Id.* at pp. 346-347.) FORA had assumed that the university would pay its share of the cost of infrastructure improvements, but the Board of Trustees refused to contribute any amount toward the cost of the improvements. (*Id.* at p. 351.) In approving the project, the board found that the improvements were the responsibility of FORA, that mitigation was infeasible because the board was legally prohibited from contributing funds to FORA for that purpose, and that the project offered overriding benefits that outweighed any remaining unmitigated environmental effects. (*Ibid.*) *City of Marina* held that the findings that mitigation was not the board's responsibility and that mitigation was infeasible were based on erroneous legal assumptions and therefore were legally erroneous. (*Id.* at pp. 355-356.) *City of Marina* stated, "... CEQA requires the Trustees to avoid or mitigate, if feasible, the significant environmental effects of their project (Pub. Resources Code, § 21002.1, subd. (b)) and ... payments to FORA may represent a feasible form of mitigation." The court stated that the board's payment should be " "roughly proportional" " to the effects of the project and that the board "need not pay to mitigate effects caused by other users of the base." (*City of Marina, supra*, at pp. 361-362.)

City of Marina stated further that "unavoidable uncertainties affecting the funding and implementation of the infrastructure improvements ... do not render voluntary contributions to FORA by the Trustees infeasible as a method of mitigating"

³⁵ FORA was created by the Legislature to govern Fort Ord and manage the transition of the base from military to civilian uses. (*City of Marina, supra*, 39 Cal.4th at p. 346.)

concerns expressed in *Federation of Hillside, supra*, 83 Cal.App.4th 1252 that the City had made no enforceable commitment to fund its share of the costs of the mitigation measures and that there was no reasonable basis to conclude that the mitigation would actually occur therefore are not present here. The City's payment obligation to Culver City is more akin to the proposed payments by the board of trustees to FORA in *City of Marina*, which the court found were a feasible means to mitigate the environmental effects of the project. Similarly here, we conclude that the City's payment obligation under its contract with Culver City is a feasible form of mitigation, that Petitioners have cited no evidence showing any serious doubt as to Culver City's intent or ability to provide the remaining funds necessary to operate the buses, and that substantial evidence supports the City's finding that the related impacts will be mitigated to an insignificant level.

f. *BEEP Has Not Shown an Abuse of Discretion with Respect to Condition 116*

Among the conditions imposed by the City on its approval of the vesting tentative map for the phase one project was condition 116. Condition 116, as quoted in the phase two final EIR, stated: "The maximum average number of P.M. peak hour off-site automobile trips generated by the cumulative total of First Phase office space shall be limited to 1,493." "The failure to achieve the [Playa Vista First Phase Project] trip reduction goal will result in a corresponding decrease in total office entitlement for the Playa Vista Master Plan Project as a whole." BEEP contends the City cannot approve the development of any office space in phase two until it

in the amount of office space allowed for the Playa Vista development as a whole, the amount to be reduced would be the 5,280,000 square feet of office space contemplated for the entire development (in the words of condition 116, “ ‘the Playa Vista Master Plan Project as a whole’ ”) at the time condition 116 was adopted, rather than the considerably smaller amount of office space actually approved for the entire development. The EIR’s analysis of traffic impacts as of 2010, including traffic anticipated to be generated by the phase one project, supports the conclusion that the phase one office space will not generate peak-hour trips sufficient to require a reduction in the amount of phase two office space. Contrary to BEEP’s argument, condition 116 neither expressly nor impliedly requires the City to withhold approval of any phase two office space until phase one is built out and fully occupied, in these circumstances.

9. *Statement of Overriding Considerations*

BEEP contends the statement of overriding considerations adopted by the City was inadequate because it failed to explain in sufficient detail the City’s balancing of competing benefits and impacts of the phase two project. The statement of overriding considerations stated that specific project benefits outweighed the adverse environmental effects and identified 27 project benefits, including among others the provision of housing, jobs, and recreational spaces in a mixed-use community and the conservation and enhancement of natural resources, including bluff restoration and creation of a riparian corridor.

An agency can approve a project that will cause significant environmental effects if it finds that specific project benefits make the mitigation measures and alternatives

A decision to approve a project despite its significant environmental effects is a policy decision. A statement of overriding considerations must comply with CEQA's procedural requirements that it state the "specific reasons" (Guidelines, § 15093, subd. (b)) for that policy decision and "reflect the ultimate balancing of competing public objectives" (*id.*, § 15021, subd. (d)), and the asserted factual basis for the policy decision must be supported by substantial evidence in the administrative record (Guidelines, § 15093, subd. (b); *Sierra Club v. Contra Costa County* (1992) 10 Cal.App.4th 1212, 1223-1224), but the statement need not describe in detail the weight accorded to the various competing interests or other detailed aspects of the balancing analysis. Rather, a statement of overriding considerations "reflect[s] the ultimate balancing of competing public objectives" (Guidelines, § 15021, subd. (d)) if it identifies the benefits (i.e., the "specific reasons" (*id.*, § 15093, subd. (b))) that outweigh the environmental effects identified in the EIR. (See *San Francisco Ecology Center v. City and County of San Francisco* (1975) 48 Cal.App.3d 584, 596.) We conclude that the City's statement of overriding considerations complied with these requirements by identifying the benefits of the project.

10. *Appropriate Remedies*

Public Resources Code section 21168.9, subdivision (a) states that if a court finds that an agency failed to comply with CEQA, the court must do one or more of the following: (1) mandate that the agency vacate the determination, finding, or decision, in whole or in part; (2) if the court finds that specific project activities will prejudice the consideration or implementation of mitigation measures or alternatives, enjoin any

project approvals. The form of the document used to revise the EIR and whether recirculation of the EIR is necessary are questions for the City to decide in the first instance under the standards governing recirculation of an EIR before certification (Pub. Resources Code, § 21092.1; Guidelines, § 15088.5). (*Protect the Historic Amador Waterways v. Amador Water Agency, supra*, 116 Cal.App.4th at p. 1112.)

Public Resources Code section 21168.9, subdivision (a)(2) also authorizes this court to enjoin project activities that would prejudice the City's consideration or implementation of mitigation measures or alternatives and that could result in an adverse change to the physical environment, until the City fully complies with CEQA. Bureaucratic and financial momentum behind a project can reduce a public agency's flexibility to change its course of action. (*San Joaquin Raptor, supra*, 27 Cal.App.4th at pp. 741-742; see *Laurel Heights I*, 47 Cal.3d at p. 395.) Moreover, when construction is partially completed, an agency is less likely to require a developer to remove or modify the improvements or to change the project design or reduce the density. For these reasons, and to preserve the city's discretion to require project changes or disapprove the project, an immediate stay is appropriate.

DISPOSITION

The judgment is reversed with directions to the superior court to issue a peremptory writ of mandate, consistent with this opinion, directing the City to (1) vacate its approvals of the project and its certification of the EIR; (2) revise the analysis of land use impacts in the EIR; (3) revise the EIR to discuss preservation in place in accordance with Guidelines section 15126.4, subdivisions (a)(1)(B) and (b)(3);

EXHIBIT A-2

Notice of Preparation

The Notice of Preparation (NOP) is used by the Lead Agency to get comments from any person, organization, or government agency that may be concerned with the potential environmental impacts of a proposed project for which an Environmental Impact Report (EIR) is being prepared. The NOP comment period is required by the California Environmental Quality Act to be 30-days. All comments received by the Lead Agency are reviewed and used to determine the scope of the EIR.

- Luxe @ Colfax
ENV-2008-3808-EIR: March 19, 2009

- Oak Village Residences
ENV-2005-8476-EIR: February 26, 2009
 - English Version
 - Versión Español
 - Maps and Graphics

- Wilshire Promenade
ENV-2008-4960-EIR: February 5th, 2009

- Washington Square
ENV-2007-5046-EIR: February 4th, 2009

- University of Southern California Specific Plan
ENV-2009-271-EIR: January 30th, 2009

- Forest Lawn Memorial Park Project
ENV-2007-1060-EIR: December 15, 2008

- Westchester - Playa Del Rey Project
ENV-2008-2610-EIR: December 1, 2008

- 4900 Hollywood Blvd. Project
ENV-2008-524-EIR: November 17, 2008

- The Wilshire Gayley Project
ENV-2008-2368-EIR: August 4, 2008

- Boyle Heights Mixed-Use Community Project
ENV-2008-2141-EIR: June 24, 2008

- La Cienega Eldercare Project
ENV-2008-1994-EIR: June 24, 2008

- Dodger Stadium: Next 50 Years Project
ENV-2008-1659-EIR: June 16, 2008
- Palmer Lorenzo Project
ENV-2006-9471-EIR: June 11, 2008
- Loyola Marymount University Master Plan Project
ENV-2008-1342-EIR: May 23, 2008
- YULA Boy's High School Project
ENV-2008-1799-EIR: June 13, 2008
- Crescent Heights Project
ENV-2008-0729-EIR: June 4, 2008
- SunCal Residential Project
ENV-2008-530-EIR: May 21, 2008
- Valleyheart Senior Living Center
ENV-2001-1196-EIR: May 19, 2008
- Bixel and Lucas Project
ENV-2007-5887-EIR: May 8, 2008
- Museum of Tolerance Project
ENV-2007-2476-EIR: March 28, 2008
- Cedars - Sinai Medical Center
ENV-2008-0620: March 7, 2008
- EIR and Notice of Scoping Meeting for the Sylmar Community Plan
ENV-2006-5624-EIR: February 19, 2008
- Hollywood Gower Project
ENV-2007-5750-EIR: January 28, 2008
- 2455 S.Figueroa Apartments and Replacement Parking Project
ENV-2007-4288-EIR: January 04, 2008
- The Plaza @ The Glen
ENV-2007-4063-EAF: January 02, 2008
- Vesting Tentative Tract No.69976
ENV-2007-3083-EIR: December 24 , 2007
- Pantages Theater Office Tower Addition
ENV-2007-5091-EIR: December 14, 2007
- The Village at Westfield Topanga
ENV-2007-3393-EAF: October 29, 2007
- NoHo Artwalk East and West Project
ENV-2007-1150-EIR: October 25, 2007

- Archstone Hollywood
ENV-2007-3810-EIR : October 10, 2007
- Westfield Fashion Square Expansion
ENV-2007-9914-MND : August 20, 2007
- Wilshire and La Brea Project
ENV-2007-1604-EIR : August 10, 2007
- Universal City Vision Plan
ENV-2007-0254-EIR : August 1, 2007

EXHIBIT A-3

Urban Concepts

8383 Wilshire Boulevard, Suite 300, Beverly Hills, CA 90211
(323) 966-2610 FAX (323) 966-5801

250 Pharr Road, Suite 404, Atlanta, GA 30305
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Bill Christopher
Principal

www.urban-concepts.com

MEMORANDUM

To: Sabrina Venskus
From: Bill Christopher
Date: April 30, 2009
Re: Playa Vista Phase 2

Re: Valuation of Entitlement Request

Your office has requested that our firm prepare an estimate of the potential added land value represented by the applicant's request for certain zoning entitlements with respect to the Phase 2 portion of the Playa Vista complex in the Westchester community of Los Angeles, just to the north of Los Angeles International Airport.

Credentials

Our firm has been involved in the purchase and sale of approximately \$15 billion worth of real estate over the past 15 years, spread over large and small parcels of land scattered throughout North America, Hawai'i and the Carribean. Our primary focus in these transactions has been on the land use regulatory framework affecting the parcels for sale or purchase.

Specifically, with regard to the Playa Vista site, I was one of a select few invited into Summa Corporation's "war room" to evaluate the regulatory state of the project when Summa first put the 1,000 plus acre site on the market in the mid to late 1980's. Given the fact that the original specific plan had recently been approved by the LA City Council, Summa was marketing the property as fully entitled at the time.

My client at the time, Trammell Crow Company, passed on the opportunity to purchase the Playa Vista property based on my assessment that the entitlement was, in fact, not complete and that the process remained long and legally complex.

I also acted as a decision maker for the City of Los Angeles, in my role as a member of the City Planning Commission and as member and Chair of the Board of Zoning Appeals, with regard to certain aspects of the Playa Vista project between 1988 and 1994.

Background

The subject site (for the remaining commercial/residential development) falls within Area D of the Playa Vista Specific Plan, last amended in 2004. Phase 1 of the Playa Vista project has been previously approved as is being built out in other portions of Area D.

Current Status

The Phase 2 Village at Playa Vista encompasses approximately 111 acres between Jefferson Boulevard and the Westchester Bluffs, approximately in the center of the Specific Plan Area D.

Phase 2 is the subject of the current Supplemental EIR. The Supplement accrues to a Superior Court decision, affirmed by the Court of Appeal, finding deficiencies in the original DEIR and FEIR produced in 2003 and 2004.

In reviewing the available documentation, it is our conclusion that Playa Vista currently has an entitlement for Phase 2 to build 108,000 sf of office space on about 65 acres and no entitlement whatsoever to build on 40 plus acres, dictated by the current level of Phase 1 development and the overall limitations placed on Area D as a whole. Plus or minus 5 acres lie on the bluff area outside the specific plan boundary.

Baseline Land Value

From the public record, it appears that Playa Vista placed a value of \$45 million for the 114 acre Hughes Industrial Site at the eastern end of Playa Vista in the timeframe of 2003 to 2004. That translates to approximately \$400,000 per acre, with certain constraints on development around the historic hanger buildings.

In May of 2007, Playa Vista sold a parcel of vacant commercial/industrial land for \$1,000,010. The parcel measures slightly less than one acre and was entitled as part of the Phase 1 approvals. May of 2007 essentially marks the top of the real estate market before the more recent marketwide reductions in value.

Marketwide in LA County, evidence suggests that commercial land values have declined up to 25% from the top of the market. The West Los Angeles sub-market, however, appears to have held value better than the broader market. Given that, we would assign a 15% to 20% decline in value to Playa Vista since 2007 based on overall market trends. Obviously, there are no precise current market comparables for large tracts of vacant commercial land on the Westside to verify this assumption.

That assumption, however, would place the value of fully entitled land between \$800,000 to \$850,000, based on the May 2007 sale price.

That value would probably accrue to the 65 acres with a considerable discount because the buildable density would be limited to 1,660 square feet of office per acre, based on the current entitlement limit of 108,000 square feet of commercial space overall.

If we assume that "normal" suburban office coverage would be 40% (which is low end), that would yield 17,400 sf of development per acre. Hence, the entitled land at Playa

Vista would only be worth about 10% of "normal" market value due to the restricted building envelope.

Using the \$850,000 current land value for fully entitled land in today's dollars, the 65 acres of developable land in Playa Vista would be worth in the range of \$85,000 per acre or a total of approximately \$5,500,000. The remaining 40 acres of residential land would have no base value, since it currently has no entitlement.

Hence, the we would expect the entire Phase 2 site at Playa Vista to appraise for approximately \$5.5 million today.

Post Entitlement Value

For the commercial land, the requested entitlement would raise the total envelope to plus or minus 365,000 square feet of office/retail/community serving space. That translates to approximately 5,600 sf of development per acre, or 3.4 times the current limit. Assuming the land today is worth \$85,000, after entitlement it would be worth about \$290,000 per acre or roughly \$18,600,000 for the entire 65 acre site.

On the residential side, the 2,600 residential units proposed translates to an R3 density with 800 sf of lot area per unit over the 40 acres. Recently completed R3 apartment complexes in the Phase 1 portion of Playa Vista carry an assessed valuation in the neighborhood of \$500,000 per unit, of which the County Assessor assigns one third to the land. Condo sales in Phase 1 run generally from \$350,000 to \$850,000 per unit so we can assume a mean value of around \$500,000, similar to the assessed valuation for apartments. Obviously, those values carry the cost of the building improvements, including substantial site work and off-site improvements as well.

I haven't been able to isolate the sale price of the raw land Playa Capital sold to the condo or apartment builders. Using Citywide numbers from 2006, however, raw R4 land was selling at \$175 per square foot. Since R3 land supports half the value in terms of density, the cost of R3 land would be on the order of \$90 per square foot. Adjusted for the current drop in the market, the cost of vacant R3 land on the Westside should be between \$75 to \$80 per square foot. That translates to between \$3,200,000 and \$3,450,000 per acre. Divided by 55 units per acre at R3 density, the value of the raw land would be between \$58,000 and \$63,000 per unit, or about 12 to 13% of the overall value of a finished unit. That falls well within a reasonable range for development purposes.

If we use a mean value of \$3,300,000 per acre as the value of the Phase 2 residential land after entitlement, the total value of the 40 acres will be approximately \$132.5 million.

Therefore, we would expect Phase 2 to appraise as entitled, yet vacant land at a total of

Ms. Sabrina Venskus
January 13, 2009
Page 4

\$151.1 million after the City's approval.

Net Delta

If we assume the Phase 2 property today appraises at \$5.5 million due to the very limited entitlement in place, and it will appraise for around \$151.1 million (\$18.6 million for the commercial side and \$132.5 million for the residential side) after the City acts, the dollar value of the City action will be in the range of \$145.6 million.

Disclaimer

The Playa Vista Village plan contains a number of provisions to encourage mixing the residential and office uses over the site. Our analysis assumes that the office site and the residential site will be built as stand alone components. We believe that the land values over all will remain constant over the site as a whole, while certain values may change locally within the property to the final allocation of the available density.

cc: File

EXHIBIT B - 1

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L.A. Admits Sewer Spills

By Miguel Bustillo
April 23, 2003

The city of Los Angeles conceded in a federal court filing Tuesday that it is legally responsible for more than 3,600 sewage spills that have sullied streets and polluted the ocean since 1993. Each sewage spill represents a violation of state and federal clean water laws, and the city's admission could open it up to millions of dollars in new fines.

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A federal judge in December found the city liable for 297 sewage spills over the course of a year, for which the city could face up to \$8 million in fines. But the city is now formally admitting responsibility for more than 12 times that many spills over the last decade -- 3,668 in all -- as part of an effort to demonstrate that it is finally owning up to the problem.

The judge must still approve the city's filing and decide whether further penalties are warranted.

The admission is the latest twist in a four-year court fight pitting Los Angeles against federal and state officials, environmental groups and homeowner organizations in Baldwin Hills, the Crenshaw District and Leimert Park, where many of the spills occurred. In recent years, raw sewage has often floated to the surface of the street in front of Manual Arts High School in South Los Angeles.

The plaintiffs want to force Los Angeles to repair its leaky and antiquated sewer system, which they claim has a rate of spills more than twice as high as other Southern California cities. With more than 6,700 miles of sewer lines, it is the largest municipal sewer system in the nation.

By acknowledging responsibility for all the spills, city officials said Tuesday that they hoped to move to the next phase of the case -- what should be done to prevent future spills from happening.

City officials said they also hope to avoid further fines. The city now must pay a fine of up to \$27,500 for each future spill under last year's ruling by U.S. District Judge Ronald S.W. Lew, who found Los Angeles had violated the federal Clean Water Act.

The city stressed in the filing that although it was admitting the violations, it was in no way conceding it should have to pay the penalties associated with breaking the law.

"The issue is, how much more do you want to beat up on the city of Los Angeles?" said Judith Wilson, director of the city's Bureau of Sanitation. "What we want to deal with are the penalties. We feel we have paid quite a bit already, and we have committed to major investments in the system."

EXHIBIT B - 2



Office of Communications

Public Health News

241 N. Figueroa Street, Room 348 • Los Angeles, CA 90012 • Tel (213) 240-8144 • Fax (213) 481-1406 • media@ph.lacounty.gov

February 14, 2007

Public Health Communications
Tel (213) 240-8144 • Fax (213) 481-1406
media@ph.lacounty.gov

Health Advisory: Los Angeles County Department of Public Health Closes Portions of Venice and Dockweiler Beaches

LOS ANGELES – Due to a raw sewage spill, County health officials have closed portions of Venice Beach and Dockweiler Beach. The beaches of Venice and Dockweiler Beaches will be closed one mile north and south of Ballona Creek. The beaches will be closed until at least the afternoon February 16, 2007.

Will Rogers Beach remains closed due to persisting levels of elevated bacteria. The accelerated monitoring at this location stems from a sewage discharge that occurred on Tuesday, February 6. Portions of Will Rogers are closed 100 yards on both sides of Santa Monica Canyon Creek, the point of discharge into the ocean.

“Due to this sewage discharge, Los Angeles County residents and visitors to the area should avoid contact with the ocean water near the point of discharge until these portions of the beach have been deemed safe to reopen,” said Jonathan E. Fielding, MD, MPH, Public Health Director and County Health Officer. “We will be conducting water quality assessments to test the level of bacteria in the water. The beach will remain closed until test results indicate that bacteria levels meet health safety standards.”

Los Angeles City Sanitation responded to the discharge which began at 1:00 p.m. and ended at 2:00 p.m. Los Angeles City Sanitation notified the Los Angeles County Department of Public Health at 2:30 p.m. The Department of Public Health immediately contacted the appropriate authorities and beach lifeguards to post warning signs on both beaches.

Recorded information on beach conditions is available around the clock on the Los Angeles County Department of Public Health Ocean Water Quality Hotline at 1-800-525-5662 and online at www.lapublichealth.org/beach.

###

EXHIBIT B - 3

1 **IRP Recommendations**

2 (working draft Version 10)

3
4 *Subject: Integrated Resources Plan Certification of Final Environmental*
5 *Impact Report, Approval of Preferred Alternative and Authorization to*
6 *Proceed with Immediate Recommended Projects and Actions*

7 **Recommendation**

8 It is recommended that the City Council:

- 9 1. Certify the Integrated Resources Plan Final Environmental Impact Report
- 10 2. Adopt the Statement of Findings and Overriding Considerations
- 11 3. Adopt the Mitigation Monitoring and Reporting Plan
- 12 4. Approve Alternative 4 as the preferred alternative for the Integrated Resources Plan
- 13 5. Approve the overall implementation strategy for the Integrated Resources Plan,
14 including recommended "Go-Projects" and Potential "Go if Triggered Projects", as
15 well as "Go-Policy Directions" for the development of recycled water, conservation
16 and runoff management opportunities. (Please see Section 3.0 for an explanation of
17 these terms.)
- 18 6. Instruct staff to file the attached Notice of Determination within five (5) working days
19 of approval of project.
- 20 7. Instruct Department of Public Works (Public Works) and Department of Water and
21 Power (DWP) to report annually on the progress in achieving the recommendations
22 contained herein and potential additional actions.

23 **Transmittals**

- 24 1. Final Environmental Impact Report
- 25 2. Statement of Findings and Overriding Considerations
- 26 3. Mitigation Monitoring and Reporting Plan
- 27 4. Quadrant Analysis Results
- 28 5. Notice of Determination

1 Los Angeles River. If triggered by regulations, availability of downstream sewer capacity,
2 and/or decision to reuse, then advanced treatment at current capacity could be required.
3 Would be subject to partnership between Public Works and City of Glendale.

4 ■ *Design/construction of secondary clarifiers at Hyperion to provide operational*
5 *performance at 450 mgd:* The existing secondary clarifiers at Hyperion are performing
6 below their rated capacity of 450 mgd. Staff is currently investigating ways to optimize the
7 existing secondary clarifiers to get them operating up to 450 mgd. If these options prove to
8 be unsuccessful, then new secondary clarifiers will be needed to provide operational
9 performance at 450 mgd.

10 ■ *Design/construction of up to 12 digesters at Hyperion:* If triggered by increased biosolids
11 production in the service area, additional digesters will be required at Hyperion.

12 We also recommend that Council direct staff to monitor the triggers for the following project,
13 and if triggered, proceed with detailed alignment study and associated environmental review
14 for the following project that has been evaluated as a programmatic element in the EIR:

15 ■ *Prepare alignment study, environmental documentation, and subsequent*
16 *design/construction of Valley Spring Lane Interceptor Sewer:* To provide additional sewer
17 conveyance capacity between Tillman and the Valley Spring Lane/Forman Avenue
18 Diversion structure, a new sewer will be required, which would require subsequent
19 environmental analysis.

20 The total estimated capital cost (in \$2006) for Go-If Triggered projects are presented in Section
21 3.3. Detailed rate impacts and subsequent budget analysis will be conducted as part of the
22 Public Works annual budget process.

23 **3.3 Go-Policy Directions**

24 The following recommended Go-Policy Directions provide direction to staff on immediate
25 activities and actions for recycled water, water conservation, and runoff management. The
26 timing of these actions may be dependent on staff and funding availability. It is
27 recommended that Council approve these immediate policy directions. Any resulting
28 impacts on existing City policy should be reported back to Council for action. Staff should
29 also provide status updates.

30 *Recycled Water – Non-Potable Uses*

31
32 1. Direct DWP and Public Works to work together to maximize use of recycled water for
33 non-potable uses in Terminal Island Treatment Plant service area, west side, and LAG
34 services areas. DWP to conduct additional Tier 1 and 2 customer analysis to verify the
35 potential demands and feasibility.

EXHIBIT B - 4

**City of Los Angeles
Department of Public Works
Bureau of Engineering**

Pre-Qualified On-Call Wastewater Engineering Services Consultant Contract

Task Order Solicitation (TOS) 15

**Hyperion Treatment Plant (HTP)
Ultimate Build-out of Secondary Treatment System**

December 2007

1. Introduction

The Bureau of Engineering (BOE) desires the services of a consulting engineering firm to conduct a feasibility study for expansion of the secondary treatment system at the Hyperion Treatment Plant.

The Hyperion Treatment Plant (HTP) secondary treatment system incorporates the High Purity Oxygen Activated Sludge (HPOAS) process into a highly space efficient modular layout. This arrangement comprises nine 50 mgd modules, each module consisting of an individual channel; three reactor trains, each divided into five mixed cells, 54 feet square by 25 feet deep; and four circular secondary clarifiers, 150 feet in diameter and 12 feet side water depth (SWD). Oxygen is supplied to the process from an on-site cryogenic air separation facility. This facility consist of three low temperature distillation columns (cold boxes) capable of producing up to 760 tons per day of high purity oxygen, liquid oxygen tanks capable of storing up to three days of oxygen requirements and ancillary process equipment and piping.

The current operation of HTP involves the addition of chemicals upstream of the secondary process which provides for removal of substantial BOD in the primary settling tanks. Nine reactor modules are operating to provide 345 mgd of treatment capacity. As a result of the entire facility operating at less than the design influent flow, and due to the enhanced chemical addition scheme in the Primary Tanks, only approximately 40% of the full reactor capacity is being utilized. This is the mode of operation for the foreseeable future; however is subject to change due to items such as projected increase in flow, chemical costs, regulatory issues, etc. In addition, Modules #3, #5 and #7 have been converted to include anaerobic selectors in the first 20% of the reactors. The remaining modules still retain their original configuration where oxygen is utilized in all five reactor stages for biological treatment.

The plant is currently operating with mixed-liquor suspended solids (MLSS) concentrations of approximately 1,400 mg/l in the non-selector modules, and 2,000 mg/l in the modules equipped with the anaerobic selectors. While the original design was

based on maintaining an MLSS concentration of approximately 2800 mg/l, the current mode of operation of the upstream facilities has resulted in the current operating parameters for the activated sludge process. The resulting mean cell residence time (MCRT), therefore, is typically about 1.2 days in the non-selector modules and about 2 days in the selected reactors. The original design was based on maintaining an MCRT of approximately 3 to 4 days.

Future plans include possibly converting the balance, or a part thereof, of the remaining oxygen reactors to the anaerobic selector design. The City has prepared an Integrated Resource Plan (IRP), dated December 2006, which gives consideration to the option of implementing additional clarification capacity in two distinct stages; an additional 100 mgd to bring the capacity in line with projected plant flows of up to 450 mgd, and a further 50 mgd to accommodate the estimated plant ultimate influent flow of 500 mgd. Based on the selected alternative presented in the IRP, the additional clarifiers have been categorized as "proceed if triggered". This means that design and construction of additional clarifiers will only be done if certain circumstances occur. These triggers include: population growth, specific increases in influent flow and groundwater and/or regulatory issues. A complete version of the IRP is available on the internet at <http://www.lacity.org/san/irp/>.

HTP continues to upgrade and optimize the Secondary Treatment Systems to enhance and maximize the quality of the secondary effluent discharged to Santa Monica bay and conveyed to West Basin for use in their water reclamation facilities. Recently, new testing program to enhance secondary clarifier performance and improve effluent quality has been initiated. This testing program will begin with a new pilot project to inject polymer into the secondary system prior to clarification. The polymer addition project is currently in pre-design and is scheduled to be in service by mid 2008. Potential future locations of additional clarifiers have been discussed in ongoing recent Hyperion Treatment Plant Master Planning meetings. See attached sketch for future locations that have been considered.

The HTP Full Secondary Facilities were built in two phases. The first phase was put into operation in 1995 and the second phase in late 1998. With the completion of the second phase, nine reactor modules provide 450 mgd of treatment capacity. The remaining two modules would be added in the future to increase the ultimate capacity of 550 mgd. Hyperion's secondary effluent is currently being partially reclaimed for industrial use and indirect potable use for groundwater intrusion barrier injection. See attached schematic drawings for an overview of the secondary reactor and clarifier system.

2. Scope of Services

The City is interested in obtaining the services of a consulting engineering firm to develop a concept report to explore alternative approaches to the ultimate buildout of

the secondary treatment systems and optimization of the process hydraulics at Hyperion.

It is anticipated that the scope of this project will include:

1. Process modeling of the Secondary Treatment System at Hyperion
2. Development of a 3D system model (including reactors, clarifiers, influents/effluent channels and RAS lines and auxiliary lines)
3. Hydraulic modeling of a range of operating scenarios
4. Investigation/analysis working with City project team

It is also envisioned that the Consultant will conduct a series of workshops with BOS/BOE staff to explore opportunities, refine ideas, discuss findings and gain consensus relative to outcomes and recommendations.

2.1 Project Management

Project management subtasks include project administration, field investigations, meetings/workshops, and QA/QC.

2.1.1 Project Administration

Project administration tasks to be conducted by the consultant team include the following:

- Project Setup
- Prepare work plan and detailed schedule and submit draft to the City prior to the project kickoff meeting
- Monitor expenditures and progress
- Prepare monthly invoices
- Project filing and record keeping
- Project website (administration and upkeep)
- Develop Work Plan and submit draft to the City prior to the project kickoff meeting.

2.1.2 Meetings and Workshops

The following is planned Workshop schedule at selected completion points:

1. Kick-off meeting
2. 25%
3. 50%
4. 75%
5. 90%

A project kickoff meeting will be held with the Bureaus of Sanitation (BOS) and Engineering (BOE). The purpose of the meeting is listed below.

- Introduce the project team members on both City and consultant teams
- Define lines of communication
- Discuss and define project objectives and expectations
- Review information required
- Review draft work plan and schedule
- Identify and develop alternatives to include the "No Project" alternative

Based on the above, the Kickoff meeting will have a dual purpose: to address administrative project issues, and to serve as the first workshop to identify and develop project alternatives (Task 2.2). In addition to the kickoff workshop, the Consultant will organize and hold a minimum of four additional workshops to explore opportunities, refine ideas, discuss findings and gain consensus relative to outcomes and recommendations. It is envisioned that the workshops will be held to, discuss preliminary selection/ranking and final recommendations. It is expected that each workshop should not exceed 4 hours.

The Consultant will also hold meetings with City project team to review operating scenarios, present the technical memorandums and final report. Approximately six (6), 2 hour meetings between the Consultant team and City project staff will be held during the course of the project as required.

2.1.3 QA/QC and Technical Review

Internal QA/QC activities shall be carried out in accordance with the Consultant's Project Quality Control Plan. The Consultant will also hold an internal City Technical Review Meeting as established within the project schedule for the Consultant team to have the benefit of the City's expertise.

2.2 Identification and Development of Alternatives

Preliminarily, the City has identified the following items to be included in the concept report:

2.2.1 HTP Biological Process Modeling

Scenarios to be modeled and evaluated utilizing present loading conditions and design and ultimate average dry weather flow (ADWF) and peak wet weather flow (PWWF) conditions:

1. Design parameters and scenario
2. Present operating scenario, all modules w/o selectors
3. Present operating scenario, all modules w/ selectors
4. Scenarios cleared by the IRP (dated December 2006)

- 4.1 Option #1: 100 mgd of additional secondary clarifiers to provide operational performance at 450 mgd (recommendation based on a high turbidity reported for modules w/ selectors)
- 4.2 Option #2: 50 mgd of additional secondary clarifiers to provide potential expansion to 500 mgd.
5. Recommended ultimate buildout of the secondary system
6. Other identified options in the course of the project

2.2.2 HTP Process Hydraulics

1. Develop 3D Model for existing HTP secondary system including intermediate pumping station (IPS) effluent channels, reactors, clarifiers and influents/effluent channels; return activated sludge feeds (RAS).
2. Develop 3D Model for recommended modifications to HTP secondary system including modifications of influents/effluent channels, RAS routings.
3. Conduct mass balance of secondary system.
4. Hydraulic analyses for the ultimate buildout of the secondary system at Hyperion (ADWF, PWWF)
5. Prepare illustrative sectional drawings (extracted from 3D model)

2.2.3 HTP Secondary Effluent Water Quality Evaluation and Process Enhancement

1. Evaluate current effluent water quality (total suspended solids – TSS and biological oxygen demand – BOD) and future quality requirements, compare against reference plants
2. Identify current pinch points or restrictions in secondary system
3. Secondary clarifier additions; Circular vs. rectangular clarifiers including advantages/disadvantages
4. Addition of clarifiers without the addition of new reactors – controlling flow between reactors and banks of clarifiers
5. Identify present and future regulatory issues and their effect on clarifier expansion
6. Impact to current and future demands by West Basin for secondary effluent
7. Process enhancements
 - a. Anaerobic vs. aerobic selectors
 - b. Filament growth
 - c. Nocardia control
 - d. Coordination with current/planned clarifier optimization projects, polymer addition, including coordination with technical advisory committee (TAC)
 - e. Identify control methodologies
 - f. Identify control system philosophies

2.2.4 Rough Order of Magnitude (ROM) Cost Estimate for Modifications and Additions

1. ROM Cost Estimate for:
 - Advantages/disadvantages including costs of common header to supply secondary clarifiers.

- Routing of RAS lines
- Future and ultimate buildout of secondary system
- Annual costs (O&M, fees, etc)

2.2.5 Identify Implementation Schedule

- Develop preliminary construction schedule
- Identify sequence of construction while keeping secondary system in operation

2.3 Evaluation and Resultant Recommended Alternatives

It is envisioned that the evaluation of alternatives and the further development of the resultant recommendations for final validation will be a multi-step process, each involving its own workshop.

2.3.1 Alternatives Evaluation

The evaluation of alternatives shall be conducted using a weighted evaluation criteria matrix approach. The development of evaluation criteria and weights shall be subject to the consensus of the workshop participants. These participants will also take part in validation of the scoring and/or adjustment of the evaluation criteria. Preliminary evaluation criteria are provided below.

1. Current and future land use
2. Operability and Maintainability
3. Capital and O&M costs
4. Regional Water Quality Control Board (RWQCB) and other permitting issues
5. Pros and Cons of the various alternatives
6. Implementation Steps
7. Implementation Schedules

2.4 Report Preparation

Fifteen (15) copies of the draft technical memorandums spiral wire bound shall be submitted to the City for review. Upon receipt of City comments and workshop to discuss comments, twenty (20) copies of the Final Concept Report spiral wire bound shall be submitted along with five (5) copies on CD of electronic files in PDF format.

3. Project Budget

The City's budget for this project is \$750,000.

4. Project Schedule

The following is an estimated Project Schedule:

Draft Technical Memorandum #1
Alternatives for ultimate buildout of the secondary system..... at 6th Month

Draft Technical Memorandum #2
Model, process hydraulics for ADWF and PWWF..... at 9th Month

Final Report..... at 12th Month

5. Solicitation Schedule

- Issue Task Order Solicitation Date of Cover Letter
- Pre-Proposal Meeting.....1 week after issuance of TOS
- Receive Solicitation Responses..... 28 days after issuance of TOS
- Conduct Interviews 7 weeks after issuance of TOS
- Select and Negotiate.....8 weeks after issuance of TOS
- Issue Task Order14 weeks after issuance of TOS

6. Solicitation Response Requirements

Solicitation Responses shall be bound and not exceed 40 pages, exclusive of cover, dividers and resumes. 10 Copies shall be submitted. Solicitation responses shall be submitted to the Second Floor receptionist of the Environmental Engineering Division, located at the Pregerson Building within the Hyperion Treatment Plant, 12000 Vista Del Mar, Playa Del Rey, Ca 90293, Attention: Al Bazzi. Bound Solicitation Responses shall include:

- Section 1 - Project understanding: Explain your firms overall philosophical approach to the work.
- Section 2 - Related Experience: Describe similar projects your firm has recently completed with contact names, e-mail addresses and phone numbers for reference.
- Section 3 - Project Team: Provide project team organization chart and describe background, roles and responsibilities of key team members. Provide information on MBE/WBE/OBE involvement. Provide resumes of those who will actually work on the project in the Appendix. Resumes shall include education history, work experience history with dates, and references from past employers.
- Section 4 - Detailed Scope of Work & Schedule: Expand and develop the City's Scope of Work and Schedule contained herein.
- Section 5 - Fee Estimate. Provide lump sum proposal for the work described in Section 4. List assumptions associated with all cost calculations. List MBE, WBE and OBE participation as a % of total fee.
- Appendix: Include resumes

7. Selection Criteria

The selection of the successful firm will be based on the following criteria:

Criteria	Weighting
Capability of the Project Team to provide the Scope of Services as demonstrated by the solicitation response and interview.	30%
Firm's experience as related to wastewater treatment plant design and master planning issues.	20%
The value offered to the City considering cost in comparison to capabilities and experience of the project team.	15%
Project Team's knowledge of the City facilities, procedures and practices.	15%
Project Manager's experience, qualifications and availability.	15%
Past performance on the Pre-qualified On-Call Consultant Lists.	5%

8. Suggested MBE/WBE Participation Levels

An MBE participation level of 12% and a WBE participation level of 2% are suggested for this TOS.

9. Managers

The City's Contract Manager is Mr. Michael Sarullo, Assistant Division Engineer, Environmental Engineering Division (310) 648-6120. The City's Task Order Manager is Mr. Al Bazzi, EED, Project Manager (310) 648-6112.

10. Disclaimer

The City may or may not decide to award any or part of this task order based on its sole convenience and shall not be responsible for any solicitation response costs.

Secondary Treatment Process Reference Documents

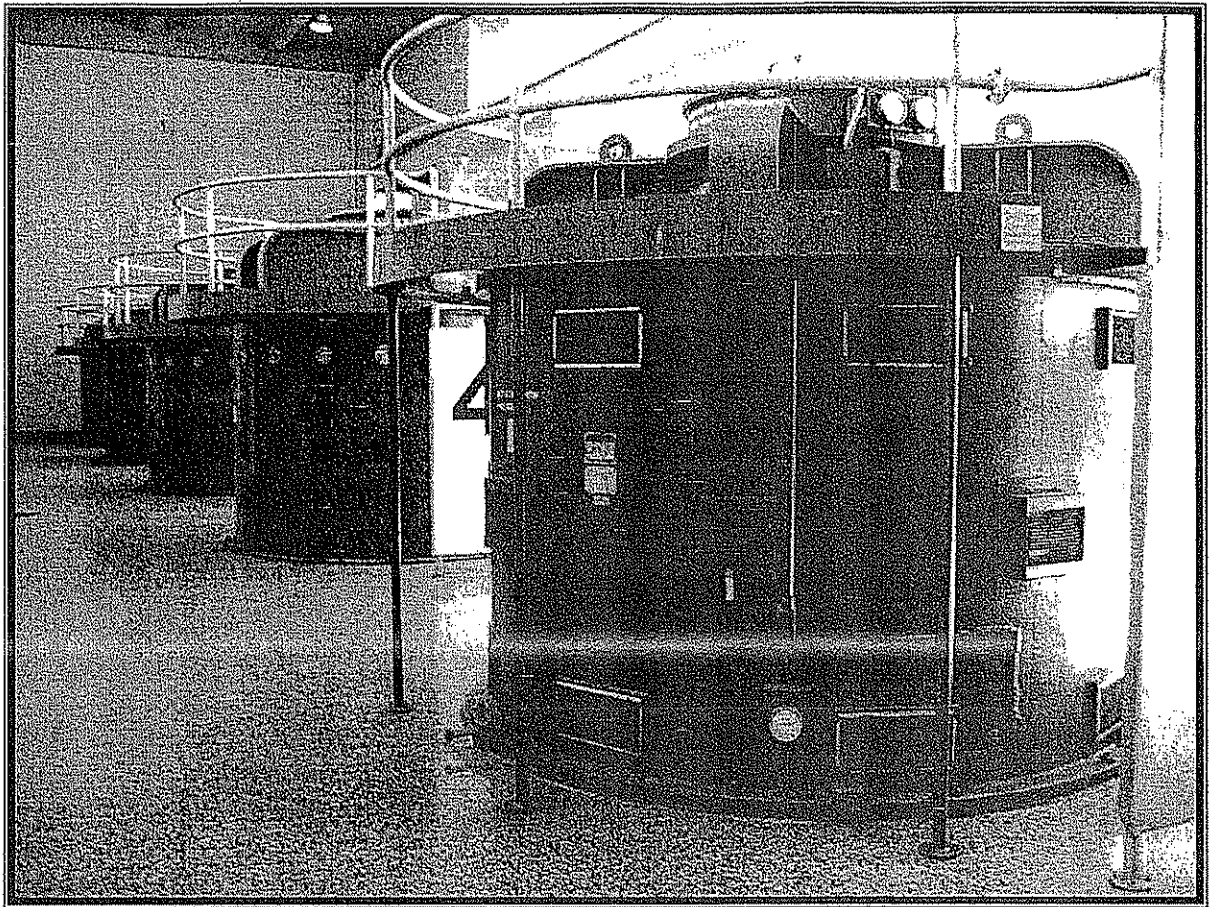
- A. Reference Documents - Hyperion Full Secondary (HFS)
 - 1. Secondary Facilities – Phase 1
D-29705 through D-29710
 - 2. Secondary Facilities – Phase 2
D-30827 through D-30834

The above drawings are available in BOE's online vault located at <http://engvault.lacity.org/apps/vault/>

- B. Operating Scenarios
 - 1. HTP Secondary Process Control Strategy, 2007
 - 2. HTP Pure Oxygen System Process Control Order, 2007

The operating scenario documents are attached (7 pages total).

EXHIBIT B - 5



MONTHLY PERFORMANCE REPORT

Hyperion Treatment Plant
Terminal Island Water Reclamation Plant
Donald C. Tillman Water Reclamation Plant
Los Angeles Glendale Water Reclamation Plant
Wastewater Collection Systems Division

JANUARY 2009



CITY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUREAU OF SANITATION

CITY OF LOS ANGELES

SANITATION
DEPARTMENT OF
PUBLIC WORKS

THIS REPORT IS PREPARED FOR ADMINISTRATIVE, AND MANAGERIAL PURPOSES ONLY
This is not a report that will meet any of the City's Legal Reporting Requirements

**HYPERION TREATMENT PLANT
TERMINAL ISLAND WATER RECLAMATION PLANT
DONALD C. TILLMAN WATER RECLAMATION PLANT
LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
WASTEWATER COLLECTION SYSTEMS DIVISION**

JANUARY 2009

Transmitted for your use is a copy of the Monthly Report for Los Angeles City Treatment Plants and Wastewater Collection Systems Division. This report provides an overview of Plants activities. Starting October '97, we have consolidated reports from all four plants into one. We welcome your comments to improve the quality of this report. Please address all comments to Plant Manager at the Hyperion Treatment Plant.

Cover: Five large vertical electric motors each rated 2500 HP located in the Effluent Pumping Plant building at Hyperion Treatment Plant.

BOARD OF PUBLIC WORKS (1) – 464

BUREAU OF SANITATION EXECUTIVES– 520

Traci Minamide
Varouj Abkian
Adel Hagekhalil

HYPERION TREATMENT PLANT - 535

Steve Fan, Plant Mgr – Preg 3
Mihran Sarkisian, Maint Mgr
Mark Starr, Eng Mgr – Preg 3
Emmanuel Alloh, Eng – Preg 3
Hansong Lee, Eng – Preg 3
Hi-Sang Kim, Eng – Preg 3
Joe Pascu, Training - HRDD
Tom Ardent, Safety – Preg 3
Jensen Liang, Oprs – Preg 1
Ron Bell, Oprs – Preg 1
Jordan Siplon, Oprs – Preg 3
Robert Planta, Oprs
Abbas Rahimdel, Oprs
Veretta Everheart, Admin. – Preg 3

OTHERS

Chris Westhoff, City Attorney-140
Karin Christie-177
John Mays, DCT-488
Michael Bell, DCT-488
Jim Feely, DCT-488

Hiddo Netto, DCT – 488
Bohlmann, Doug, TIWRD - 542
Seung Oh, TIWRD - 542
Dave Gumaer, TIWRD - 542
Brent Lorscheider, WESD - 544
Dan Pierce, ICSD - 911
David Bianchi (2), LAG - 541
Vlad Lorenzo, WCSD - 536
Barry Berggren, WCSD – 536-01
Jose Fuentes, EED – Preg 2
Kenneth Redd, EED – Preg 2
Kay Yamamoto (3), EMD-Preg 5
Sumitra Roy-Burman, EMD-Preg 5
Tim Haug, BOE EXEC.- 490
Tim Dafeta, IWMD-911
Sharam Kharaghani, WPD-1149/756
Omar Moghaddam, RAD – HRDD
Diane Gilbert, RAD – HRDD
Lisa Mowery, FMD-581
Stephen Petrich, ICSD – Preg 3
Len Bonilla, (El Seg. Citizens)
James O'Neill, (El Seg. Citizens)
James Clark, Black & Veatch
Lauren Fondahl, USEPA
File
Compiled by: Miguel Medina

HYPERION TREATMENT PLANT
TERMINAL ISLAND WATER RECLAMATION PLANT
DONALD C. TILLMAN WATER RECLAMATION PLANT
LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
WASTEWATER COLLECTION SYSTEMS DIVISION

MONTHLY PERFORMANCE REPORT
JANUARY 2009

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Treatment Plant Performance Executive Summary

January 2009

HYPERION TREATMENT PLANT
 TERMINAL ISLAND WATER RECLAMATION PLANT
 DONALD C. TILLMAN WATER RECLAMATION PLANT
 LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
 WASTEWATER COLLECTION SYSTEMS DIVISION

Plant Effluent Performance Summary Vs NPDES Requirement

Jan-09	Influent	Effluent	SS	BOD	Turbidity	Ammonia (as N)	Nitrite	Nitrate	Temp
	(mgd)	(mgd)	(mg/l)	(mg/l)	(NTU)	(mg/l)	(mg/l)	(mg/l)	Degree F
HTP	305		19	22	9	34			76
NPDES	N/A	N/A	30	30	75	N/A	N/A	N/A	100
TIWRP	15		<1	<2	0.7	<0.05			76.2
NPDES	N/A	N/A	15	15	2	7.4	N/A	N/A	100
DCT	45.0	32.8	0.8	<3	1.1	1.1	0.05	5.5	73
NPDES	N/A	N/A	15	20	2	1.4	0.9	7.2	86
LAG	20.4	17.7	1	<3	0.9	1.2	<0.02	6.2	71
NPDES	N/A	N/A	15	20	2	2.2	0.9	7.2	86

HTP effluent noncompliance: None

TIWRP effluent noncompliance: None

DCT effluent noncompliance: One - chlorine residual > 0.1 mg/L

LAG effluent noncompliance: None

City employees can retrieve detailed process reports in the WISARD section of L.A. Sanitation Intranet.
 The address is <http://www.san.ci.la.ca.us>

EXECUTIVE SUMMARY

This summary outlines wastewater treatment process performance in the City of Los Angeles' four wastewater treatment/reclamation facilities and the Wastewater Collection Systems Division.

HYPERION TREATMENT PLANT

- **Primary Battery C Modifications Project (CIP 2221):** The approved scope of this project includes; replace tank interior concrete columns & top deck, install new stainless steel effluent launders & scum troughs, modify influent & effluent channels & replace gates, replace sludge collection system, replace primary sludge pumps & piping, replace instruments & integrate them into DCS, and replace aluminum covers for tanks C-0 through C-4. Contractor will continue pouring concrete for the new walls and columns. The fabrication of new walls in Tanks C-3 and C-4, and top concrete slab is in progress. The installation of new sludge pumps and piping have been completed. New MCC buckets were replaced for all Primary Battery C electrical equipments.
- **NOS Wetwell/Pump Station Abandonment:** Process Engineering had meetings with personnel from WCSD to discuss the requirements for abandoning the NOS wetwell. On completion additional sewage will be re-routed through NOS to increase its flow from the existing 3 MGD (estimated) to approximately 50 MGD.
- **Secondary SRT/WAS Control Project:** The Solids Retention Time (SRT) control test on the secondary process has been conducted on Module 7 reactors since late September of last year. The consultants, Brown and Caldwell, and the plant staff have worked together to come up with ideal process parameters, such as feed flow rate, vent gas oxygen purity, and dissolved oxygen concentrations.
- **Gas Handling:** 7.1 mscfd of treated di-gas was delivered to Scattergood as green energy. Performance of Desulfurization Plant was in compliance with AQMD permit. IGC, Sullair and Norwalk compressors provided continuous service. Refurbishment of IGC started at the end of the month. Performance of Scattergood Steam Line and Siloxane Removal Filter at Scattergood was satisfactory.
- **Digesters:** Class B sampling is ongoing. Digester 2E mixer is in need of maintenance. In Digester battery D2, the fire alarm panel is being replaced and two sump pumps are being repaired. The 5D2 steam flow control valve was repaired by the instrument shop. The DSF screw conveyors 3 and 20 are being repaired; screw conveyors 2 and 11 have undergone repairs and are back in service. The new ferrous chloride pump has arrived and is being prepared for piping.
- **Dewatering and Thickening:** CIP 2335 – Primary Solids Thickening Centrifuge project – Demolition and construction work ongoing. CIP 3050 – Wet Cake Pump Replacement project – The first new pump arrived in mid December. Installation work ongoing.

- **Water Conservation:** It was determined that Hyperion is responsible for close to 85% of the Bureau's total freshwater consumption. Annual expenditure on freshwater at Hyperion is running over one million dollars. A team consists of plant's operation, maintenance, and engineering staff was formed to optimize freshwater usage at the plant. The team will determine freshwater consumption at various processes and facilities and optimize the usage of freshwater.
- **MAINTENANCE ACTIVITIES**
 - Completed emergency testing of the Power Restart Facility.
 - Completed installing new variable frequency drive units at the Dewatering Facility.
 - Completed repairs to the back drive controller at the Dewatering Facility.
 - Completed repairs to the Venturi Flowmeter of the North Outfall Sewer Flow.
 - Completed replacing a rotating assembly on a centrifuge at the Dewatering Facility.
 - Fabricated new shafts for the Micro Screen Rollers at the Service Water Facility.
 - Installed signage at City facilities in the Valley.
 - Replaced broken or missing grating at the Truck Loading Facility.

TERMINAL ISLAND WATER RECLAMATION DIVISION

The Terminal Island Water Reclamation Division met all constituent NPDES permit requirements for the month of January 2009. The average influent flow to the Plant was 15.0 mgd. Effluent suspended solids averaged less than 1 mg/l and BOD concentration averaged less than 2 mg/l, resulting in the removal efficiency of greater than 99%, for both constituents.

- **Advanced Wastewater Treatment Facility Project:** The delivery of recycled water to the Dominguez Gap is continuing at capacity of 2.9 mgd. The recycled water Modified Fouling Index (MFI), turbidity and pH continues to meet targeted values.
- **Centrifuge Improvement Project:** This project involves the installation of three new centrifuges inside the sludge dewatering building, structural reinforcement, relocation of Sharples cake pump #1 from outside to inside the building underneath centrifuge #3, and the installation of a new screw reversible conveyor. The project contractor, Olsson Construction, Inc. is fully mobilized and on site but job commencement is contingent on fabrication of the new centrifuges in France. A local third party inspection is scheduled for the later part of February 2009. Estimated project cost is \$3.1 million and completion time is November 2009.
- **Terminal Island Renewable Energy Project (TIRE):** An initial Class V draft permit was issued to the City of Los Angeles for a five-year testing period of the TIRE project, in which biosolids are injected 6000 feet below ground for decomposition and renewable energy. TIRE operational personnel are on site conducting deep well injection of brine and TIWRP digested sludge.

Testing of Hyperion wetcake injection began in January. Testing of larger amounts of Hyperion wetcake and other methods to efficiently break it up, for example fluid agitation, mechanical mixing, and chemical addition, will be tested. Deep well injection testing with brine from AWTF and digested sludge is ongoing. The figure below shows the materials injected in January and the total to date.

	Gallons			Hyperion Wet Cake (tons)
	HPE	Brine	Digested Sludge	
January 2009	106,934	1,391	725,335	1,174
<i>Total to date</i>	<i>1,715,828</i>	<i>937,786</i>	<i>4,514,815</i>	<i>2,823</i>

DONALD C. TILLMAN WATER RECLAMATION PLANT

The plant had one exceedance of its NPDES permit and no exceedances of its Water Recycling permit based on results available to date.

The NPDES exceedance was as follows:

Plant Effluent Chlorine Residual

Permit Standard: 0.1 mg/L

January 7th Result: 5.0 mg/L for 10 minutes

This exceedance was the result of a severe voltage dip on both electrical feeders to the Plant. The voltage dip lasted only a few seconds, but was severe enough to trip all plant equipment. The voltage dip was caused by a vault explosion on one of the main power feeders near the plant. The plant has two separate power feeders, but unbeknownst to the Plant, DWP tied both electrical feeders together upstream of the plant. This reduced the plant to a single power feed past the point they were tied together. The result was that when the vault explosion occurred, the entire plant lost power and the dechlorination system was rendered inoperable.

The major activities at the DCTWRP were the following:

- Testing of the Roots blowers with foul air against the Turblex blowers with fresh air. The goal is to see whether foul air should be used in the Turblex blowers as odor control or whether an odor control system should be installed at DCT.
- Installation of the new Storm Water Pumping system was completed and tested.

LOS ANGELES-GLENDALE WATER RECLAMATION PLANT

The plant had no exceedances of its NPDES or Water Recycling permits based on results available to date.

The major activities at the LAGWRP continue to be the following:

- ABB control system optimization.
- Development of unmanned grave operational parameters and testing.

WASTEWATER COLLECTION SYSTEMS DIVISION

The Wastewater Collection Systems Division (WCSD) through the joint labor-management efforts and the collaborative benchmarking efforts continues to work aggressively on increasing the productivity and the quality of work performed associated with the sewer and storm drain maintenance program. The following is a summary of the highlights for this month:

- Cleaned **9,187** pipes for a total of **435** miles (YTD: **64,734** pipes, **3,033** miles) Cleaned **107.89%** of the **60,000** pipes required annually per the Settlement Agreement.
- Cleaned **9,121** catch basins and removed **232** tons of material at a cost of **\$33.75** per catch basin. (YTD: **51,891** catch basins cleaned and removed **1,480** tons)
- Raised to grade **79** maintenance holes (YTD: **942** MHs).
- Responded to **416** service requests, where **320** were related to the sewer system and **96** were related to the storm water (YTD: **3,462** service requests).
- CCTV'd **243,660** feet or **46.15** miles of pipe (YTD: **510.59** miles which is **85.10%** of the **600** miles required annually per the Settlement Agreement.)
- During the month of January, the collection system experienced **15** overflows totaling **4,419** gallons. The majority of the blockages were caused by root intrusion. There were **two Category I** overflows. Of the **15** overflows, **one** of them reached the storm water system.
- WCSD is continuing to implement its odor control program including sewer maintenance and chemical addition. The maintenance activities include sewer cleaning, maintenance hole sealing and maintenance hole trap repair. Chemical addition includes Thioguard magnesium hydroxide on the NOS as well as the LCSFVRS and sodium hydroxide shock dosing of various sewers in the South LA .The City continues to operate its sewer odor hotline covering entire city. During this reporting period, **forty-nine (49)** odor hotline complaints were received and investigated. Among them, **twenty-two (22)** were city related and **twenty-seven (27)** were not city related.
- The new root control contracts were executed on May 3, 2006. The chemical root control contractors treated **50.83** miles of sewer in Basins PO4, P14 and P19 in January. (YTD: **234.88** miles).

HYPERION TREATMENT PLANT

MONTHLY REPORT – January 2009

OPERATIONS SECTION

PRIMARY TREATMENT - The average ferric chloride dosage to NCOS and NORS were 13 ppm and 14 ppm respectively. The section achieved 62% and 47% removal efficiencies for suspended solids and BOD, excluding recycle loading. Primary effluent suspended solids and BOD concentrations were 130 mg/l and 187 mg/l. The monthly average percent total solid for the primary sludge was 3.9%.

SECONDARY TREATMENT - Secondary effluent suspended solids averaged 19.0 mg/l while BOD averaged 22.0 mg/l. Treatment was maintained with an MCRT of 1.4 day and an estimated F/M ratio of 1.2pound of BOD per day per pound of MLVSS. **Cryogenic Facility** – Air Compressors #1, Direct Contact Aftercooler (DCAC) No.1, Evaporative Cooling Tower No.1, and Molecular Sieve A line up with Cold box #2 were on-line. Average reactor oxygen demanded was 4.11kscfm (245 tons/day). Liquid oxygen (LOX) inventory in LOX tank #1 and #2 were 77% and 27% respectively.

SLUDGE DIGESTION - An average of 2.05 mgd of primary sludge and 0.46 mgd of thickened waste activated sludge (TWAS) was processed through the digesters. An average detention time of 16.1 days resulted in volatile solids destruction of 63.8%.

BIOSOLIDS DEWATERING - Average biosolids cake dryness of 29.3% total solids was attained, while maintaining 95% solids capture efficiency. A total of 251 dry tons per day (dtpd) were processed with a mannich polymer dosage of 15.4 pounds per dry ton.

RECLAIMED WATER - West Basin Municipal Water District reclaimed 24.93 mgd secondary effluent from the Hyperion Treatment Plant. Of this amount 11.68 mgd was used for Groundwater Barrier Injection, and 13.25 mgd of Title 22 reclaimed water was used for irrigation and industrial cooling water. 2.12 mgd of brine was returned to Hyperion.

PLANT ENGINEERING SECTION

LIQUID PROCESS ACTIVITIES:

Preliminary Treatment

Headworks Material Handling Improvements: The contract for the installation of an additional classifier and three cyclones on the first floor of the Headworks building have been awarded to Murray Contractors under CISCO VI. Process Engineering is also coordinating the installation of the two Vulcan screenings compactors and drum screens on the third floor of the Headworks building.

Headworks Grit & Screenings Handling Improvements (CIP 2239): This project will rehabilitate the existing system at the Headworks with the goal of improving grit and screenings capture to approximately 1 cubic foot per MG (1 cu.ft/MG). The Plant participated in weekly progress meetings and was part of the team that visited AMREP to inspect the various types of trucks assembled at the plant. The pre-design is being developed.

NOS Wetwell/Pump Station Abandonment: Process Engineering had meetings with personnel from WCED to discuss the requirements for abandoning the NOS wetwell. On completion additional sewage will be re-routed through NOS to increase its flow from the existing 3 MGD (estimated) to 50 MGD.

Primary Treatment

HTP Primary Treatment Polymer Facility project (CIP-2315): The approved scope of this project includes: modify CFSF to provide all four primary batteries with flow paced diluted polymer injection system by installing two new batch mixing tanks, installing 4 new transfer pumps & 5 new distribution VFD pumps, installing automatic flow pacing through DCS, and relocating DPU & installing a new CSI cabinet at WTF.

In the Chemical Storage Facility area, PPC contractor completed the installation of the polymer tanks and mixer. Contractors are finishing up the piping and MOV valve installation.

In the TWAS building basement, PPC contractor are finished with the pump installations. Contractor is currently installing the local control panels and instrumentations.

Primary Battery C Modifications Project (CIP 2221): The approved scope of this project includes; replace tank interior concrete columns & top deck, install new stainless steel effluent launders & scum troughs, modify influent & effluent channels & replace gates, replace sludge collection system, replace primary sludge pumps & piping, replace instruments & integrate them into DCS, and replace

aluminum covers for tanks C-0 through C-4. Contractor will continue pouring concrete for the new walls and columns. The fabrication of new walls in Tanks C-3 and C-4, and top concrete slab is in progress. New MCC buckets were replaced for all Primary Battery C electrical equipments.

Tank B-3 Cross Collector: The Plant communicated to Kiewit through EED about a faulty motor on Tank B-3 cross collector. Process Engineering is coordinating a replacement motor from the contractor since the unit is still under warranty.

Secondary Treatment

Turbidity Sampling Project for Secondary Effluent Channel: The bulkhead frames have been fabricated and 1 has been installed. Planning is underway for the remaining installation.

Secondary Optimization Project: Testing efforts for clarifier and reactor optimization have been ongoing for the past 2 months. High flow stress testing has been concluded on Clarifier 7 and Clarifier 8. Polymer addition to the mixed liquor at splitter box #7 will begin and testing/data collection will commence now that missing electrical components have been shipped and installed. Both selector and non-selector modules, reactor modules 7 and 8, respectively, will be the subjects of this project's efforts.

Secondary SRT/WAS Control Project: Per the recommendation of Brown and Caldwell to increase the efficiency and treatment effectiveness, we have continued SRT (solids retention time) as a controlling parameter for secondary treatment operation. Data is still being collected, and the operation of the reactors is being guided by SRT control. It is decided to continue with testing and data retrieval for further study.

Request for Proposal for setting up a new outfall inspection contract, Request for Good Faith Effort Waiver Application, and the board report were prepared. Comments from contract group staff were incorporated into the documents and were sent to the office of the board for approval.

CIP 2506 – Service Water Facility Expansion -The project will expand the HPE production and provide rehabilitation of existing equipment.

The purpose of this project is to replace the aging and corroding micro-screens with filtration that will more effectively and efficiently filter the secondary effluent entering the HTP Service Water Facility.

The scope of this project is as follows:

- Dismantle and transport six (6) of the existing Aqua-Aerobics Disk Filters and instrumentation at DCT.
- Modify the filters as required to fit the existing basins at the HTPSWF. This will include, but not be limited to:

- Modify inlet piping
- Relocate backwash pumps, valves, piping to the operating floor
- Modify the filtrate tank and add a new filtrate trough
- Relocate the Aqua-Aerobics controls to the operating floor
- Modify the existing concrete basins at the HTPSWF to accept the Aqua-Aerobics Disk Filters.
- Procure new cloth media to replace the old cloth media currently installed on each filter. The new cloth will be the same type (PA-13 nylon pile media) and size (10 microns) as the cloth currently installed, but will also be chlorine resistant.
- Install two (2) AquaDisk cloth media filters from DCT in the empty basins at the HTPSWF.
- Remove four (4) of the existing micro-screens in the HTP SWF and replace with the modified remaining four (4) AquaDisk Filters. It is expected that this will proceed by replacing two filters at a time.

CIP 2386 -Hypochlorite System Modifications

100 % design work is completed.

The scope of work includes demolishing the existing Interim Hypochlorite Facility and redesigning the following functions in SWF:

1. RAS Chlorination line
2. Cryo Cooling Water Chlorination line
3. One-Mile Outfall Chlorination line
4. Relocating ocean tide level transmitter
5. Updating Control Panel CP-CL2F and CP-HF
6. Demolishing MCC-IHF and relocating MCC for 1-mile outfall sump pump
7. Demolishing CP-IHF

The construction work will begin starting from second week of March, 2009.

CIP 2380 – HTP Service Water Facility Ventilation Improvements

The contractor installed six new exhaust fans. The project progressing as planned and expected to be completed by end of March, 2009.

The scopes of work for Service Water Facility Ventilation Improvements, which will be built under CIP 2380, include:

1. Remove and replace existing six (6) roof mounted 8,400 SCFM exhaust fans. New fans will be constructed of stainless steel. (Completed)
2. Demolish existing ducting and duct supports. (completed)
3. Install new stainless steel foul air intakes with stainless steel supports at ceiling.
4. Seal fresh air gravity intakes.

CIP 2302 and CIP 5162 (EPP Header Survey, and Analysis)

City consultant, Parsons has completed the final technical memo regarding EPP Header Survey and Analysis. Both short-term and long-term improvements alternatives have been provided to the city. EED has preceded the design for the short-term improvement. EED is still working on preliminary design with Parsons.

SOLIDS PROCESS ACTIVITIES:

Digesters

The mixer on Digester 2E is in need of maintenance. The Digester Battery 2 fire alarm panel is being replaced and two sump pumps in Digester Battery 2 are being repaired. The 5D2 steam flow control valve was repaired by the instrument shop. The new ferrous chloride pump is in place and being prepared for piping. On Wednesday January 14, a power outage tripped the solids side, all equipment tripped except for the digester mixers and Norwalk compressor.

CIP 2335- Primary Sludge Thickening –Construction

CIP 2305- Batch Digester Expansion – Construction

CIP 2304- Emergency Liquid Storage- Construction

Digester Screening Facility

3 Trains online, 1 standby. Screw Conveyor 2 and 11 were repaired, screw conveyors 3 and 20 is undergoing repairs.

Dewatering and Thickening

CIP 2335 – Primary Sludge Thickening Centrifuge – Construction work is ongoing. All three new centrifuge units are onsite.

CIP 3050 – Wet Cake Pump Replacement – Installation of the first pump is ongoing.

AIR POLLUTION CONTROL ACTIVITIES

APC at Influent Sewers and Headworks: INF fan 2 continues to experience crystal build-up that causes high vibration. Process engineering is evaluating methods to reduce the crystal buildup. The chemical control valves show signs of severe corrosion. Developing specs for the purchase of replacement valves. The CIP 2344 - HTP Headworks Odor Control Improvements – Pre-design will be postponed until the scope of the Headworks Grit and Screenings Handling Improvements are

finalized. HWK 1 recirculation pump discharge line modifications are complete. The instrument shop needs to relocate the pH and ORP probes from the overflow line to the new sample ports on the discharge line. Headworks emission testing was completed.

APC at Primary Batteries: Received and reviewing SCAQMD comments on the Source Test Protocol submitted in 2007. Processing engineering is collecting data to optimize performance. CIP 2220 – Centralized Primary Scrubber Improvements – Major outstanding items remain: false local and remote indication when a pump has tripped, high amperage draw on the chemical metering and recirculation pumps. CIP 8039 – No activity. CIP 2370 – Scrubber Piping Platforms and Walkways – construction work is 20% complete. Processed two SPA for freshwater and HPE tie-ins.

APC at Intermediate Pumping Station: The drawings for the new berm were received and have been submitted to Building and Safety for review. CIP 2253 – On hold pending air flow testing at the Primary Battery Scrubbers.

APC at Secondaries: Monitoring of the high capacity sulfur adsorbing carbon on-going.

APC at WAS Thickening Facility: The automatic make-up water system has been repaired and Process Engineering is collecting data to evaluate and optimize the system.

APC at Digester Screening Facility and Truck Loading Facility: The media in DSF 2 was replaced. Parts have been ordered to repair the automatic make-up water system.

APC at Gas Handling: LO-CAT – No activity. Boilers - Requested ICSD to mirror the Boiler CEMS hard drive. The Boiler 3 RATA test has been scheduled for Feb 09.

Other APC Activities: There were eleven odor complaints. Two 500Ns were submitted to the SCAQMD for a breakdown at the Gas Handling Facility on January 8, 2009 for a di-gas leak on the discharge Norwalk A and for low temp on Flare 1. Health Risk Assessment– pending emissions testing at the Headworks and Primaries. The 2008 SCAQMD Rule 431.1 Combustion Report was prepared and submitted to SCAQMD.

GAS HANDLING ACTIVITIES

An average of 7.1 mscfd of digester gas was processed through the Gas Handling Facilities and transmitted to Scattergood for power and steam production in January 2009.

Boilers: Boiler 2 and Boiler 3 were on standby mode.

Desulfurization Plant: Average H₂S removal efficiency was 88% with H₂S leaving the scrubber at 9.9 ppmv. Chemistry of LO-CAT solution was reviewed and discussed with Gas Technology Products. Total iron was maintained slightly above the target level of 200 mg/l level. Metering pump of ARI-400 continued to stay off line. Re-circulation rate was maintained at 400 gpm per train without return flow problems. The chemical metering pump for ARI-350 was replaced with a new unit.

Gas Export: A total of 26,400 lbs of fresh Activated Carbon 70CTC was used for siloxane removal at Scattergood. Performance of the scrubbing system was monitored with satisfactory results.

Gas Compressors & CIP1022-New Compressor Facility: IGC, Sullair A & B and Norwalk A & B compressors provided continuous service this month. Replacement of IGC gas heads started at the end of the month.

MAINTENANCE SECTION

AIR CONDITIONING/SHEET METAL SHOP

- Major Projects:
 - Completed repair work on piping and installed new controllers on the cooling towers at the Dewatering Facility.
 - Completed the change out of controllers and actuators on the air handlers at the Technical Support Facility.

CARPENTER SHOP

- Major Projects:
 - Fabricated a counter top for the Paint Shop at the Service Maintenance Facility.
 - Installed signage at City facilities in the Valley.

CUSTODIAL SHOP

- Major Projects:
 - Completed stripping and waxing offices and hallways at the Steve Harrington training facility.

ELECTRIC SHOP

- Major Projects:
 - Completed emergency testing of the Power Restart Facility.
 - Completed installing new variable frequency drive units at the Dewatering Facility.

ENGINEERING MAINTENANCE

- Major Projects:
 - Completed the specification and purchase of Variable Frequency Drive Units for the Dewatering Facility.

EQUIPMENT SHOP

- Major projects:
 - Assisted with crane operations on a large air compressor placement at the Gas Handling Facility.

INSTRUMENT SHOP

- Major Projects:
 - Completed multiple repairs and adjustments to the Flow and Temperature Controls at the Gas Flares.
 - Completed repairs to the back drive controller at the Dewatering Facility.
 - Completed repairs to the Venturi Flowmeter of the North Outfall Sewer Flow.

LABOR GROUP

- Major Projects:
 - Assisted with road closure for testing One Mile Gate Operations.

MACHINE SHOP

- Major Projects:
 - Completed rebuilding a gearbox for the mixer on the Reactor Deck.
 - Completed the inspection and disassembly of the bearing housing at the Intermittent Pumping Station.
 - Fabricated new shafts for the Micro Screen Rollers at the Service Water Facility.

MECHANIC SHOP

- Major projects:
 - Completed rebuilding the Grit Pump at the Headworks Facility.
 - Completed replacing a rotating assembly on a centrifuge at the Dewatering Facility.
 - Replaced all the mechanical seals of the Gas Compressor at the Gas Handling Facility.

OPERATIONS

- Major Projects:

- Completed four lubrications on equipment at the Dewatering Facilities.
- Completed 21 Acid Washes on Air Pollution Equipment throughout Hyperion plant.

PAINT SHOP

- Major projects:
 - Completed lead removal on the screw conveyers at the Dewatering Facility for other trades to perform their duties.
 - Completed sandblasting and coating the upper bearing housing assembly of the pump at the Intermittent Pump Station.

PIPE SHOP

- Major projects:
 - Completed modifications to the sumps for acid washing at the Primary Centralized Air Scrubbers.
 - Completed the cleaning of a wet well, a centrate line, a centrifuge, and tanks at the Dewatering Facility.

MAINTENANCE PLANNING

- Major projects:
 - EMPAC/ICSD Support
 - No report.
 - Planning Update
 - Coordinated the wet well shut down for inspection at the Dewatering Facility.
 - Procured Allen Bradley Panel View to replace existing Nematron's for all the centrifuges at the Dewatering Facilities.
 - Service Contracts
 - No report.

SAFETY

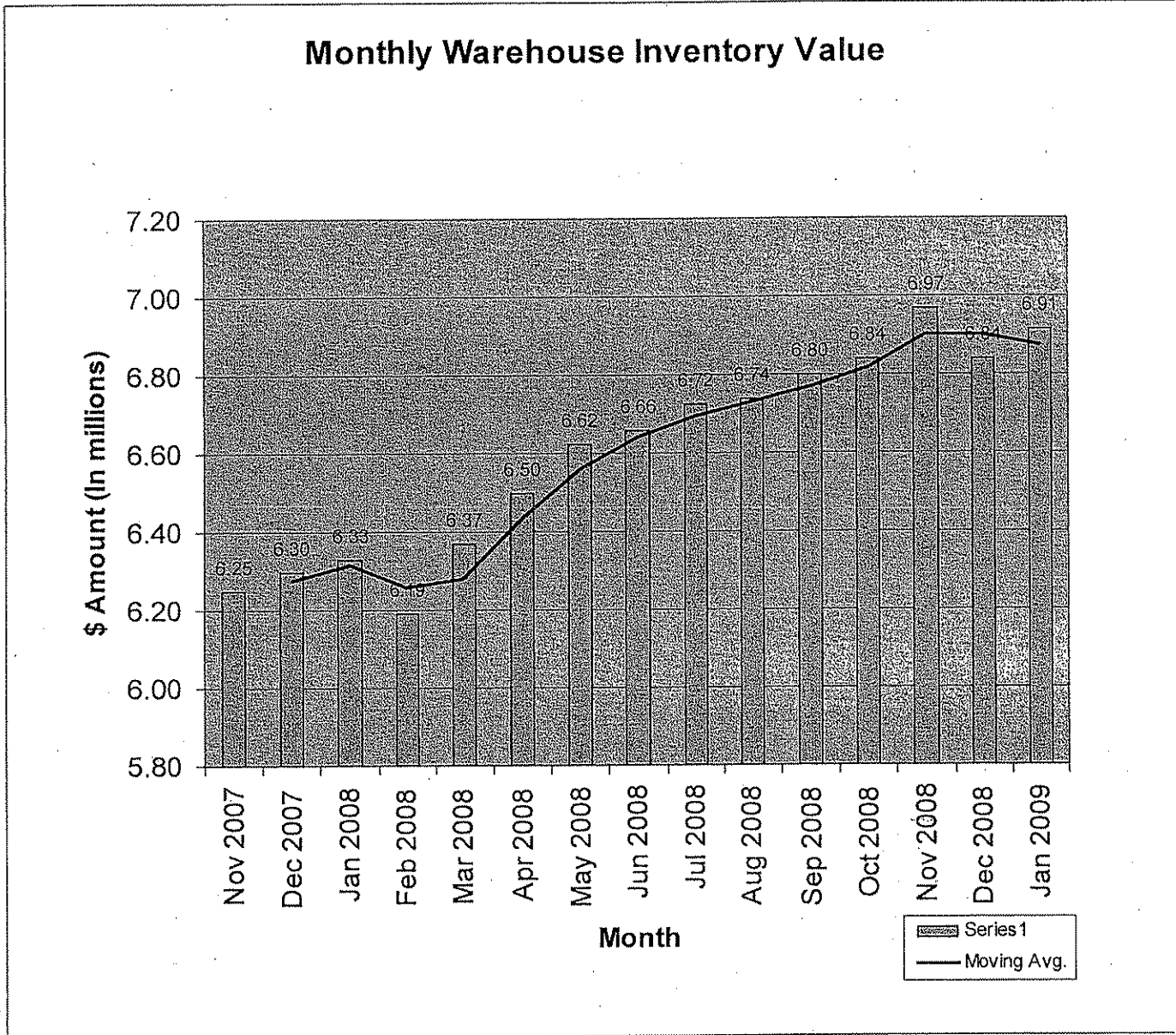
- Major projects:
 - Completed shop inspections for January 2009.
 - Completed the Hazardous Materials Business Plan for 2007.

WELD SHOP

- Major projects:
 - Completed repairs on the discharge chute for the centrifuge at the Dewatering Facility.

- Completed the installation and all welding requirements for the new screw conveyer at the Digester Screening Facility.
- Replaced broken or missing grating at the Truck Loading Facility.

HYPERION TREATMENT PLANT WAREHOUSE INVENTORY VALUE FOR JANUARY 2009



ADMINISTRATIVE SERVICES SECTION

New employees hired	6	Changes/transfers within HTD	1
Promotions within HTD	4	Leaves of absence transactions	1
Promotions from HTD	1	Light duty transactions	1
Promotions/transfers to HTD	0	Status changes	8
Transfers from HTD	1	Certifications requested	0
Resignations, retirements, etc.	0	Bids processed	4
Pay grade advancements	2	Total	<u>29</u>

Certifications Requested: None

Interviews: None

HYPERION TREATMENT DIVISION FINANCIAL SUMMARY

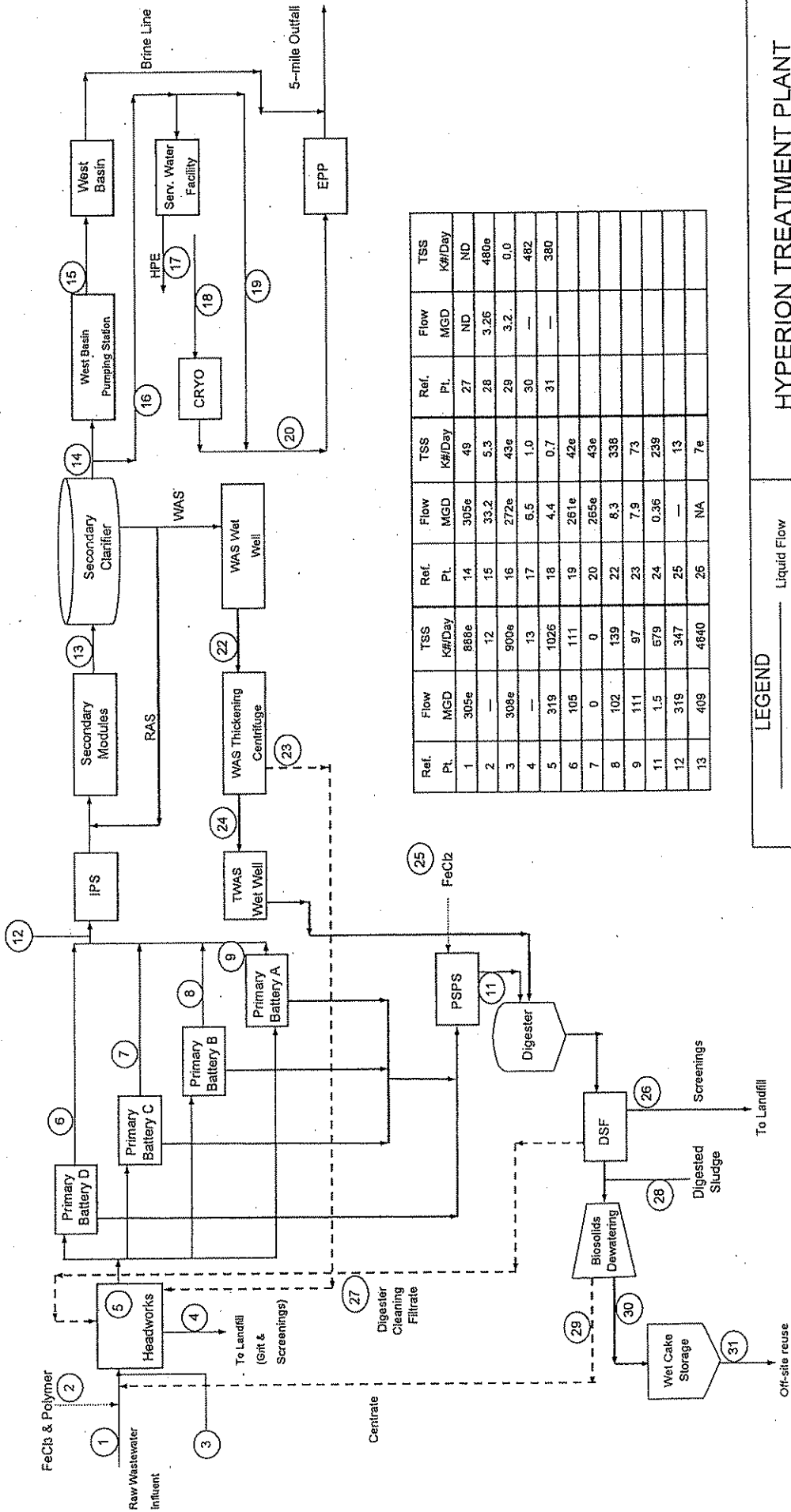
January 2009	<i>Year-To-Date Expenditures</i>	<i>Annual Budget 1</i>	<i>Projected Expenditures</i>	<i>Surplus Deficit</i>
Salary (Including Hiring Hall)	\$15,093,444	\$29,556,912	\$28,090,281	\$1,466,631
Overtime	\$824,991	\$887,194	1,500,000	(\$612,806)
Subtotal	\$15,918,435	\$30,444,106	\$29,590,281	\$853,825
Utilities & Expenses	\$30,339,852	44,456,523	\$47,258,836	(\$2,802,313)
Equipment	\$62,918	\$124,083	\$151,153	(\$27,070)
Subtotal	\$30,402,770	\$44,580,606	\$47,409,989	(\$2,829,383)
Total	\$46,321,205	\$75,024,712	\$77,000,270	(\$1,975,558)

PUBLIC TOURS

- 21 groups came for tours.
- 416 visitors.
- Four cancellations.

SAFETY REPORT

- There was no unsafe condition reported.
- There was no injury reported for Operations.

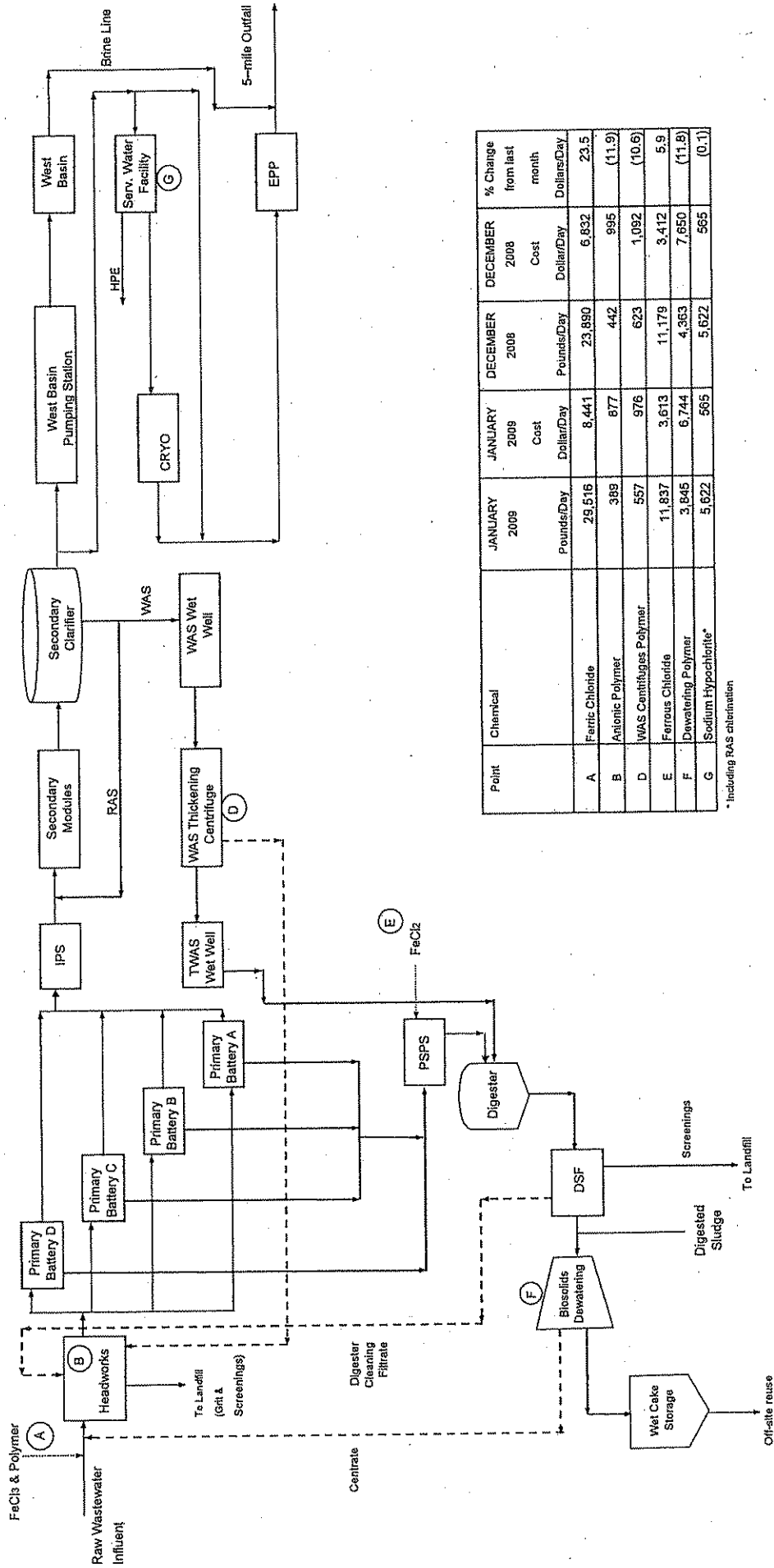


Ref. Pt.	Flow MGD	TSS K#/Day	Ref. Pt.	Flow MGD	TSS K#/Day	Ref. Pt.	Flow MGD	TSS K#/Day
1	305e	888e	14	305e	48	27	ND	ND
2	—	12	15	33.2	5.3	28	3.26	480e
3	308e	900e	16	272e	43e	29	3.2	0.0
4	—	13	17	6.5	1.0	30	—	482
5	319	1026	18	4.4	0.7	31	—	380
6	105	111	19	261e	42e			
7	0	0	20	255e	43e			
8	102	139	22	8.3	338			
9	111	97	23	7.9	73			
11	1.5	579	24	0.36	239			
12	319	347	25	—	13			
13	409	4840	26	NA	7e			

HYPERION TREATMENT PLANT
MONTHLY MASS BALANCE
JANUARY 2009

LEGEND

—— Liquid Flow
 - - - Solids Flow
 - - - - - Recycle
 - - - - - Chemical



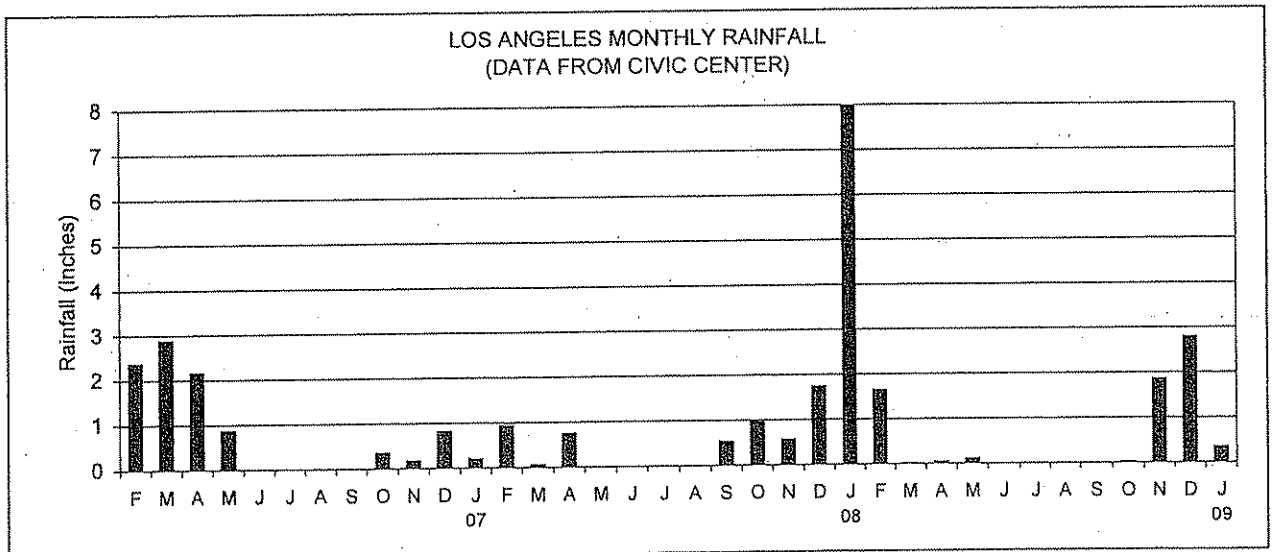
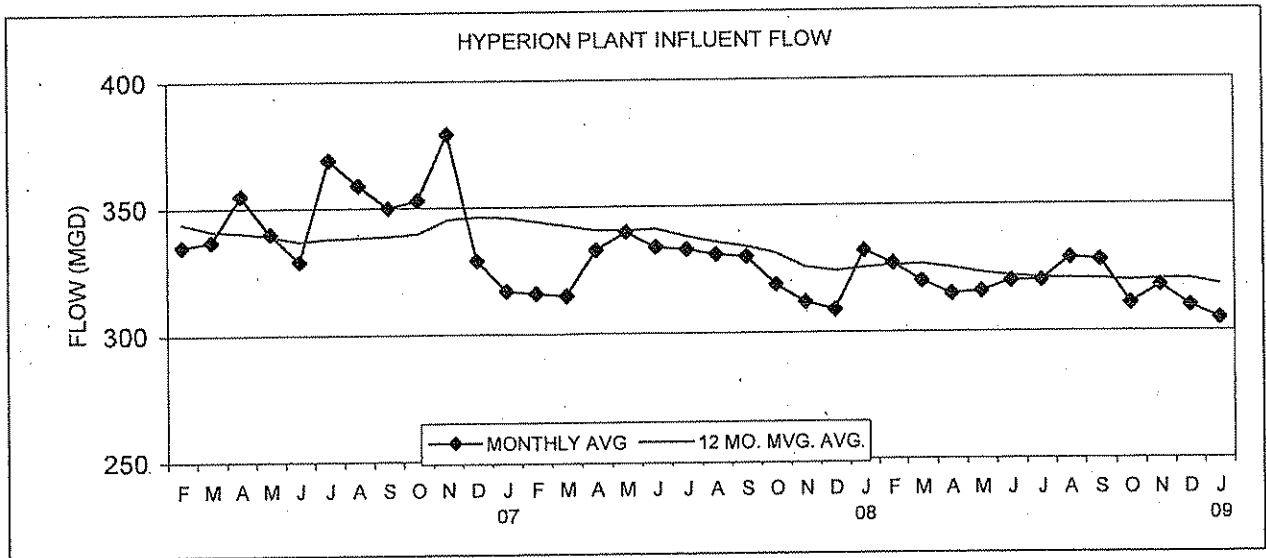
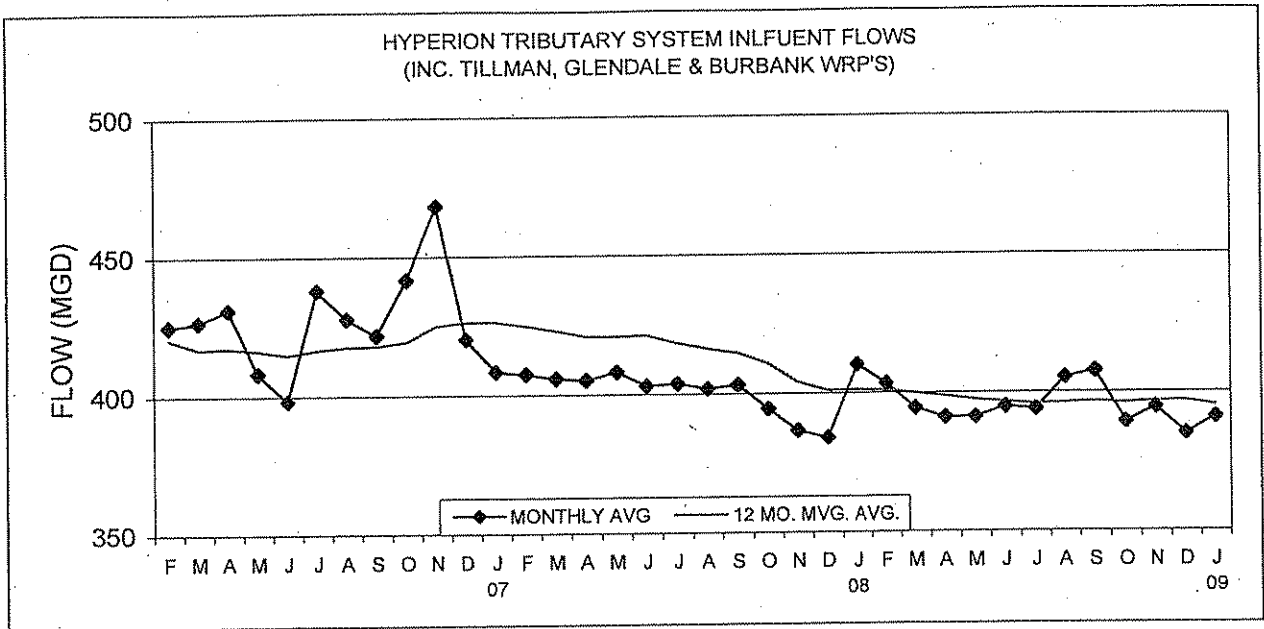
Point	Chemical	JANUARY 2009 Pounds/Day	JANUARY 2009 Cost Dollar/Day	DECEMBER 2008 Pounds/Day	DECEMBER 2008 Cost Dollar/Day	% Change from last month Dollars/Day
A	Ferrous Chloride	25,516	8,441	23,890	6,832	23.5
B	Azlonic Polymer	389	877	442	995	(11.9)
D	WAS Centrifuges Polymer	557	976	623	1,092	(10.6)
E	Ferrous Chloride	11,837	3,613	11,179	3,412	5.9
F	Dewatering Polymer	3,845	6,744	4,363	7,650	(11.8)
G	Sodium Hypochlorite*	5,622	565	5,622	565	(0.1)

* including RAS chlorination

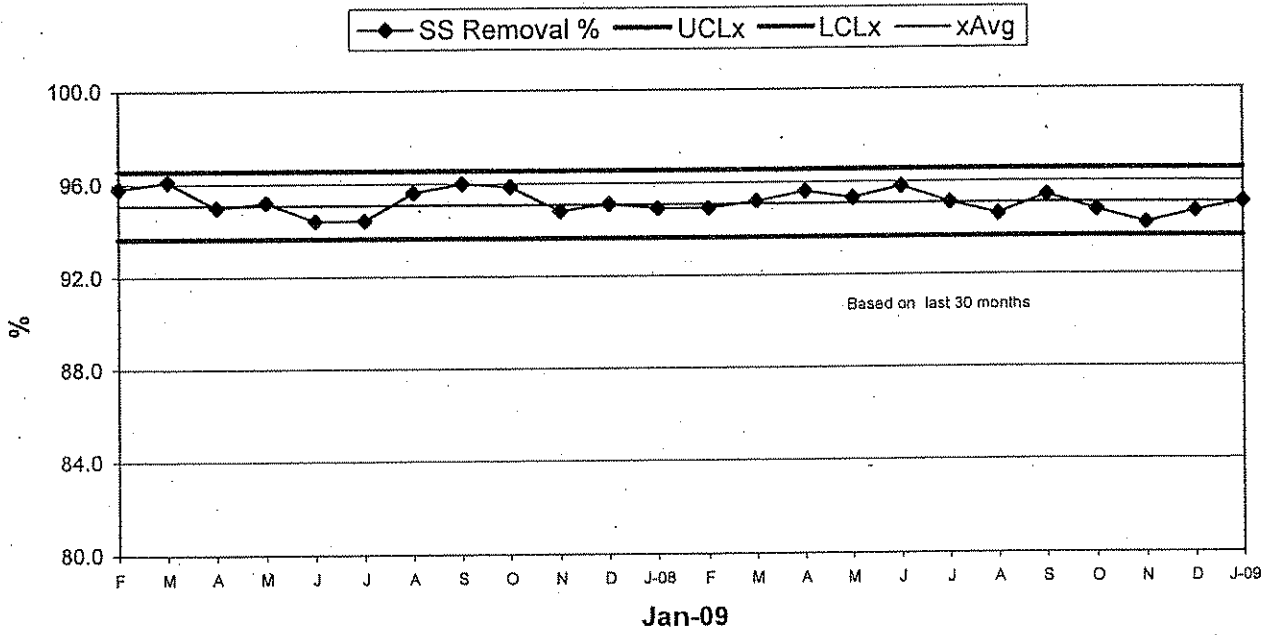
**HYPERION TREATMENT PLANT
MONTHLY CHEMICAL USAGE
JANUARY 2009**

LEGEND

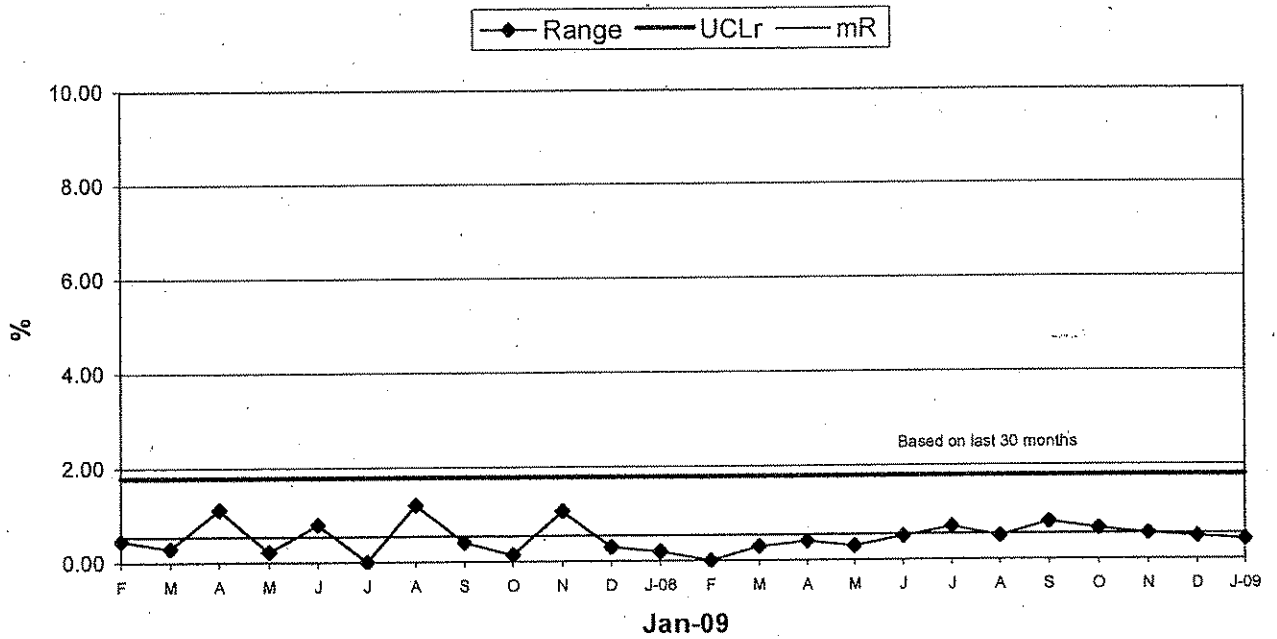
- _____ Liquid Flow
- _____ Solids Flow
- Recycle
- _____ Chemical



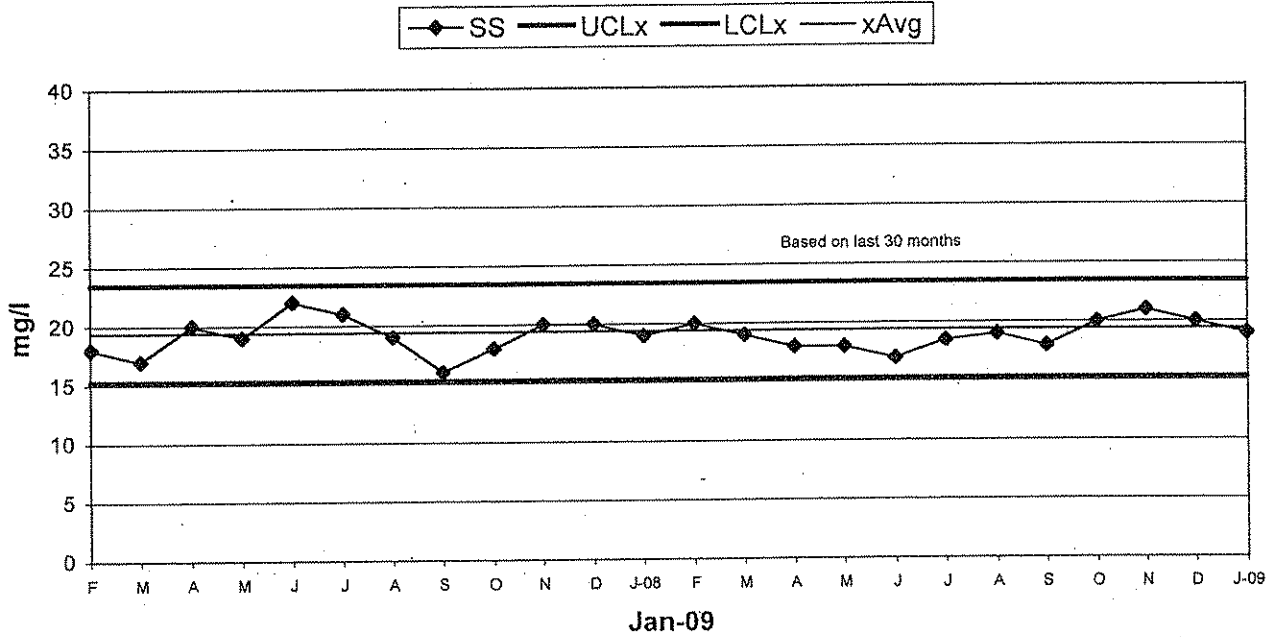
X Chart For Overall Suspended Solids Removal Efficiency



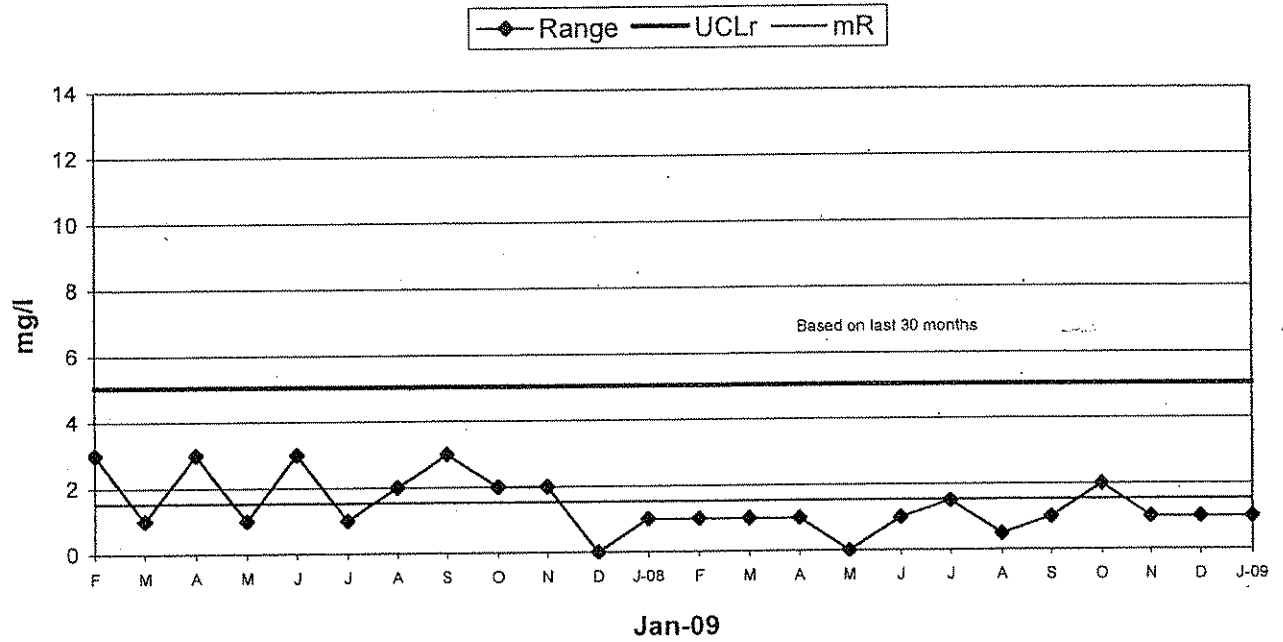
Range Chart For Overall Suspended Solids Removal Efficiency



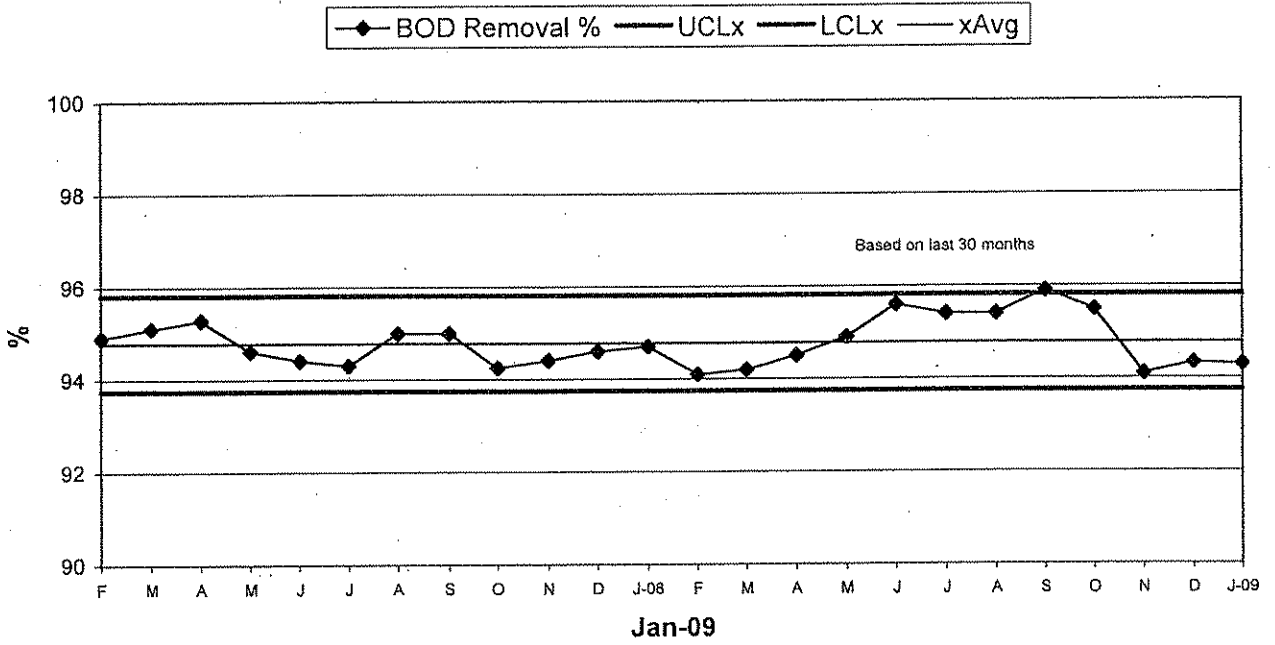
X Chart For 5-mile Suspended Solids



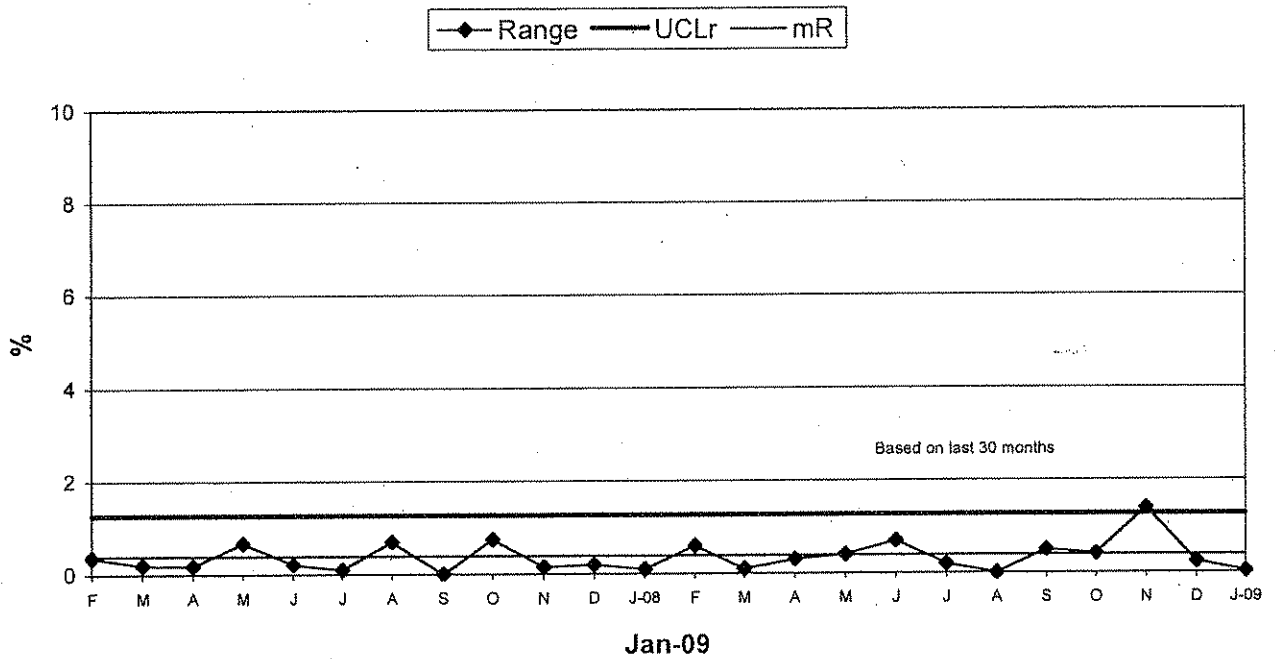
Range Chart For 5-mile Suspended Solids



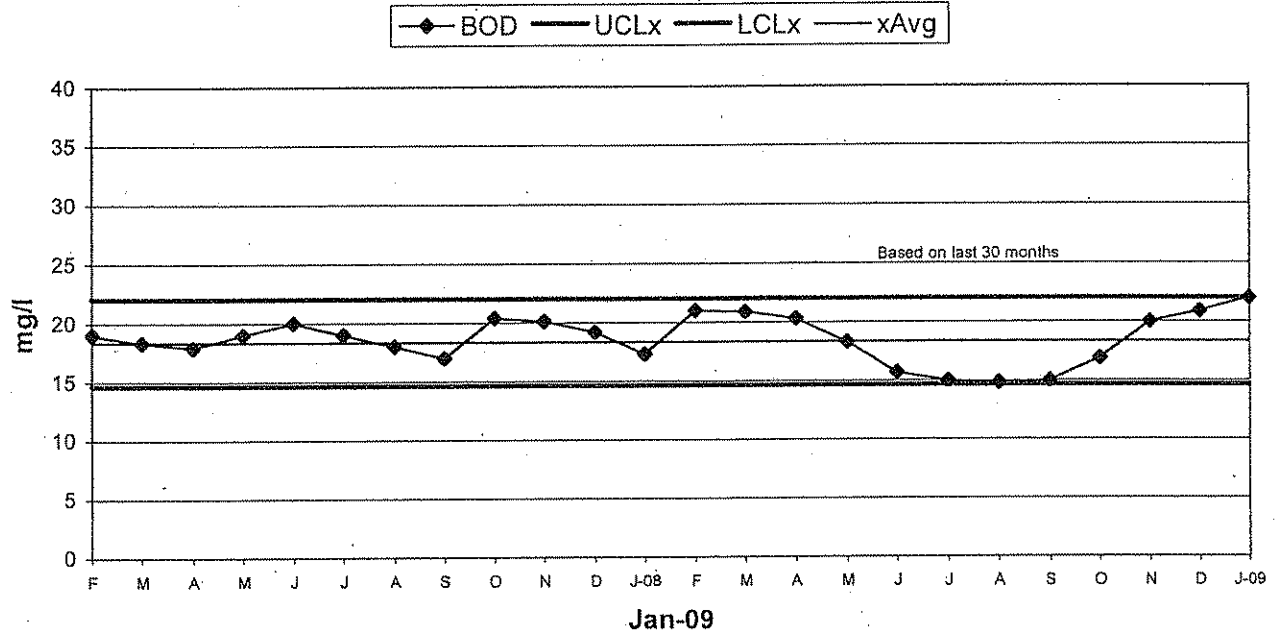
X Chart For Overall BOD Removal Efficiency



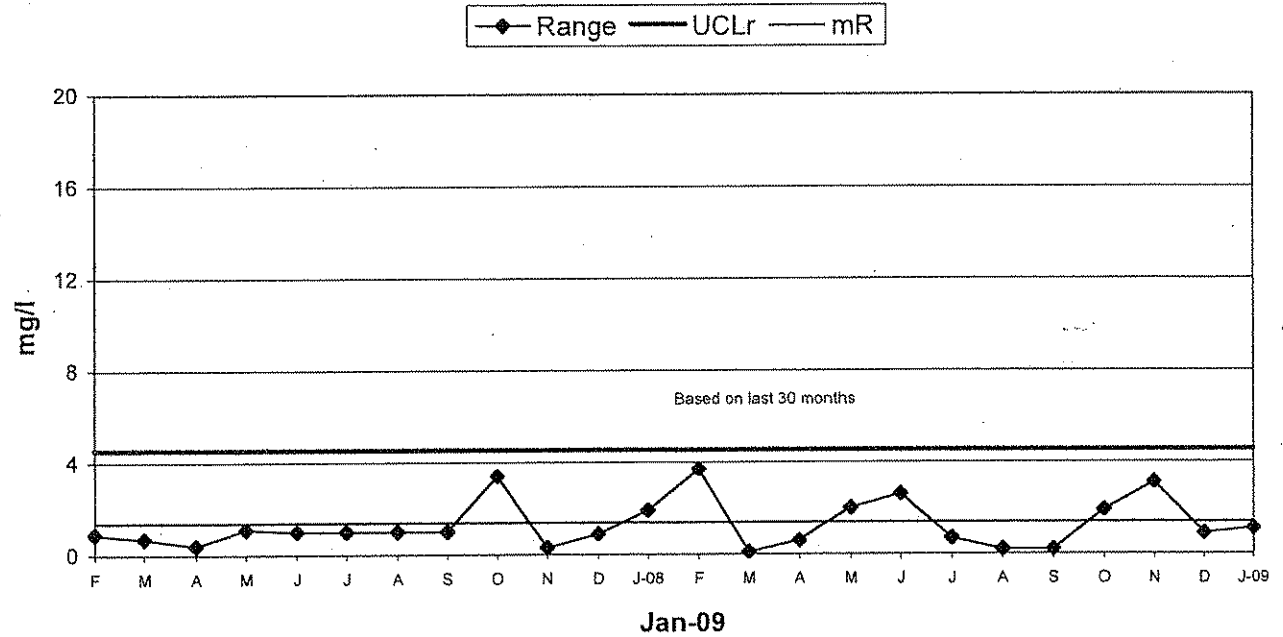
Range Chart For Overall BOD Removal Efficiency



X Chart For 5-mile BOD

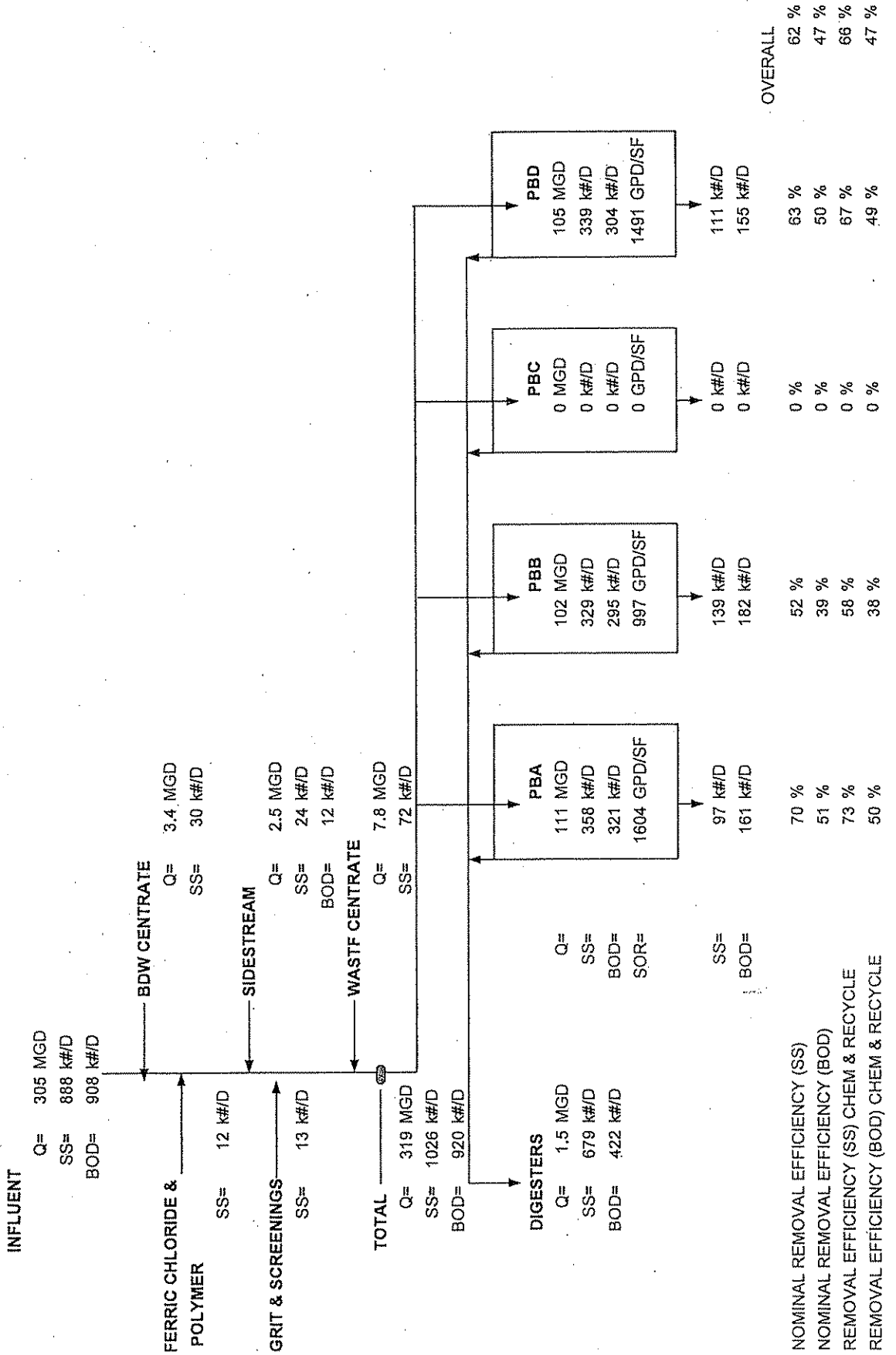


Range Chart For 5-mile BOD

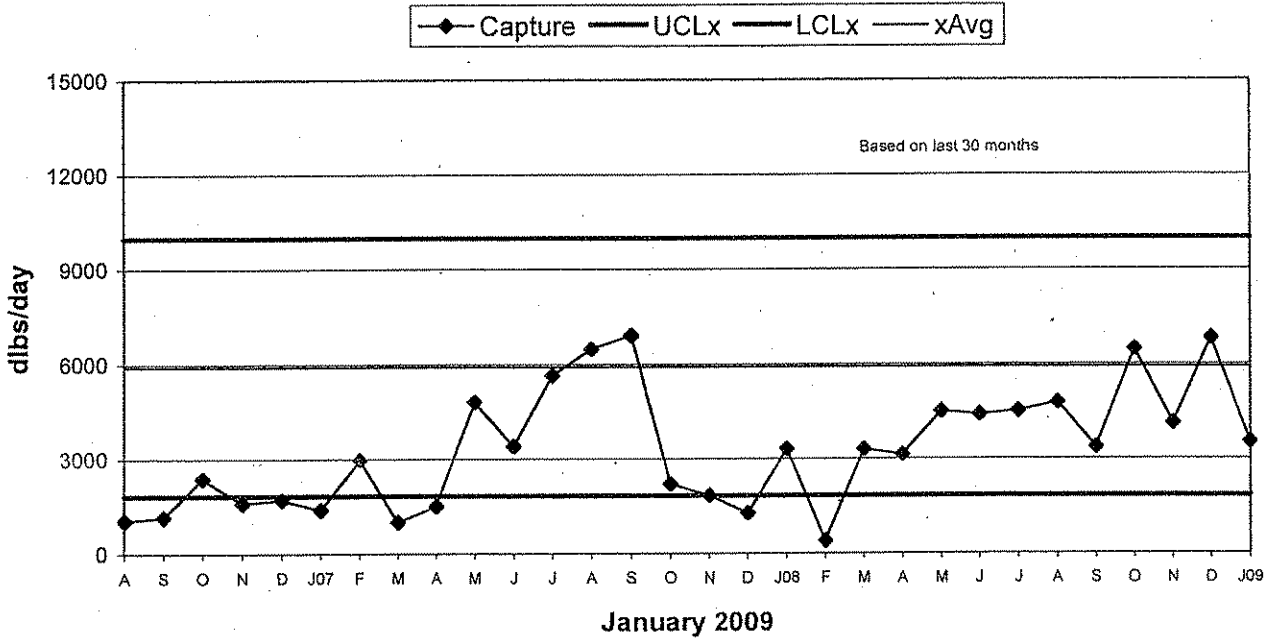


PRIMARY SUSPENDED SOLIDS & BOD MASS BALANCE

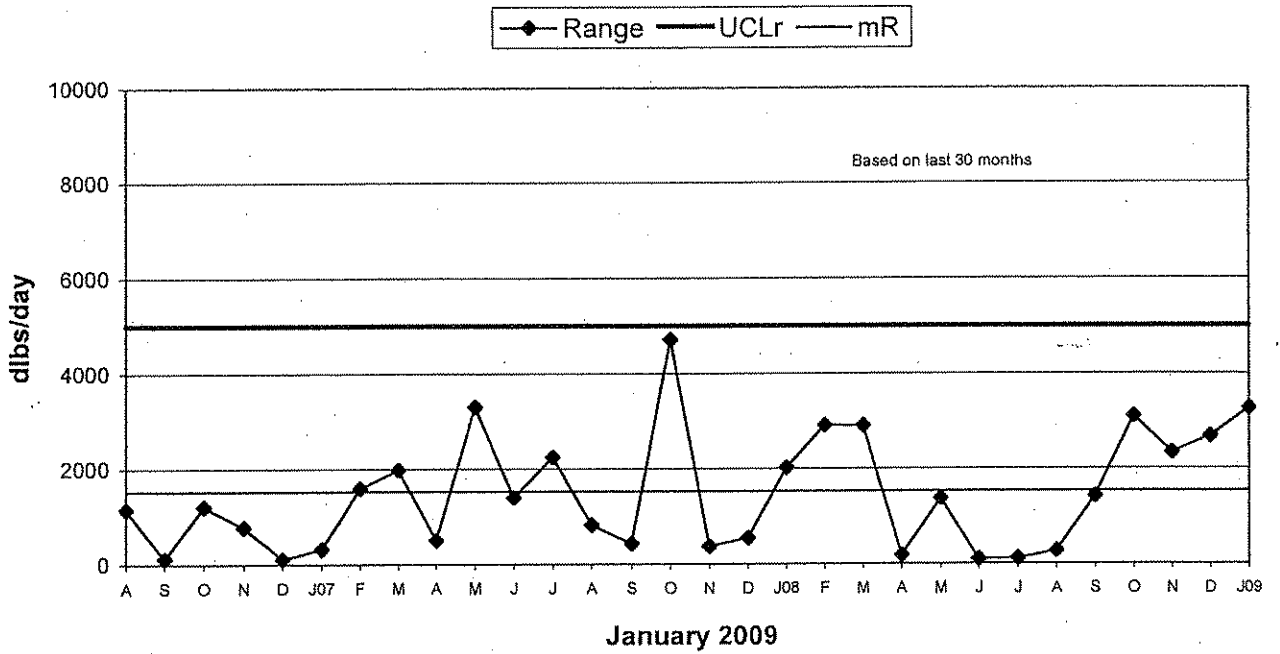
January 2009



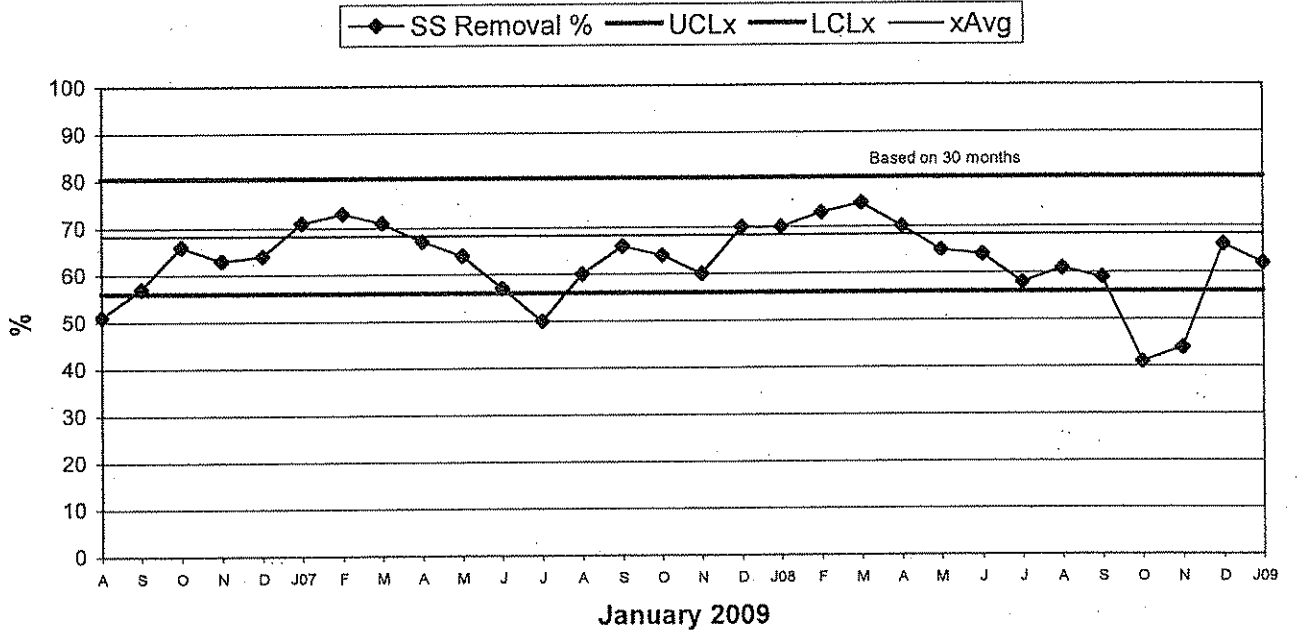
X Chart For Headworks Grit Capture



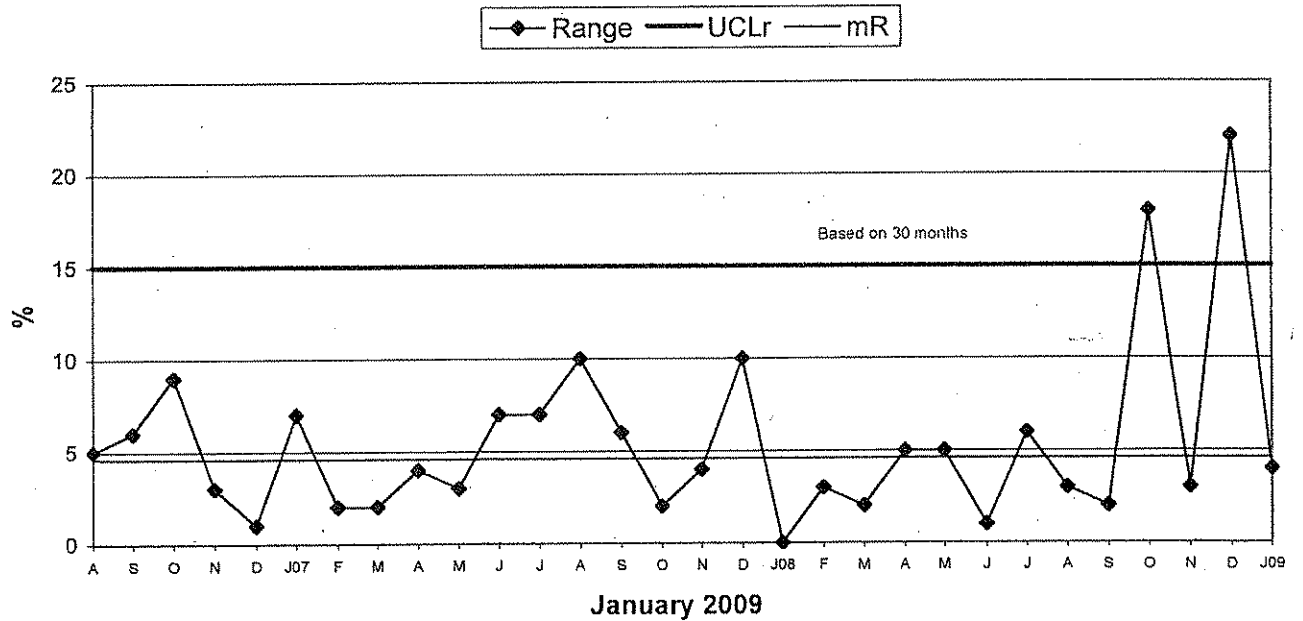
Range Chart For Headworks Grit Capture



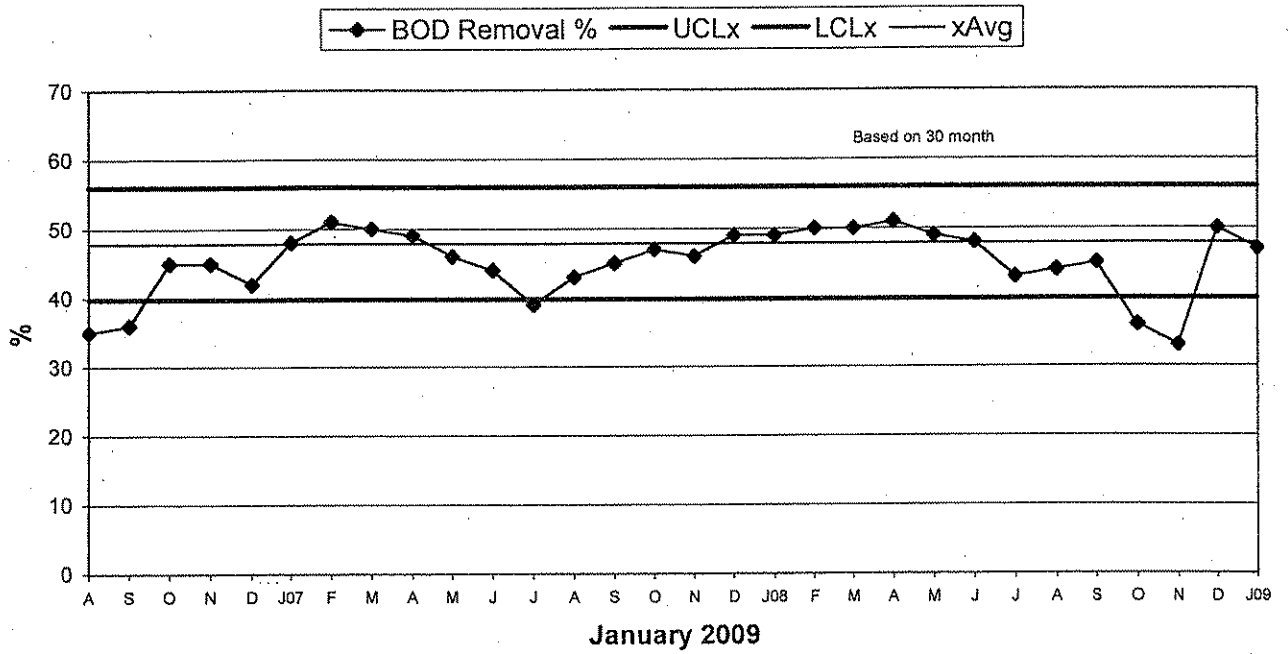
X Chart For Primary Suspended Solids Removal Efficiency



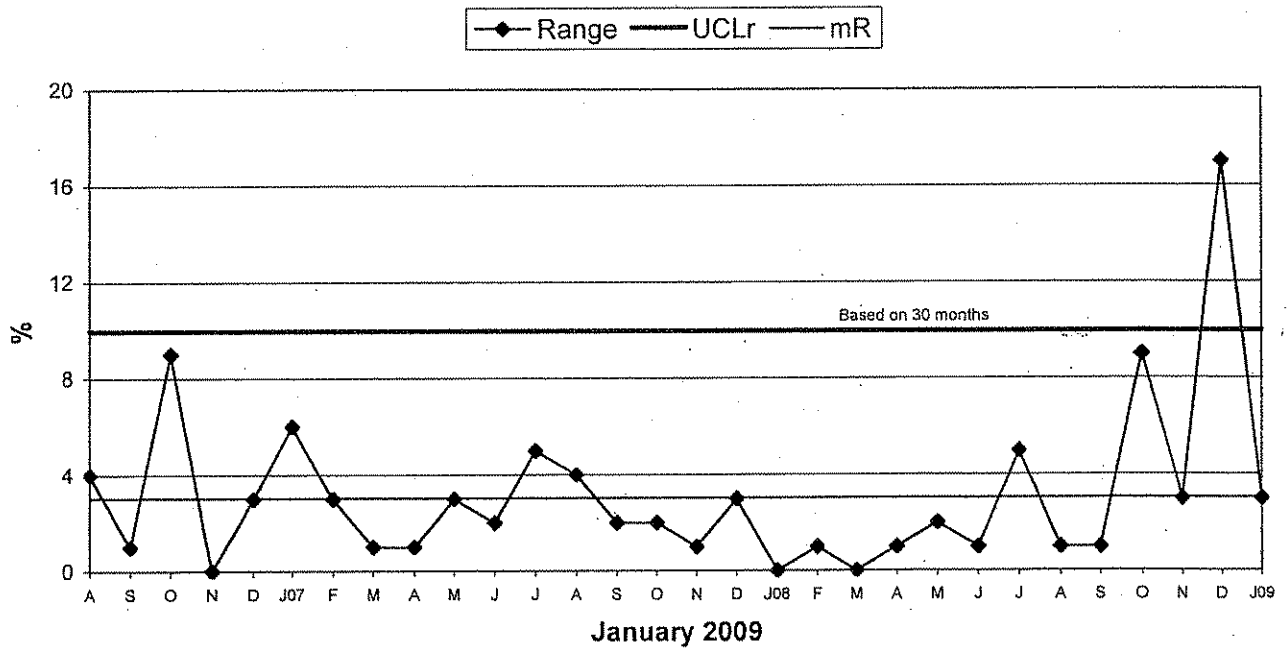
Range Chart For Primary Suspended Solids Removal Efficiency



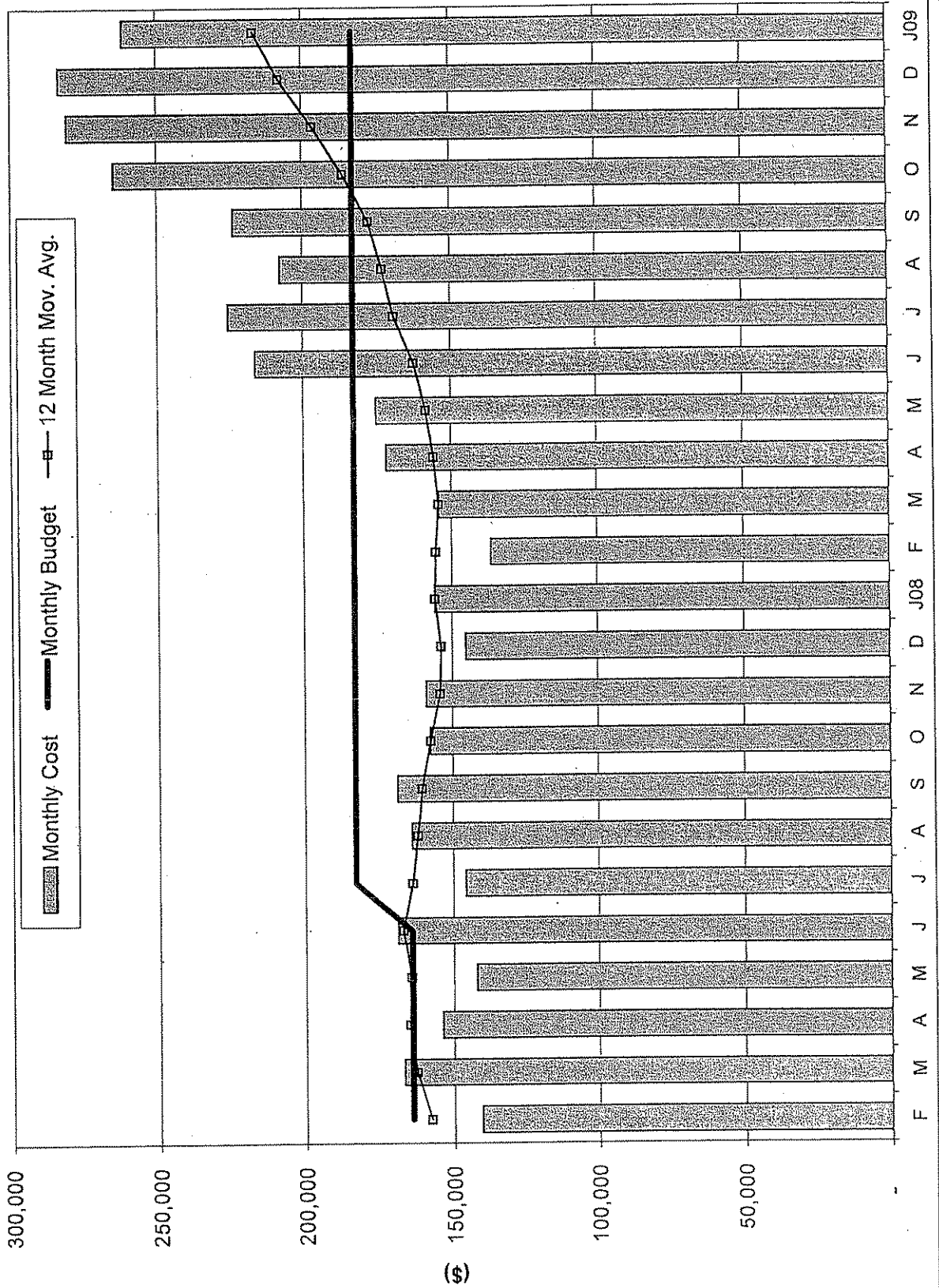
X Chart For Primary BOD Removal Efficiency



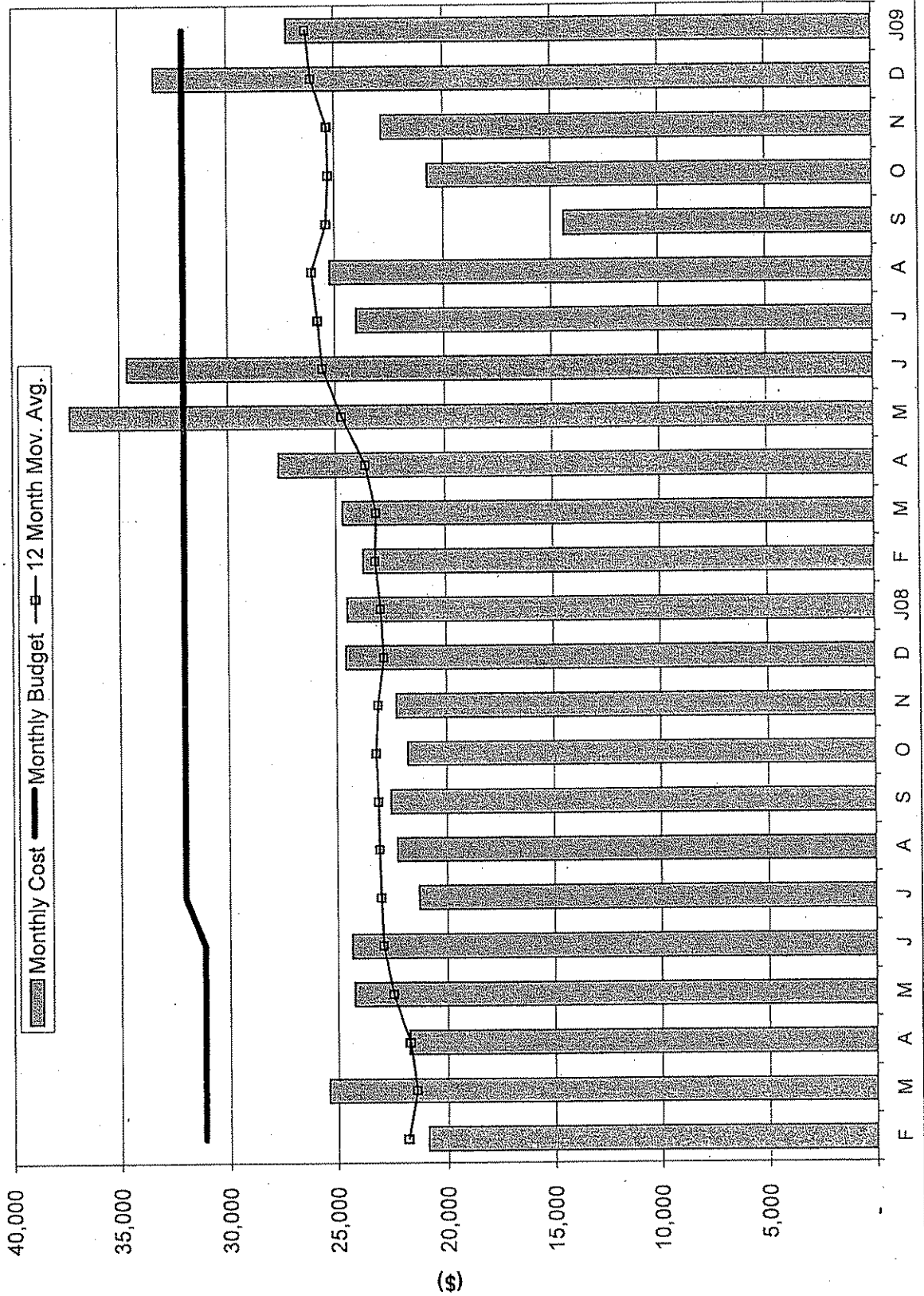
Range Chart For Primary BOD Removal Efficiency



PRIMARIES - Ferric Chloride Cost



PRIMARIES - Anionic Polymer Cost



**HYPERION TREATMENT PLANT
SUMMARY OF SECONDARY TREATMENT**

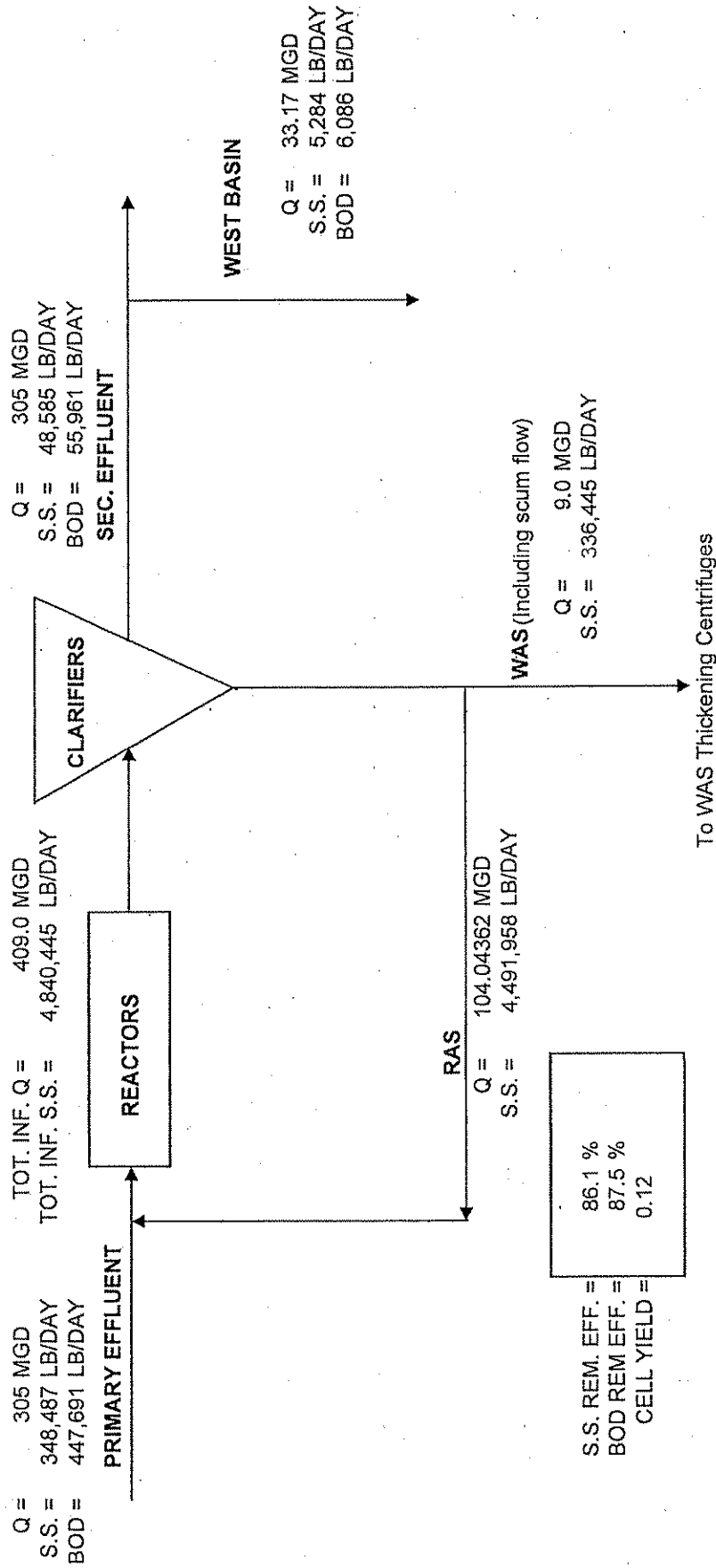
DATE DAY	SECONDARY INFLUENT										REACTORS										FIVE MILE OUTFALL										% REMOVAL
	TOT SEC FLOW (MGD)	SUSP SOLIDS	BOD TOTAL	BOD FILT (MGL)	NH3-N	COD	TOTAL TRANS OIL	AVG MLSS (MGL)	AVG FIM (LBS)	AVG MCRRT (DAYS)	TOT O2 USAGE (TON/DAY)	AVG SVI (ML/G)	AVG SOLIDS (MGL)	SETT SOLIDS (M/L)	TOTAL BOD	NH3-BOD	COMB SEC EFF (MGL)	NO2 (GRAB)	TDS (COMP)	DO (GRAB)	PH (COMP)	O&G (COMP) (MGL)	TURB (COMP) (NTU)	TEMP (F)	SUSP SOLIDS						
1 THU	287e	155	192	41	459	12	1587	1e	1e	242	216	19.0	<0.1	20.0	9	27				7.0			7	76	87.8						
2 FRI	300e	136	156	44	369	12	1566	1e	1e	227	242	23.0	<0.1	29.0	11	41				7.0			10	75	83.1						
3 SAT	302e	143	182	36	404	12	2041	1e	2e	231	143	21.2	<0.1	29.0	11	37			7.4		<3		12	75	85.2						
4 SUN	302e	109	170	46	400	12	1316	1e	1e	221	195	18.0	<0.1	28.0	11	29				6.9			10	75	83.5						
5 MON	310a	115	161	35	459	12	1397	1e	1e	225	171	18.3	<0.1	25.0	9	40		836		7.0			8	74	84.1						
6 TUE	310	148	181	36	443	12	1576	1.3	1.2	235	134	20.5	<0.1	25.0	10	33				7.0			9	74	86.1						
7 WED	312	145	154	71	429	12	1509	1.1	1.2	241	189	21.0	<0.1	25.0	9	32				7.0			9	75	85.5						
8 THU	310	156	185	42	495	12	1619	1.3	1.2	248	174	25.0	<0.1	26.0	8	30				7.0			10	75	84.0						
9 FRI	309	129	157	38	444	12	1557	1.1	1.0	249	243	19.0	<0.1	25.0	9	38			6.6		<3		9	75	85.2						
10 SAT	304	116	169	32	434	12	1626	1.1	1.0	241	196	22.0	<0.1	31.0	12	34				6.9			11	76	81.0						
11 SUN	297	128	181	36	419	12	1397	1.4	0.8	230	219	22.5	<0.1	25.0	13	31				6.9			11	76	82.4						
12 MON	306	119	171e	36	403	12	1393	1e	0.9	255	167	20.0	<0.1	20e	12e	33				6.7			8	76	83.2						
13 TUE	315	122	182	35	456	12	1350	1.5	0.9	273	161	19.6	<0.1	20.0	9	23		836		7.0			9	76	84.0						
14 WED	309	125	181	73	447	12	1440	1.4	1.0	240	163	20.0	<0.1	25.0	9	37				6.9		<3	8	76	83.9						
15 THU	307	126	152	44	449	12	1471	1.1	1.0	268	144	19.0	<0.1	25.0	10	36				7.0			9	76	84.9						
16 FRI	306	147	206	41	432	12	1305	1.7	0.9	262	153	16.0	<0.1	18.0	10	36				7.1			9	76	89.1						
17 SAT	303	130	182	40	437	12	2019	1.0	1.4	259	92	17.6	<0.1	23.0	10	36				6.9			9	76	86.5						
18 SUN	290	147	171	39	435	12	1344	1.3	0.9	247	148	19.5	<0.1	21.0	11	34				7.0			8	76	86.7						
19 MON	307	125	181	47	438	12	1280	1.5	0.9	253	180	17.5	<0.1	22.0	12	33				7.0		<3	9	76	86.0						
20 TUE	306	147	182	38	440	12	1290	1.5	0.8	273	149	18.5	<0.1	21.0	10	42		870		7.2			9	77	87.4						
21 WED	305	136	168	39	406	12	1480	1.2	1.2	266	138	16.5	<0.1	20.0	9	36				7.0			8	77	87.8						
22 THU	304	150	188	38	416	12	1776	1.1	1.2	250	115	17.0	<0.1	17.0	8	39				7.0			8	77	88.7						
23 FRI	311	127	154	33	417	12	1436	1.2	0.8	238	155	18.4	<0.1	20.0	8	33				7.0			8	76	85.5						
24 SAT	311	138	180	40	424	12	1504	1.3	1.0	234	145	18.5	<0.1	21.0	9	29				6.9			9	76	86.6						
25 SUN	301	130	159	40	417	12	1480	1.1	1.1	228	135	20.5	<0.1	20.0	11	31				7.0		<3	9	76	84.2						
26 MON	307	132	149	37	408	12	1738	0.9	0.9	232	137	18.0	<0.1	17.0	8	32				6.9			8	75	86.4						
27 TUE	307	115	150	37	415	12	1307	1.3	1.2	229	173	16.0	<0.1	16.0	9	32		980		7.0			8	74	86.1						
28 WED	306	113	185	83	399	12	1773	1.1	2.6	249	160	14.8	<0.1	16.0	8	29				6.9			7	75	86.9						
29 THU	304	137	198	37	469	12	1513	1.4	1.3	268	287	20.0	<0.1	21.0	9	33				7.0			10	76	85.4						
30 FRI	300	142	200	44	469	12	1489	1.4	0.8	280	292	18.8	<0.1	21.0	12	40				7.0			10	76	86.7						
31 SAT	294	155	189	43	496	12	1591	1.2	1.1	248	225	17.5	<0.1	23.0	11	36				6.9			9	76	88.7						
TOTAL																															
MAXIMUM	315	166	206	83	47	496	2041	1.7	2.6	280	292	25.0	<0.1	31.0	13	42		980		7.4		<3	12	77	89.1						
MINIMUM	287e	109	149	62	29	369	1280	0.9	0.8	221	92	14.8	<0.1	16.0	8	23		836		5.8		<3	7	74	81.0						
AVERAGE	305e	134	175e	72	39	433	1521	1.0	0.9	247	175	19.1	<0.1	22e	10e	34		881		6.8		<3	9	76	85.6						

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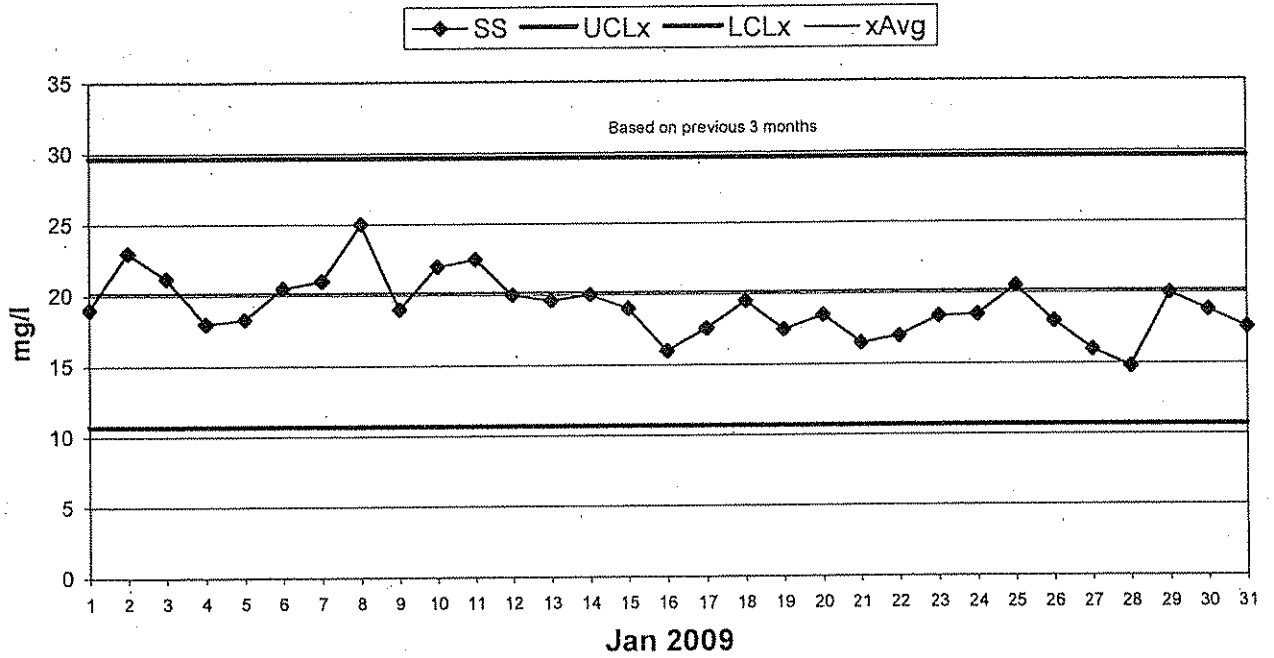
e: estimated

SECONDARY TREATMENT MASS BALANCE

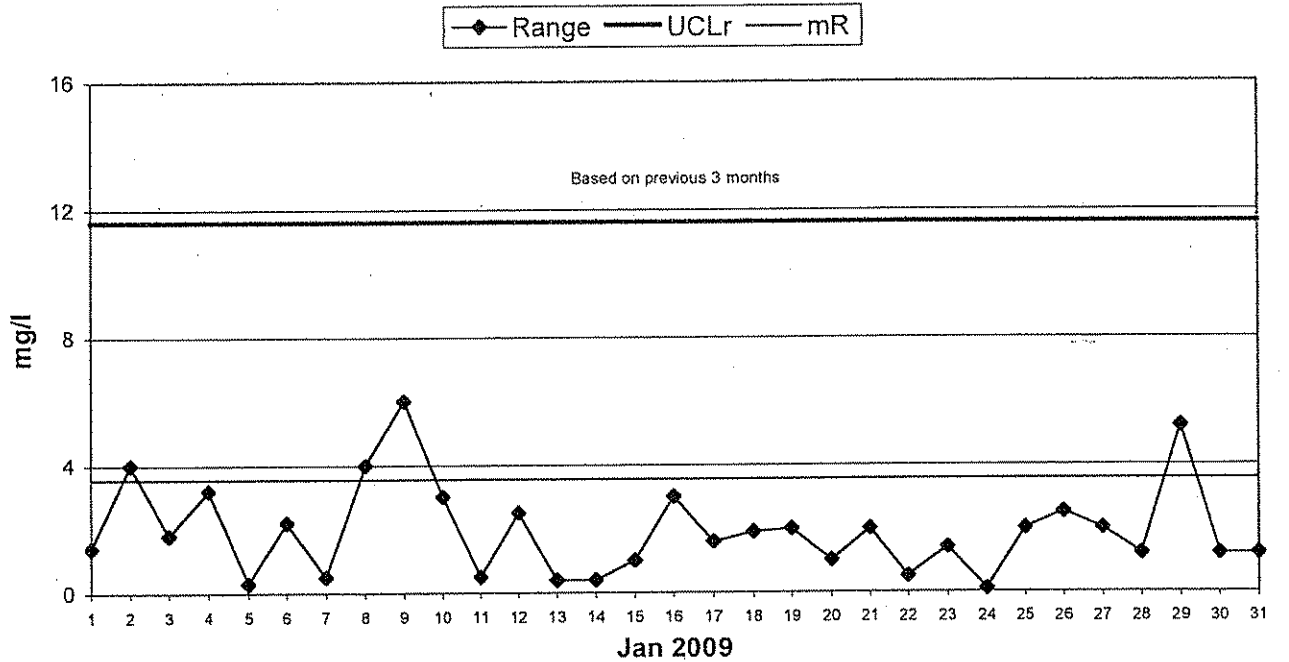
January 2009



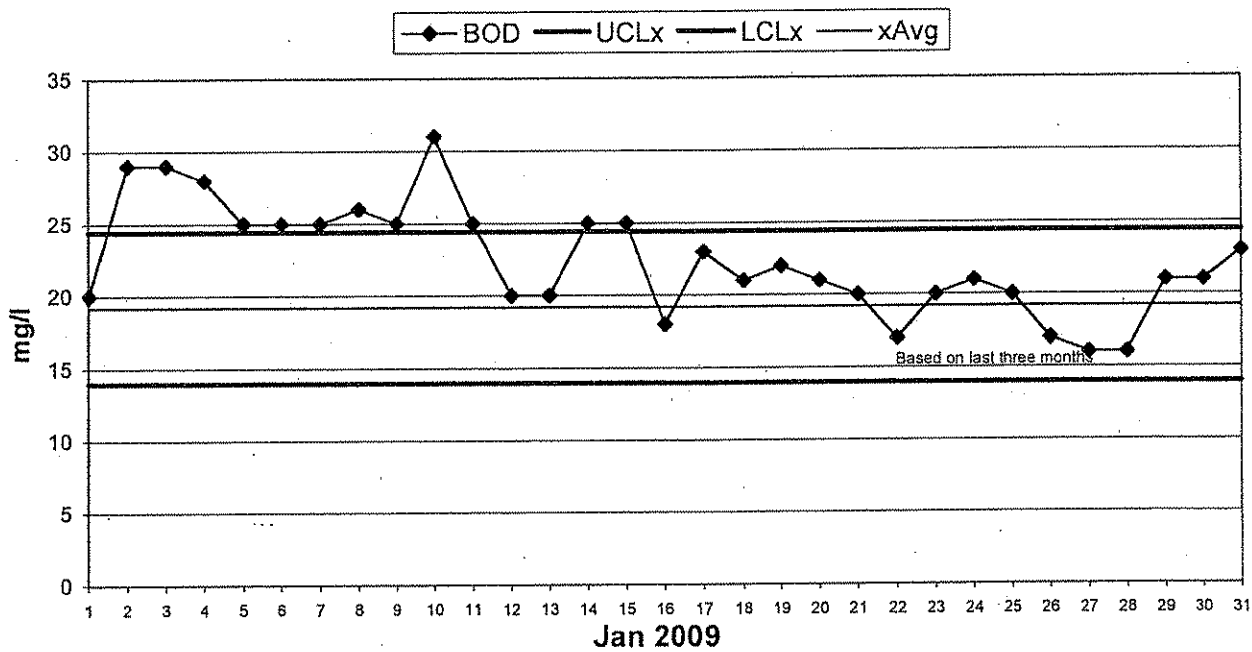
X Chart For Secondary Effluent Suspended Solids



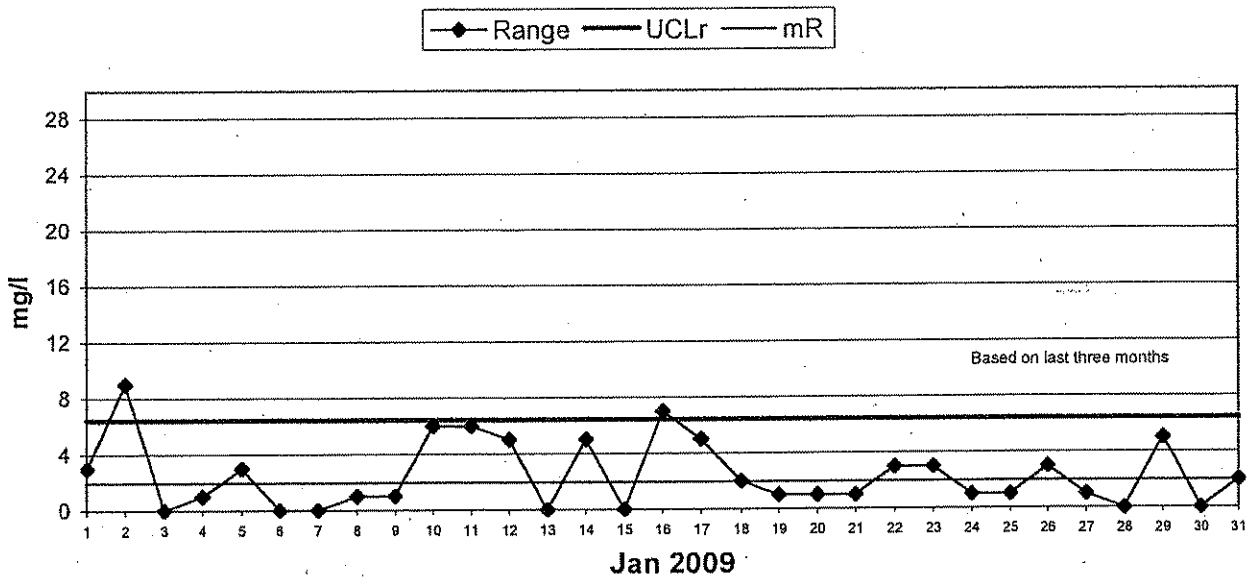
Range Chart For Secondary Effluent Suspended Solids



X Chart For Secondary Effluent BOD



Range Chart For Secondary Effluent BOD

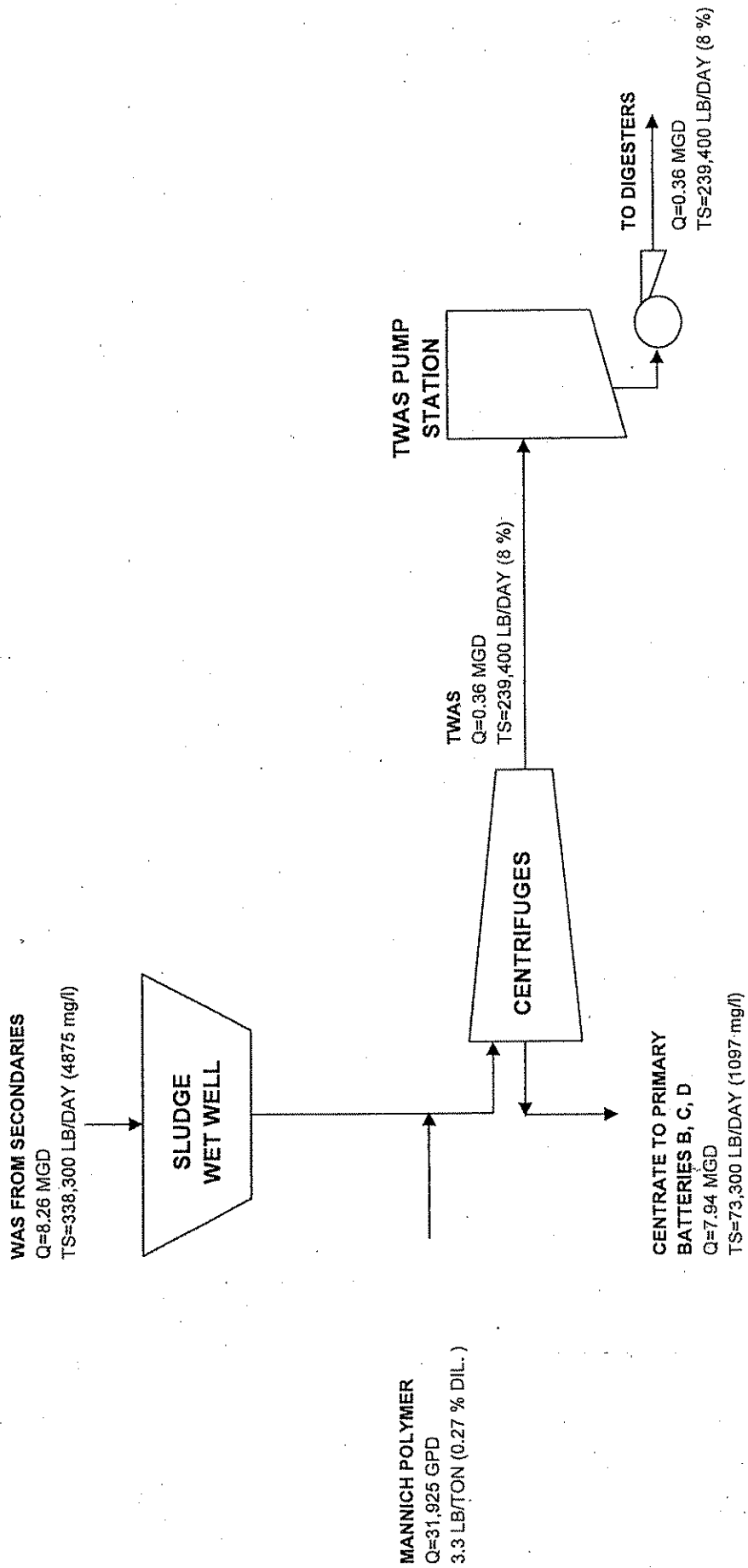


**HYPERION TREATMENT PLANT
SUMMARY OF WAS THICKENING FACILITY**

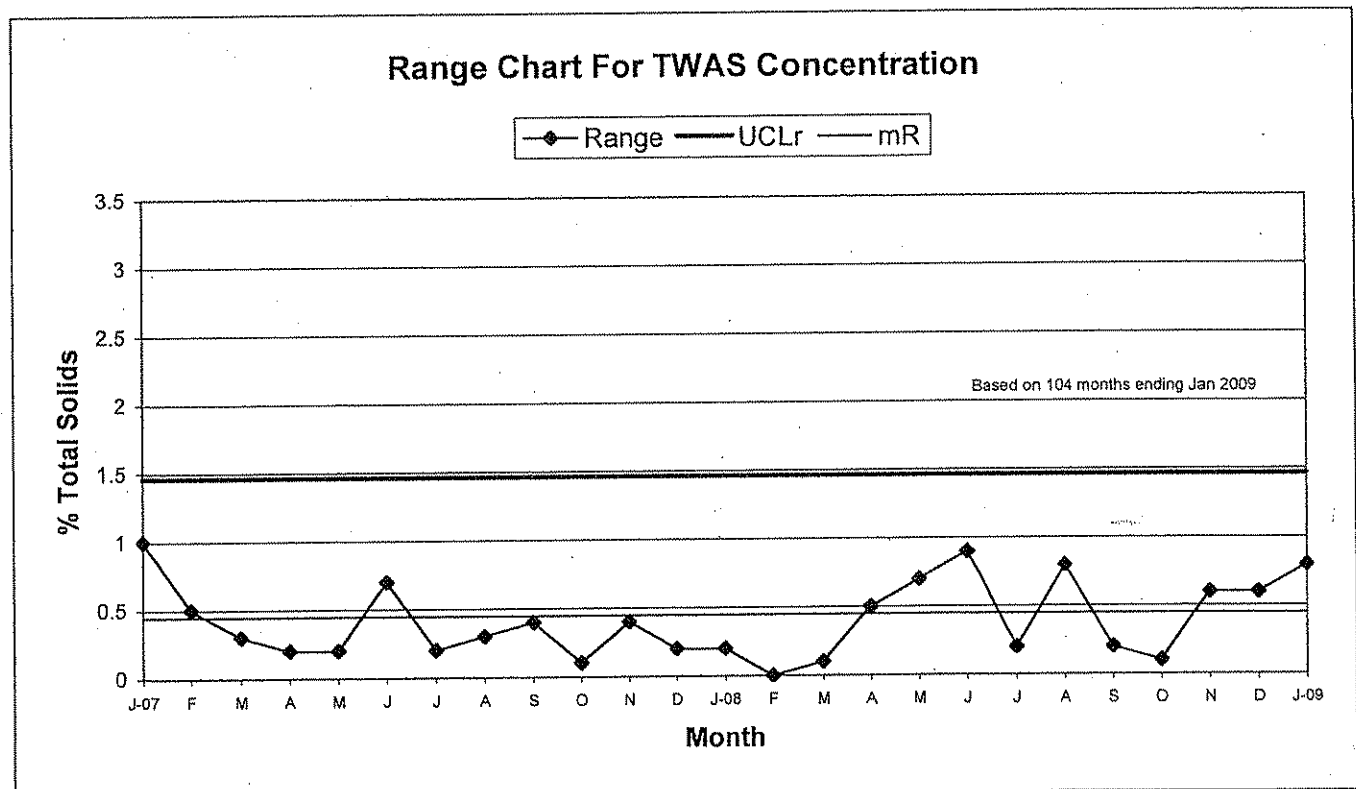
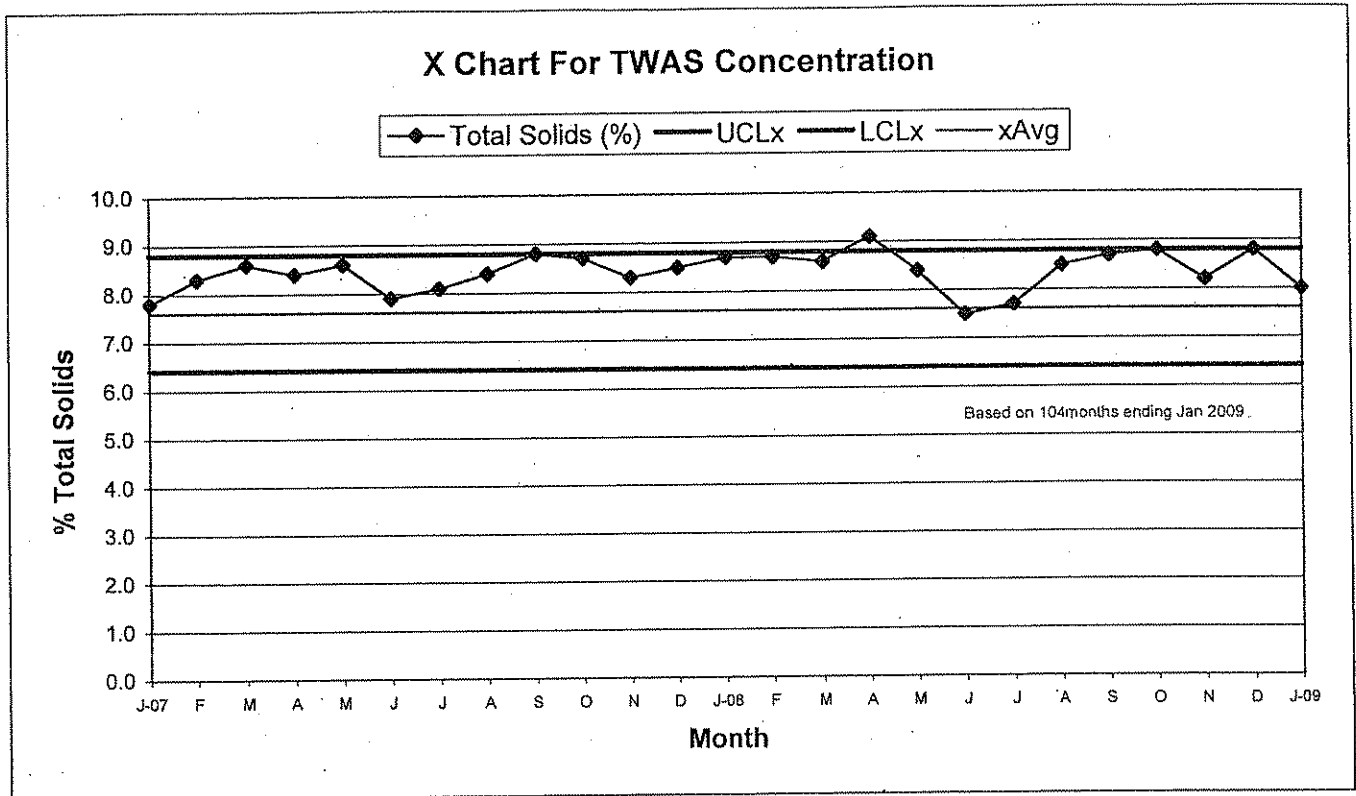
DATE	DAY	OVERALL WAS FEED				OVERALL POLYMER FEED										TWAS PRODUCTION				CENTRATE			OVER CAF EFI (%)
		FLOW (MGD)	SS (mg/L)	SOLIDS LOADINGS (Klbs)	BULK VS (%)	DIL FLOW (GPD)	DIL TS (%)	DIL VS (%)	OVERALL DOSAGE (lbs/ft)	VISC (cps)	CHARGE (UEG/G)	TWAS FLOW (MGD)	TWAS TS (%)	TWAS SOLIDS TO DIG (Klbs)	FLOW (MGD)	SS (mg/L)	LOADING (Klbs)						
1	THU	7.3	5400	328		25562	0.31	0.24	3.2				0.31	8.6	223	7.0	1510	88					
2	FRI	7.9	4770	314		30695	0.28	0.22	3.6				0.31	6.3	164	7.6	987	63					
3	SAT	8.0	4770	317		31990	0.29	0.22	3.7				0.36	6.8	204	7.6	907	58					
4	SUN	7.8	4930	321		29456	0.28	0.21	3.2				0.32	5.0	132	7.5	1190	75					
5	MON	7.7	4770	307		26328	0.26	0.19	2.6				0.30	8.6	213	7.4	960	60					
6	TUE	7.8	4730	306		30293	0.27	0.20	3.3				0.30	9.4	235	7.5	1310	82					
7	WED	6.7	5700	318		26358	0.30	0.22	3.1				0.30	9.4	232	6.4	890	48					
8	THU	6.7	5600	312		23552	0.29	0.22	2.7				0.28	4.6	108	6.4	1170	63					
9	FRI	8.6	4730	339		29814	0.29	0.20	3.0				0.35	9.6	277	8.3	973	67					
10	SAT	9.0	4570	342		29714	0.26	0.22	3.2				0.37	8.6	283	8.6	833	60					
11	SUN	9.2	4430	338		45464	0.30	0.19	4.2				0.44	8.8	320	8.8	807	59					
12	MON	9.0	4500	336		38263	0.26	0.22	4.1				0.38	8.7	276	8.6	1360	98					
13	TUE	9.2	4830	377		38211	0.26	0.20	3.5				0.37	8.7	267	8.8	863	64					
14	WED	8.1	4670	315		30829	0.30	0.23	3.9				0.31	8.8	287	7.8	940	61					
15	THU	8.9	4100	305		34228	0.30	0.19	3.7				0.32	9.0	241	8.6	1160	84					
16	FRI	8.9	5270	380		29716	0.27	0.19	2.5				0.32	9.3	244	8.6	1720	123					
17	SAT	9.1	5270	400		31065	0.29	0.22	2.8				0.41	8.9	308	8.7	1380	100					
18	SUN	9.0	4130	308		34418	0.29	0.21	4.0				0.37	7.2	223	8.6	860	62					
19	MON	8.6	4400	315		33593	0.25	0.20	3.8				0.31	7.3	188	8.3	1100	76					
20	TUE	8.5	5230	372		34442	0.26	0.24	3.7				0.38	7.9	248	8.2	1040	71					
21	WED	8.4	4900	344		37354	0.26	0.20	3.4				0.42	9.1	317	8.0	1030	69					
22	THU	8.1	4970	338		29434	0.29	0.22	3.2				0.36	7.7	232	7.8	927	60					
23	FRI	9.1	5230	397		31643	0.27	0.21	2.6				0.38	8.8	281	8.7	1060	77					
24	SAT	9.1	4730	358		33550	0.24	0.18	2.8				0.42	7.0	243	8.7	1090	79					
25	SUN	8.6	4730	340		41530	0.26	0.19	3.8				0.42	7.7	269	8.2	980	67					
26	MON	8.7	6200	450		36335	0.26	0.23	3.0				0.43	6.8	243	8.3	773	54					
27	TUE	7.5	NS	NC		34783	NS	NS	NC				0.40			7.1	NS	NC					
28	WED	3.7	3700	114		14384	0.25	0.19	4.0				0.21	6.0	107	3.5	775	23					
29	THU	7.3	4070	249		25028	0.27	0.22	3.8				0.32	9.1	242	7.1	1530	90					
30	FRI	9.9	5800	479		33828	0.25	0.21	2.5				0.48	8.5	345	9.5	980	77					
31	SAT	9.9	5030	417		38007	0.29	0.23	3.5				0.40	9.3	308	9.6	1800	144					
TOTAL		256.1		10148		989669							11.95		7182	246.0		2200					
MAXIMUM		9.9	6200	479		45464	0.31	0.24	4.2				0.48	9.6	345	9.6	1800	144					
MINIMUM		3.7	3700	114		14384	0.24	0.18	2.5				0.21	4.6	107	3.5	773	23					
AVERAGE		8.3	4875	338		31925	0.27	0.21	3.3				0.36	8.0	239	7.9	1087	73					

WAS THICKENING MASS BALANCE

January 2009

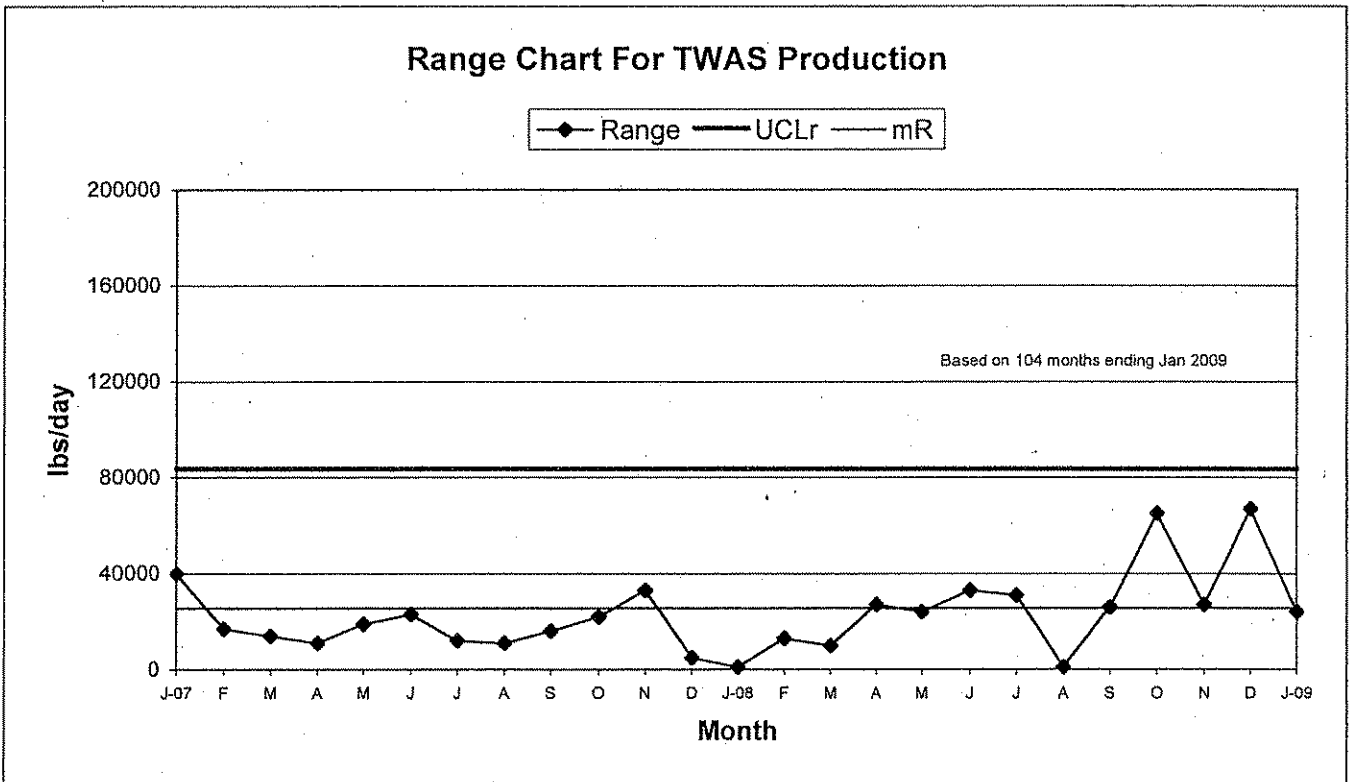
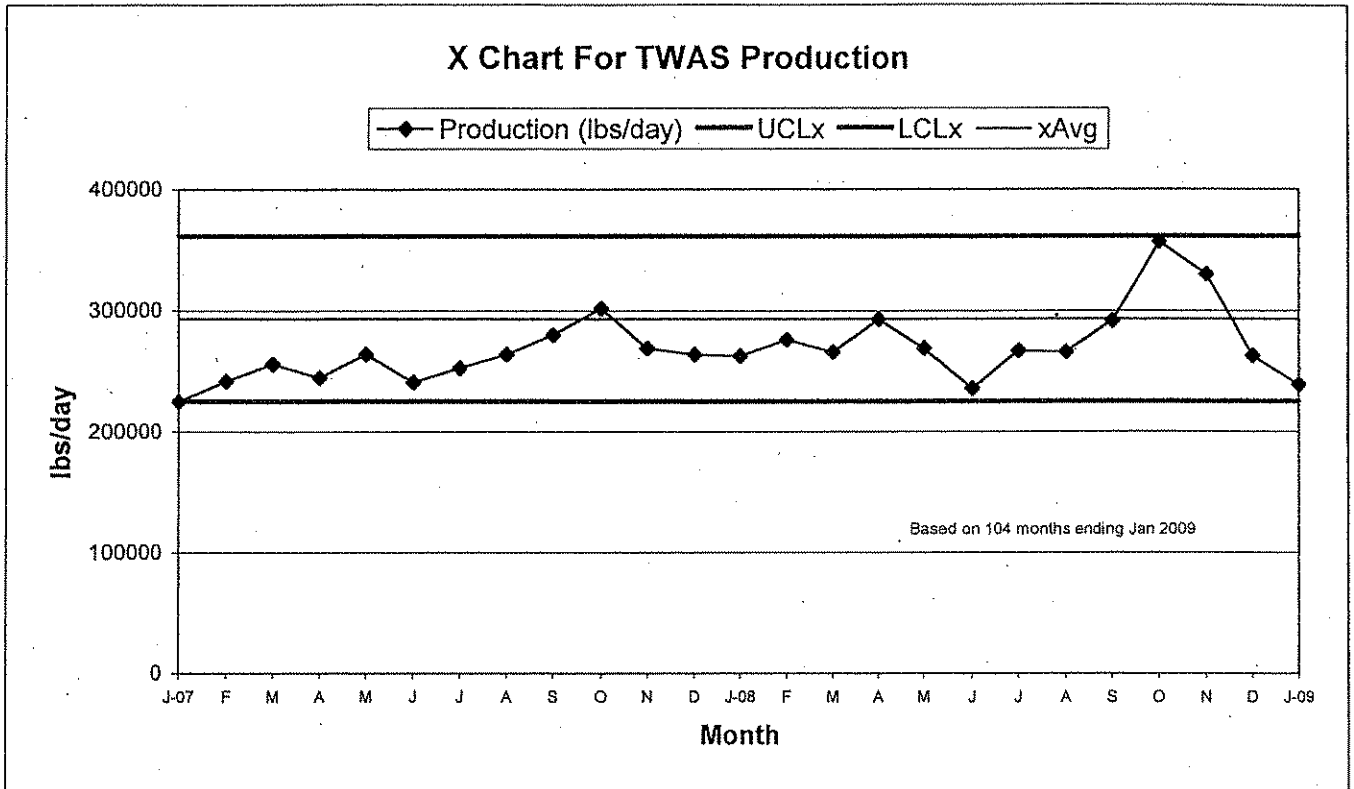


SOLIDS CAPTURE EFFICIENCY=78.4%



Analysis:

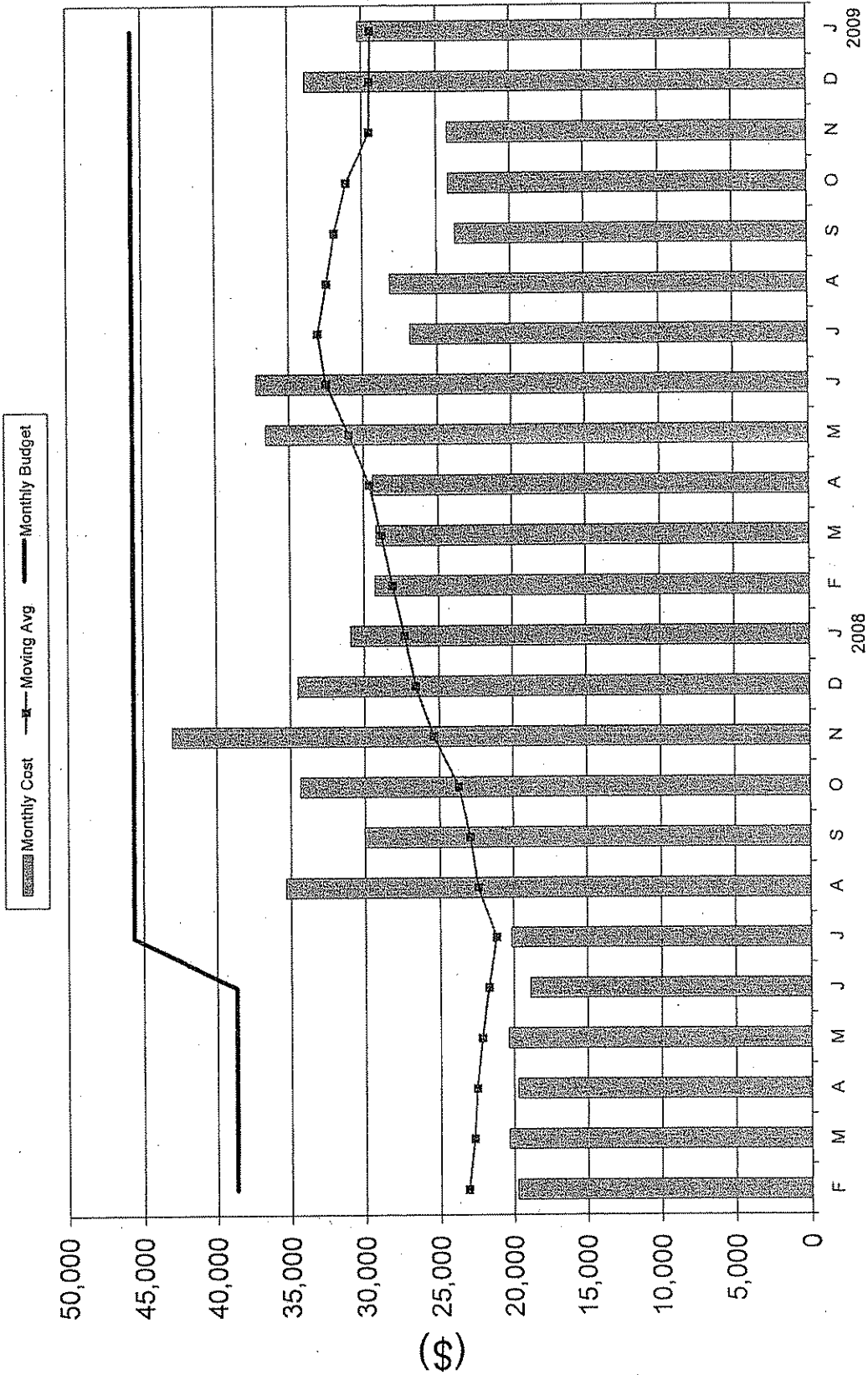
1. The control limits and averages have been recomputed starting with June 2000 data because that data showed a significant change (improvement) in the overall system starting then.
2. The system was in control.



Analysis:

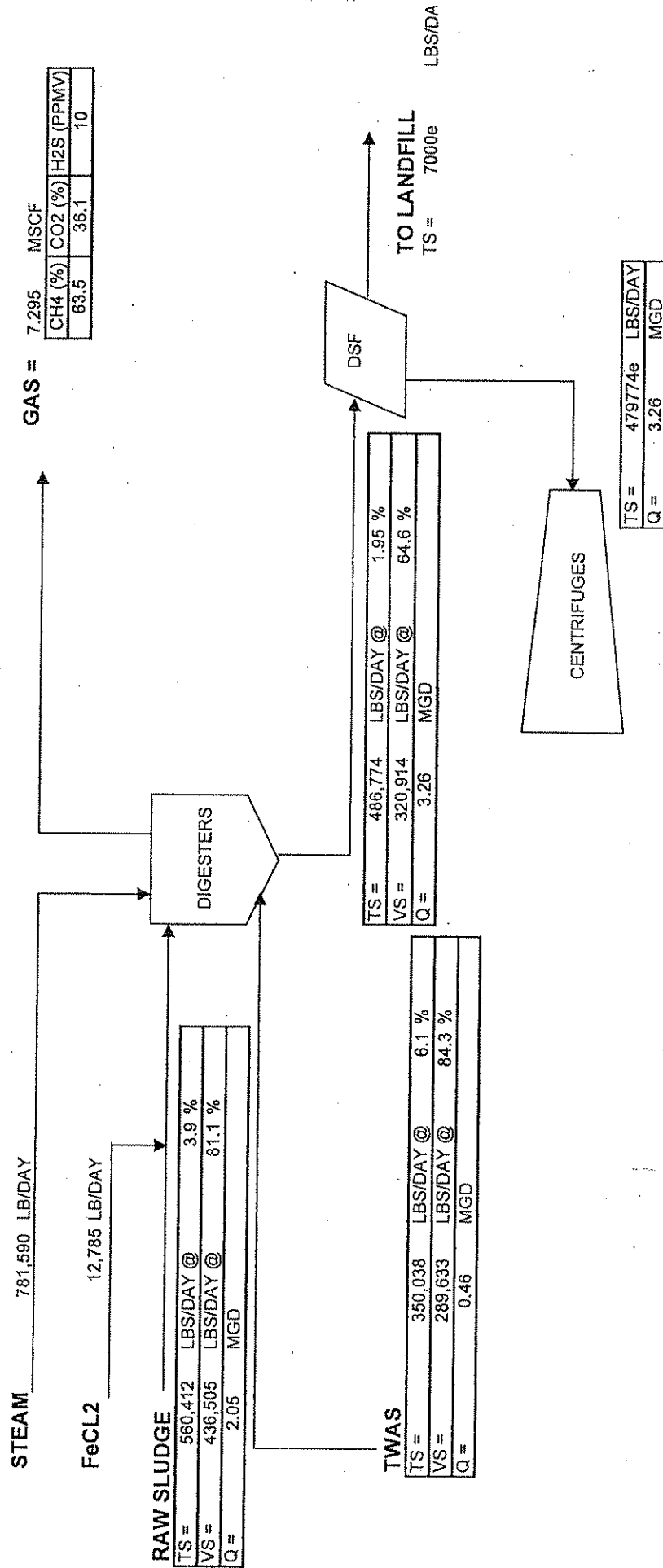
1. The system was in control.

Thickening Facility Polymer Cost

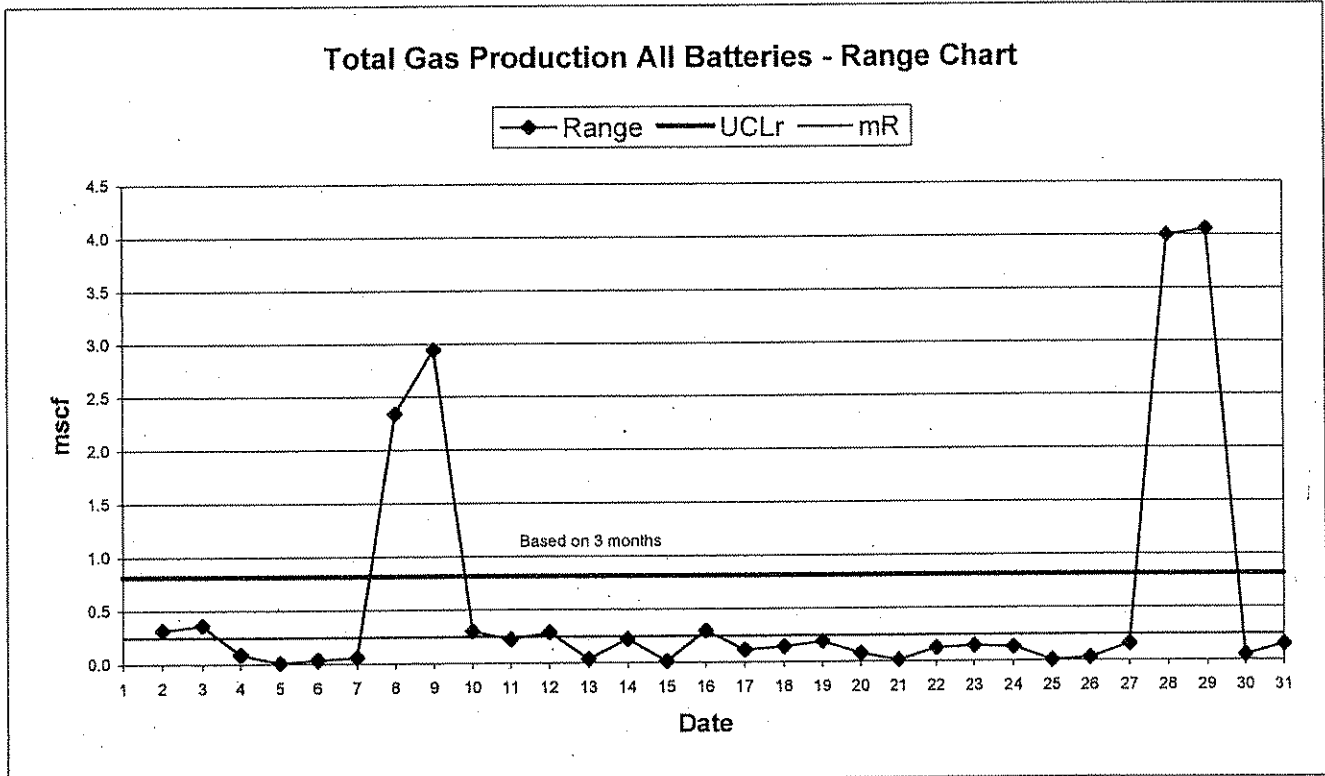
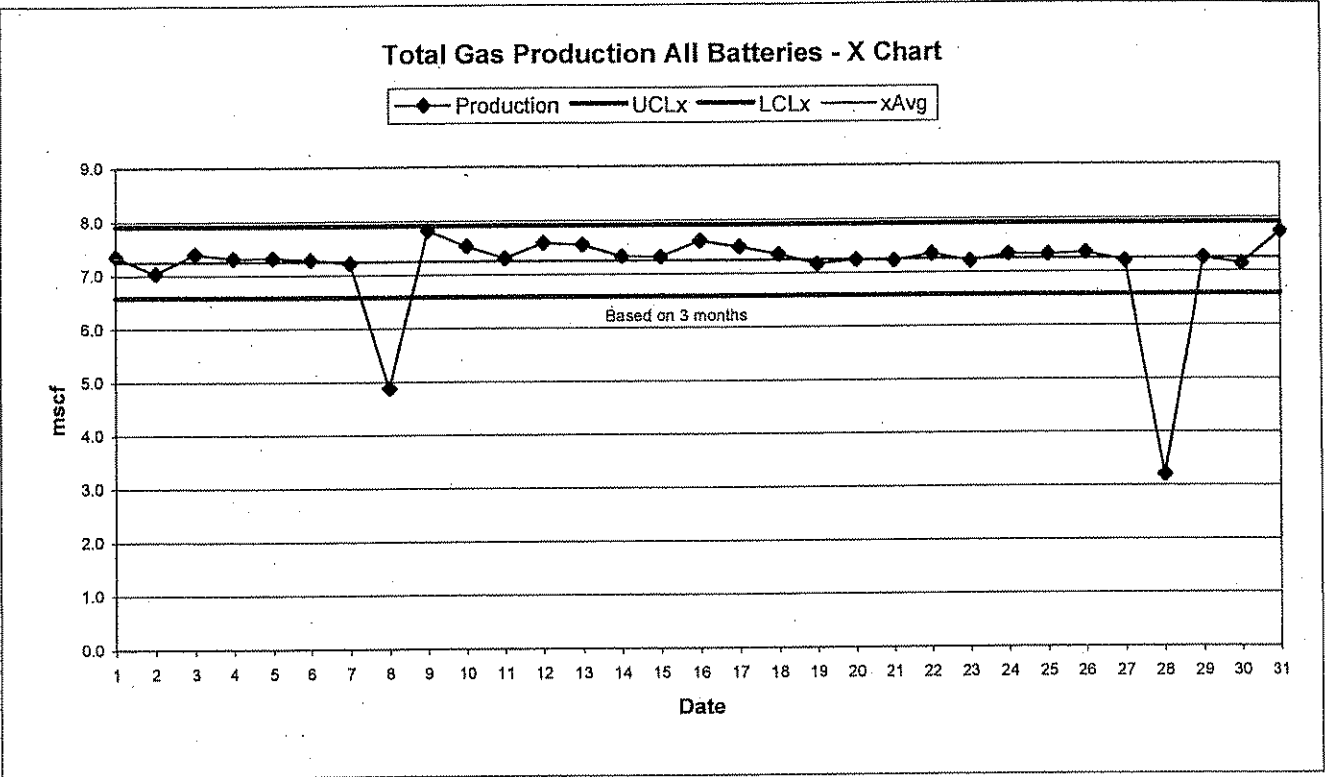


DIGESTER SECTION MASS BALANCE

January 2009



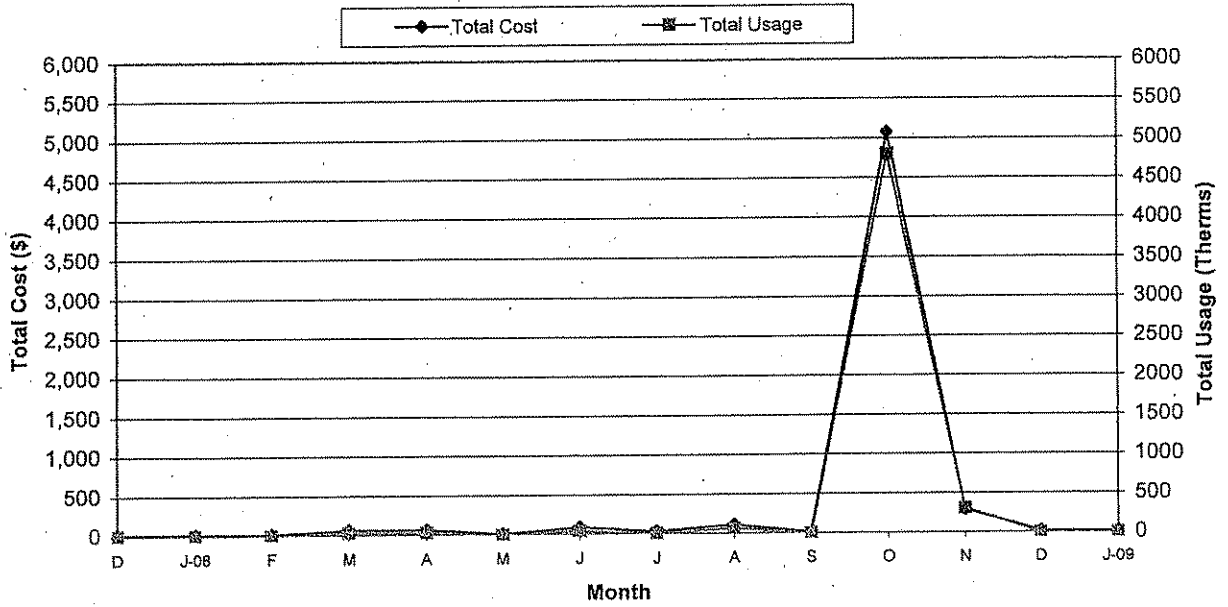
Note: Value ending with an "e" means the data or calculated value is based in full or in part upon estimated value(s).



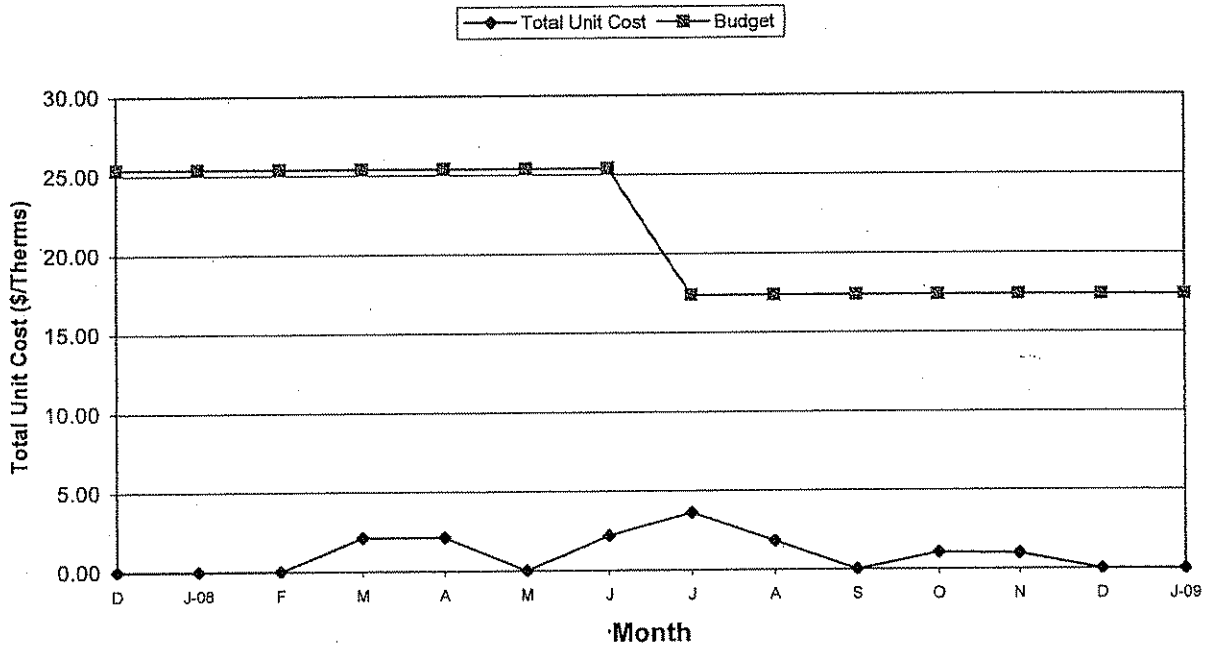
Analysis:

The control limits and averages have been computed based on data for the last 3 months.

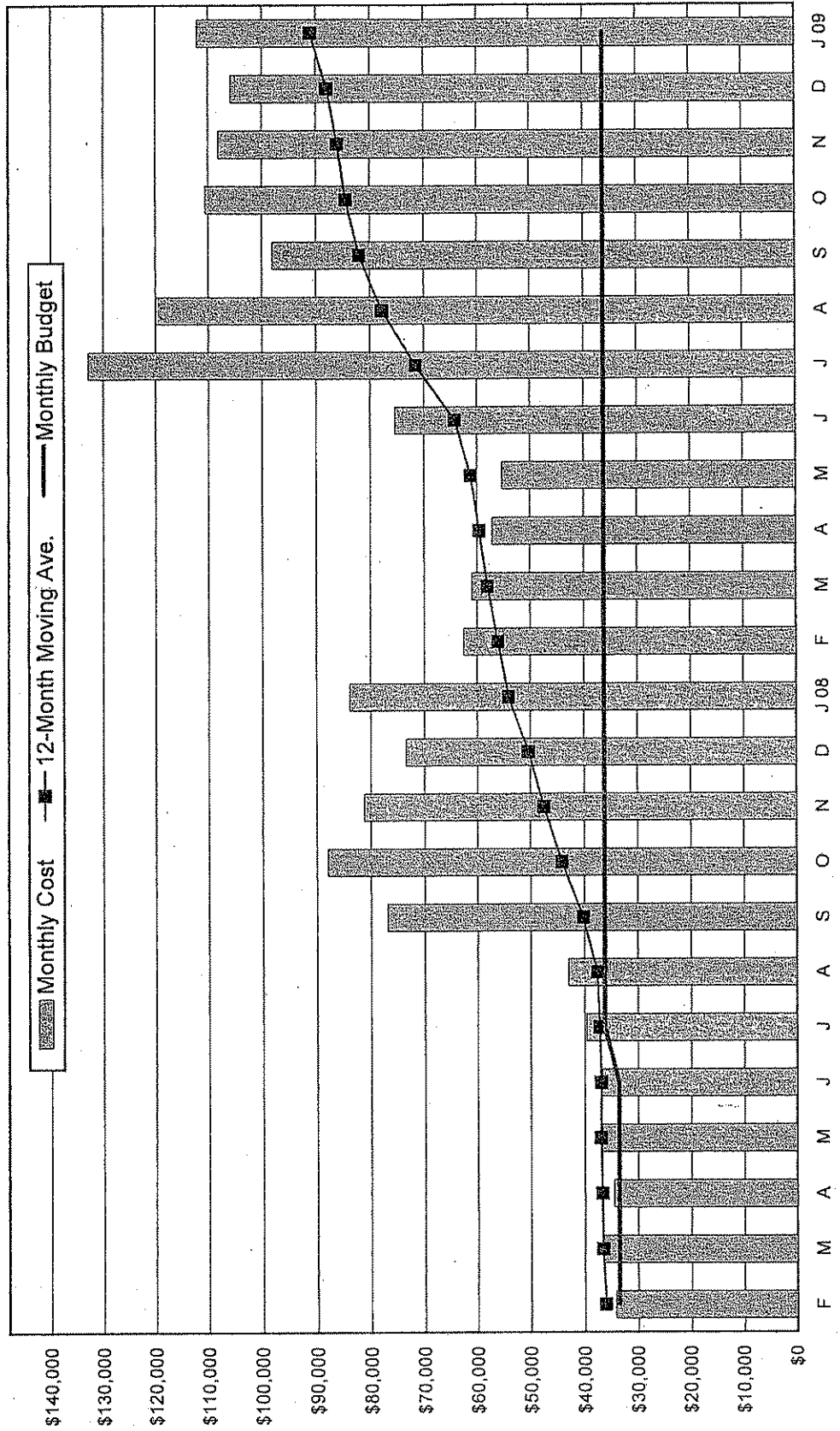
HTP Natural Gas Total Usage for Digester Heating



HTP Natural Gas Total Unit Cost for Digester Heating



HTP - Ferrous Chloride Cost



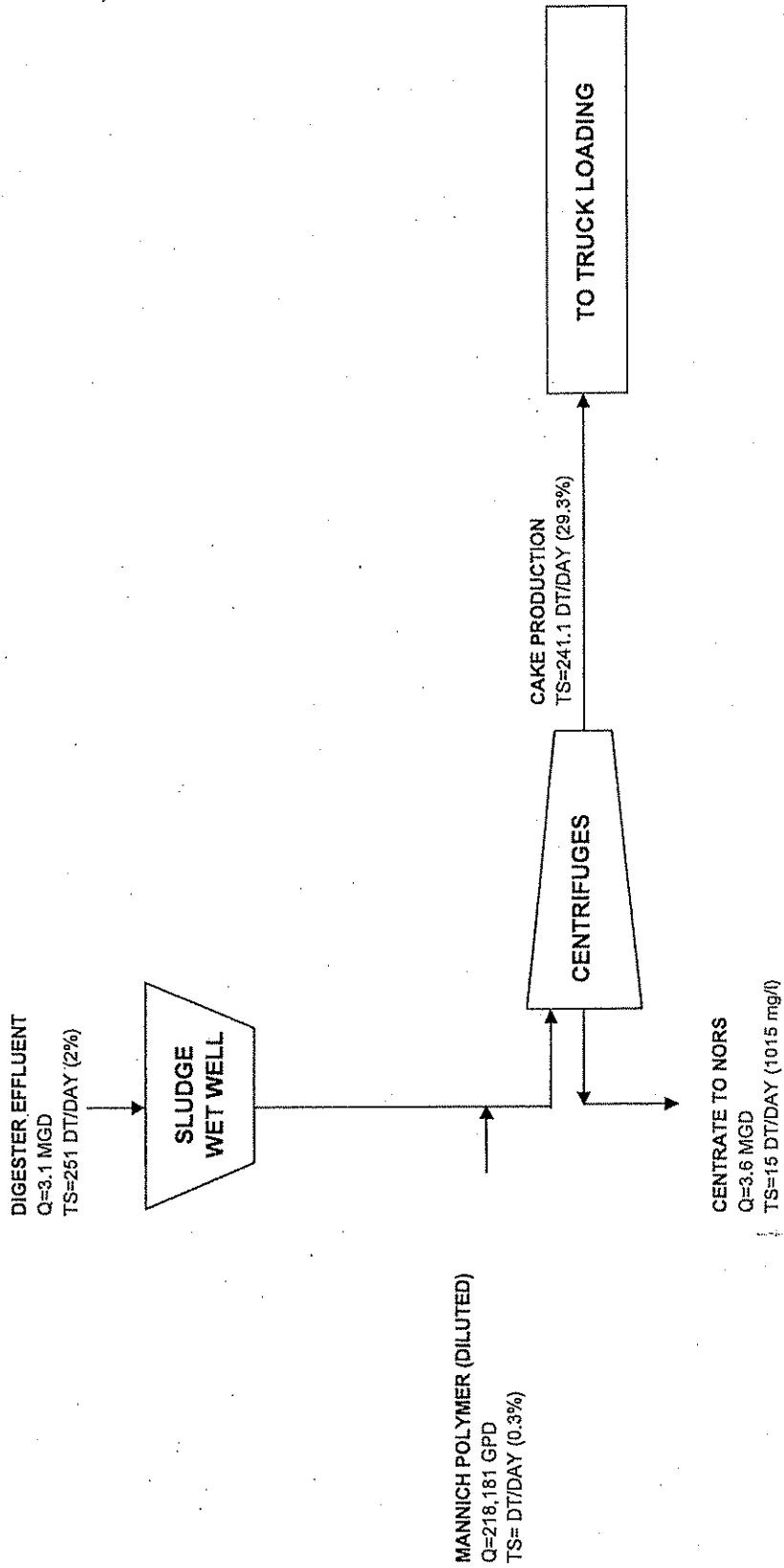
HTP - BIOSOLIDS DEWATERING PROCESS
OVERALL PROCESS SUMMARY

January 2009

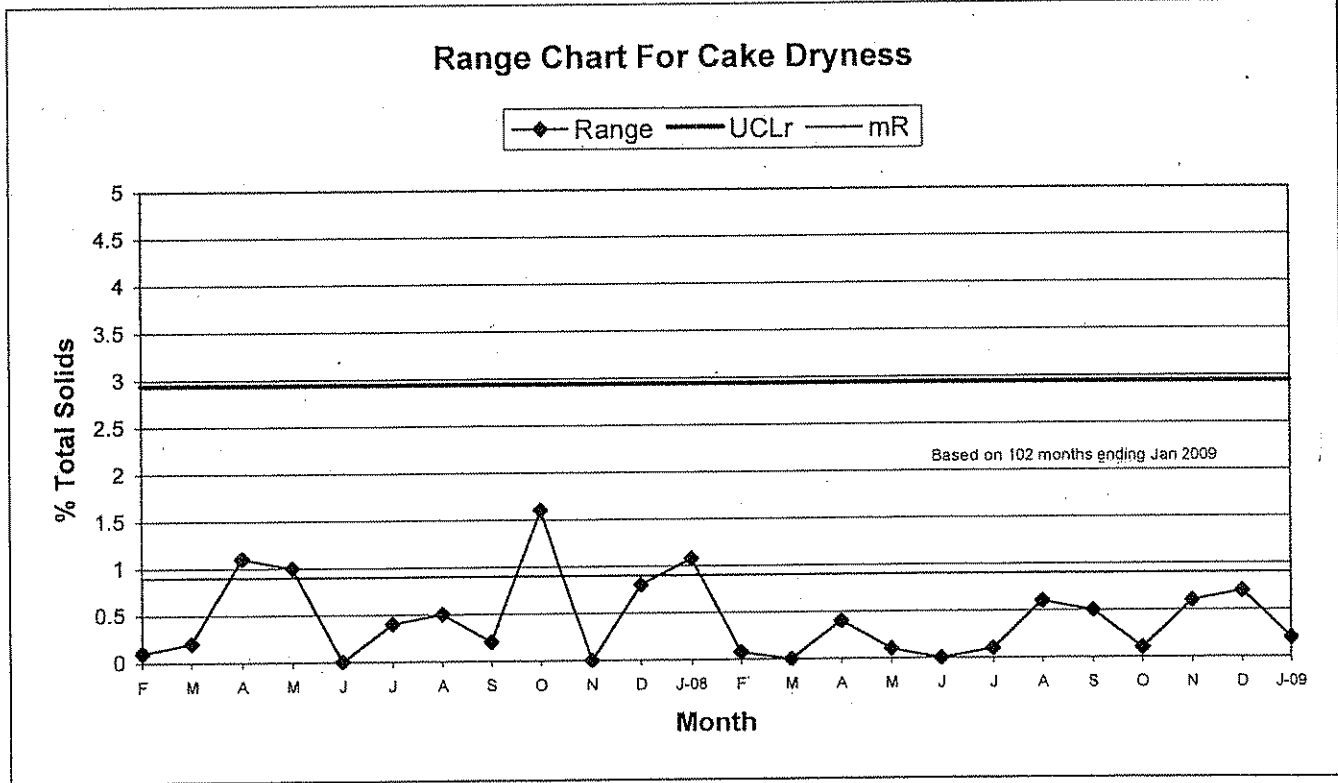
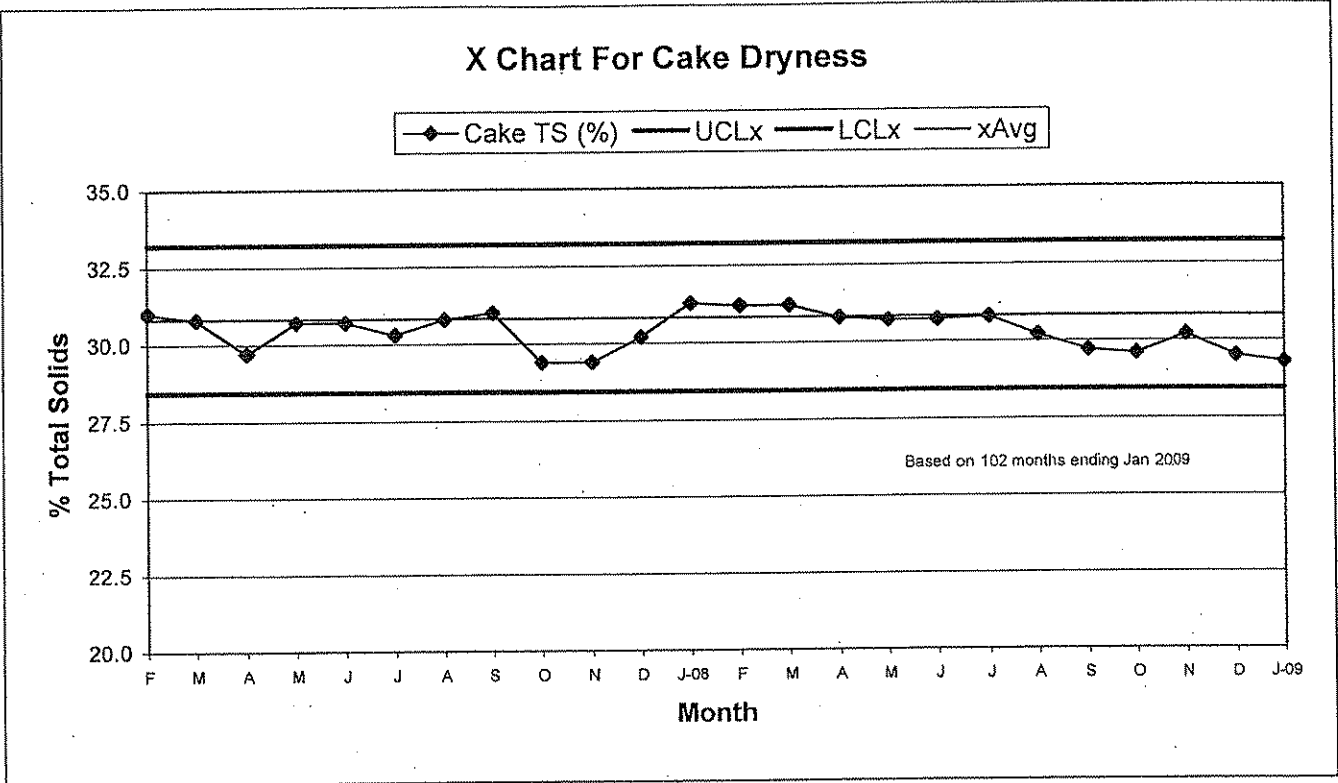
DATE	DAY	OVERALL BIOSOLIDS FEED				OVERALL PERFORMANCE			CAKE PRODUCTION			CAKE HAULED			OVERALL POLYMER					
		FLOW (MGD)	TS (%)	SOLIDS LOADS (DT/DAY)	CENT SS (MGL)	CAKE TS (%)	CAPT EFF (%)	(WT/DAY)	(DT/DAY)	(WT/DAY)	COST (\$/DAY)	DILUTED FLOW (GAL/DAY)	BULK TS (%)	BULK VS (%)	BULK VIS (CP)	OVERALL DOSAGE (LB/TON)	DIL TS (%)	DIL VS (%)		
1	THU	2.96	1.9	228	1050	30.7	94.6	704	216	500	12,067	190,265		NS	14.6	0.31	0.24			
2	FRI	3.47	2.0	285	940	28.5	95.5	956	273	735	17,724	238,348		NS	14.7	0.28	0.22			
3	SAT	3.27	2.1	291	847	22.3	96.4	1258	280	668	16,129	227,807		NS	13.8	0.29	0.22			
4	SUN	3.51	1.7	246	990	24.9	94.5	932	232	658	15,876	247,528		NS	17.6	0.28	0.21			
5	MON	3.17	1.8	233	727	30.7	96.1	729	224	790	19,074	216,214		NS	14.7	0.26	0.19			
6	TUE	3.07	1.8	236	987	28.3	95.0	792	224	684	16,507	209,855		NS	15.6	0.27	0.20			
7	WED	3.04	2.1	263	1150	30.8	94.8	808	249	527	12,709	211,923		NS	14.8	0.30	0.22			
8	THU	3.34	1.8	248	1000	27.2	94.7	861	235	713	17,194	228,598		NS	16.7	0.29	0.22			
9	FRI	2.92	1.7	203	827	30.0	95.3	646	194	712	17,174	201,200		NS	16.8	0.29	0.20			
10	SAT	3.53	1.7	248	884	28.6	95.0	824	235	633	15,271	237,274		NS	17.6	0.26	0.22			
11	SUN	3.03	2.1	263	700	31.2	96.9	817	255	632	15,255	199,049		NS	11.8	0.26	0.22			
12	MON	3.12	1.8	229	933	31.4	95.0	693	217	791	19,076	228,245		NS	18.3	0.26	0.22			
13	TUE	3.18	1.8	238	908	29.3	95.2	774	226	686	16,555	231,285		NS	16.2	0.26	0.20			
14	WED	2.74	2.0	228	1072	30.2	95.0	717	217	582	14,035	229,299		NS	19.6	0.30	0.23			
15	THU	3.30	2.3	313	1210	26.5	95.1	1124	297	765	18,465	247,636		NS	12.8	0.30	0.19			
16	FRI	3.18	1.6	212	938	28.7	94.4	697	200	634	15,302	227,443		NS	17.0	0.27	0.19			
17	SAT	3.16	2.5	327	954	33.6	96.4	939	315	581	14,011	230,272		NS	13.1	0.29	0.22			
18	SUN	3.39	1.9	270	1228	29.3	94.0	866	245	607	14,635	248,367		NS	16.4	0.29	0.21			
19	MON	3.16	2.0	257	987	30.0	95.3	817	245	716	17,278	230,289		NS	14.9	0.25	0.20			
20	TUE	3.31	1.7	236	870	29.9	95.2	751	224	843	20,338	234,378		NS	19.6	0.26	0.24			
21	WED	3.20	1.8	243	1110	28.6	94.3	799	229	765	18,458	221,477		NS	15.0	0.26	0.20			
22	THU	3.01	3.5	436	1174	29.9	97.0	1416	423	554	13,377	208,226		NS	8.9	0.29	0.21			
23	FRI	2.82	1.9	227	1048	28.4	94.9	759	215	683	16,491	187,125		NS	14.2	0.27	0.21			
24	SAT	2.85	1.9	223	893	28.4	95.6	751	213	683	16,476	195,287		NS	12.9	0.24	0.18			
25	SUN	2.92	1.9	229	1100	29.7	94.5	728	216	473	11,420	214,615		NS	15.1	0.26	0.19			
26	MON	2.58	1.9	201	973	29.8	95.1	642	191	577	13,926	195,225		NS	18.3	0.26	0.23			
27	TUE	1.91	2.2	176						656	15,822	141,729		NS	14.2					
28	WED	1.27	1.9	101	1170	29.9	94.3	319	96	144	3,464	90,643		NS	13.9	0.25	0.19			
29	THU	3.60	1.9	278	1086	27.7	94.5	947	262	501	12,091	252,279		NS	16.7	0.27	0.22			
30	FRI	4.06	1.9	315	1239	29.3	93.7	1007	295	788	19,021	284,159		NS	16.1	0.25	0.21			
31	SAT	3.54	2.0	298	1453	36.2	93.2	767	278	796	19,212	257,572		NS	16.6	0.29	0.23			
TOTAL		96								20075.97	484,433	6,763,622								
MAXIMUM		4.06	3.5	436.2	1,453	36.2	97.0	1416	423	843	20,338	284,159		NS	19.6	0.31	0.24			
MINIMUM		1.27	1.6	101.4	700	22.3	93.2	319	96	144	3,464	90,643		NS	8.9	0.24	0.18			
AVERAGE		3.08	2.0	251.0	1,015	29.3	95.0	828	241	648	15,627	218,181		NS	15.4	0.28	0.21			

BIOSOLIDS DEWATERING MASS BALANCE

JANUARY 2009



SOLIDS CAPTURE EFFICIENCY=95%

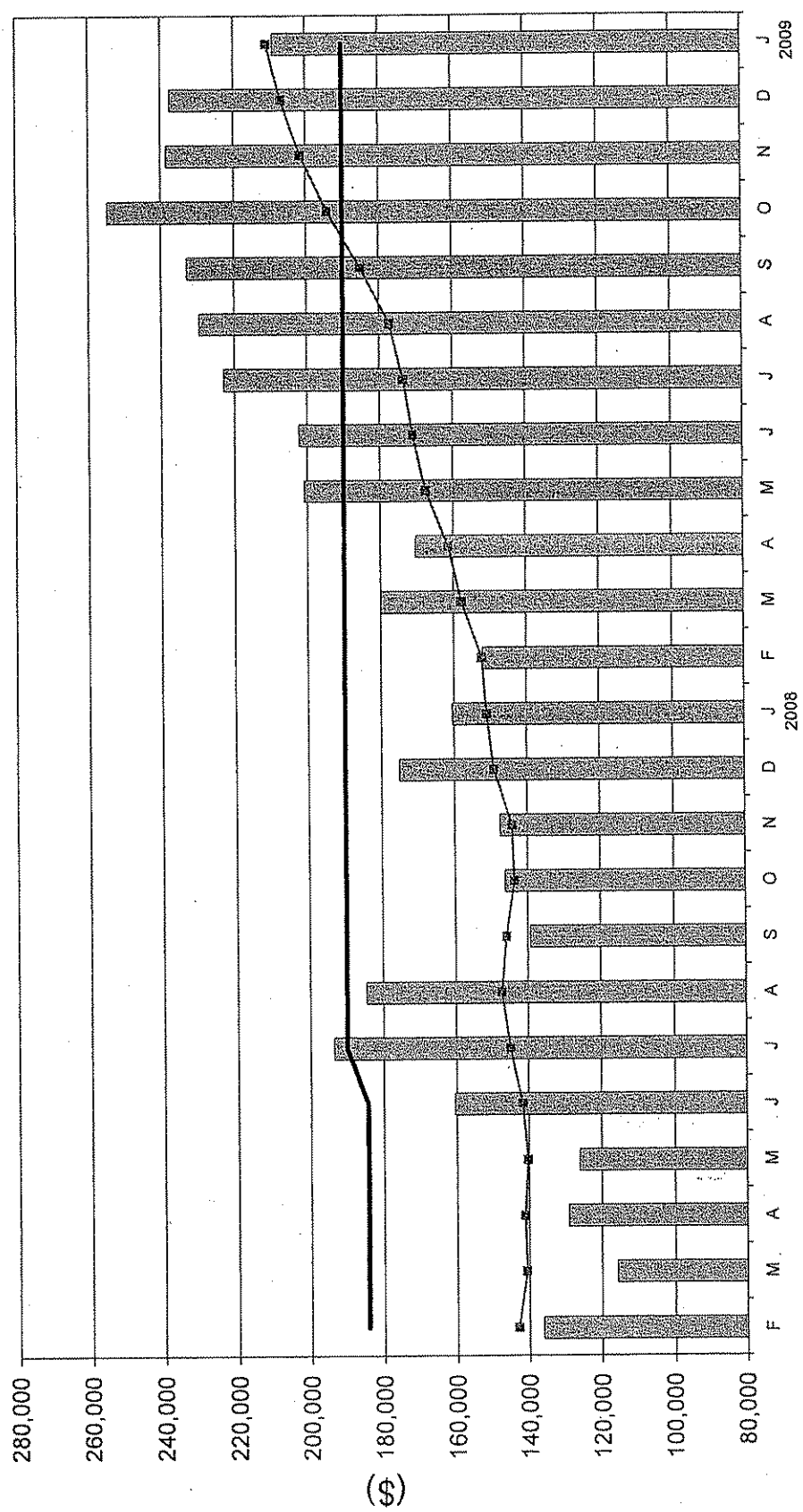


Analysis:

1. The system had special cause due to control parameter changes.

Biosolids Dewatering Polymer Cost

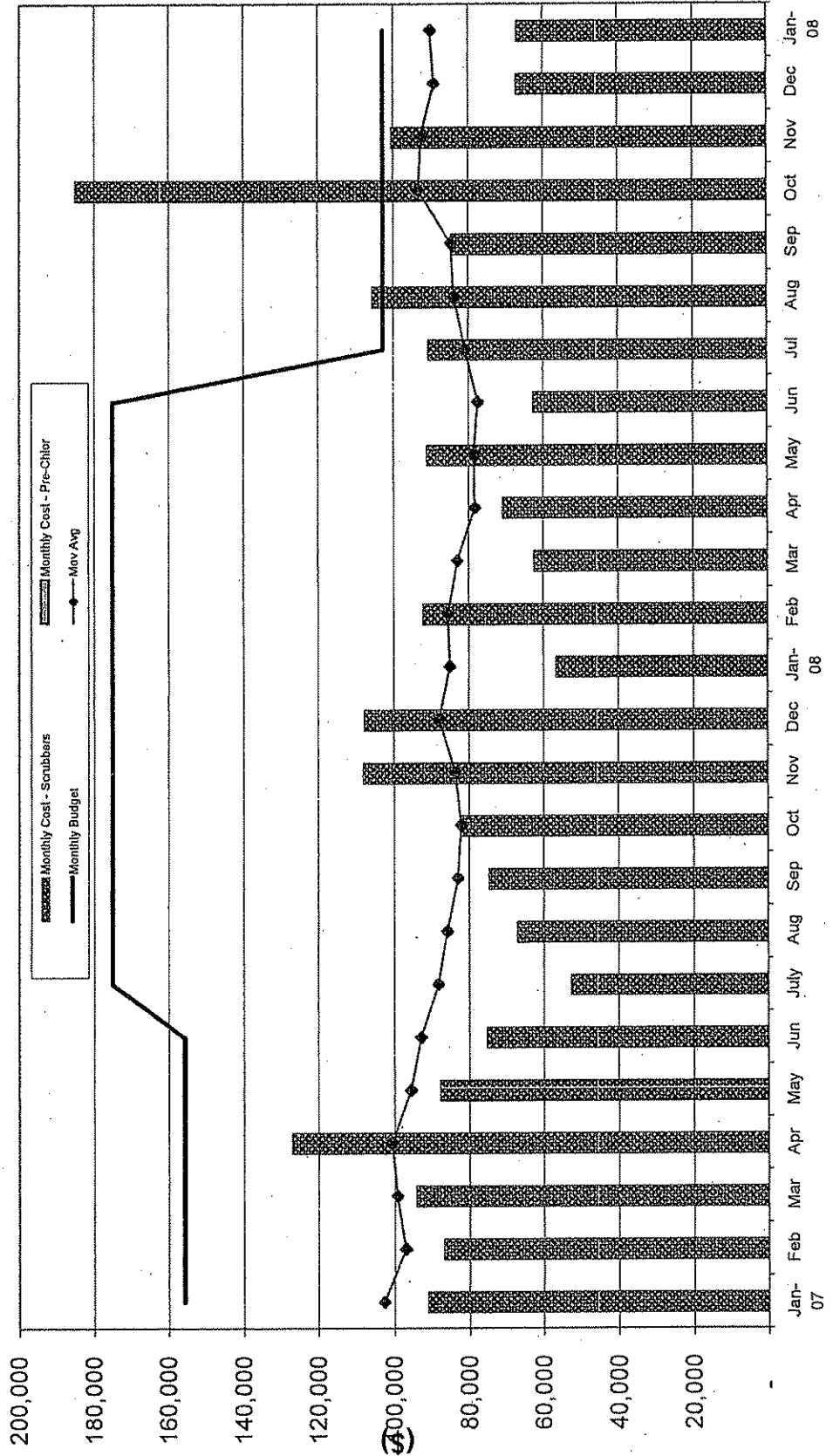
Monthly Cost
 Moving Avg
 Monthly Budget



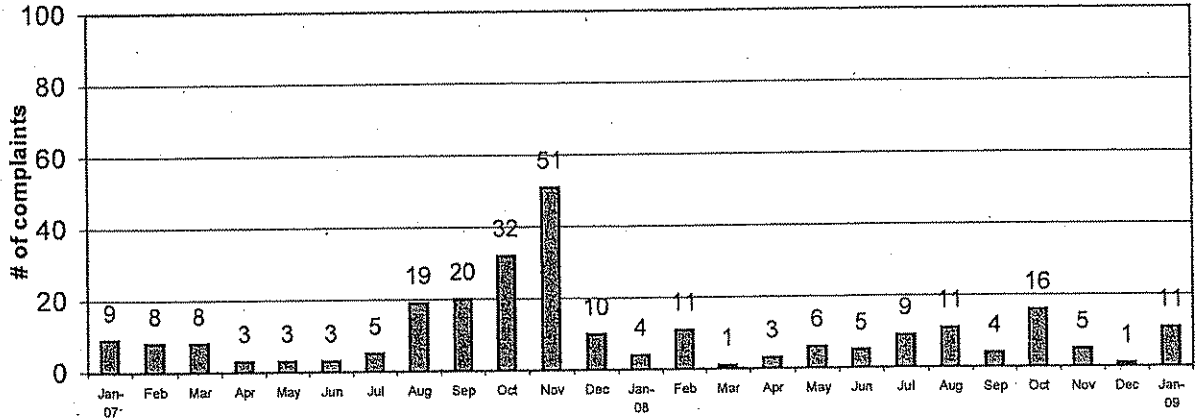
**APC Monthly H2S Data
Jan-09**

Facility	Inlet H2S Avg. (ppm)	min. in (ppm)	max. in (ppm)	Outlet H2S Avg. (ppm)	min. out (ppm)	max. out (ppm)
Influent Sewers	48	39	54	0	0	0
Headworks	6	0	10	0	0	0
Primary Batteries	16	0	33	0	0	0
Digester Screening Facility	0	0	0	0	0	0
Truck Loading Facility	0	0	0	0	0	0
WAS Thickening Facility	0	0	0	0	0	0
Intermediate Pump Station	9	1	18	0	0	0
Reactors 1-4	2	1	2	0	0	0
Reactors 5-7	2	1	2	0	0	0
Reactors 8&9	1	0	1	0	0	0

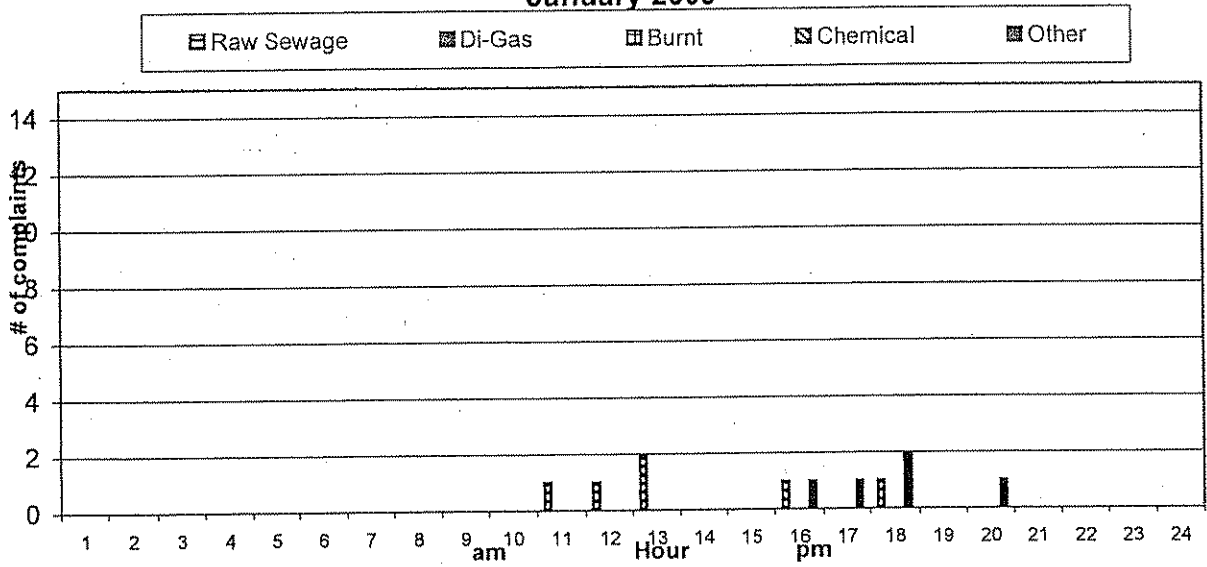
Air Pollution Control NaOCl Cost 01/07 - 01/09



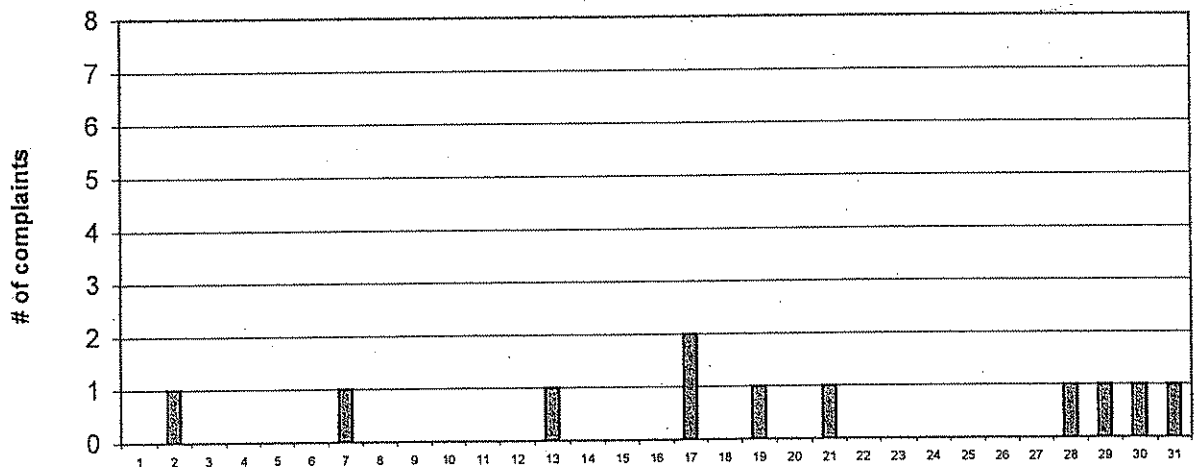
HTP Monthly Odor Complaints Two Year History



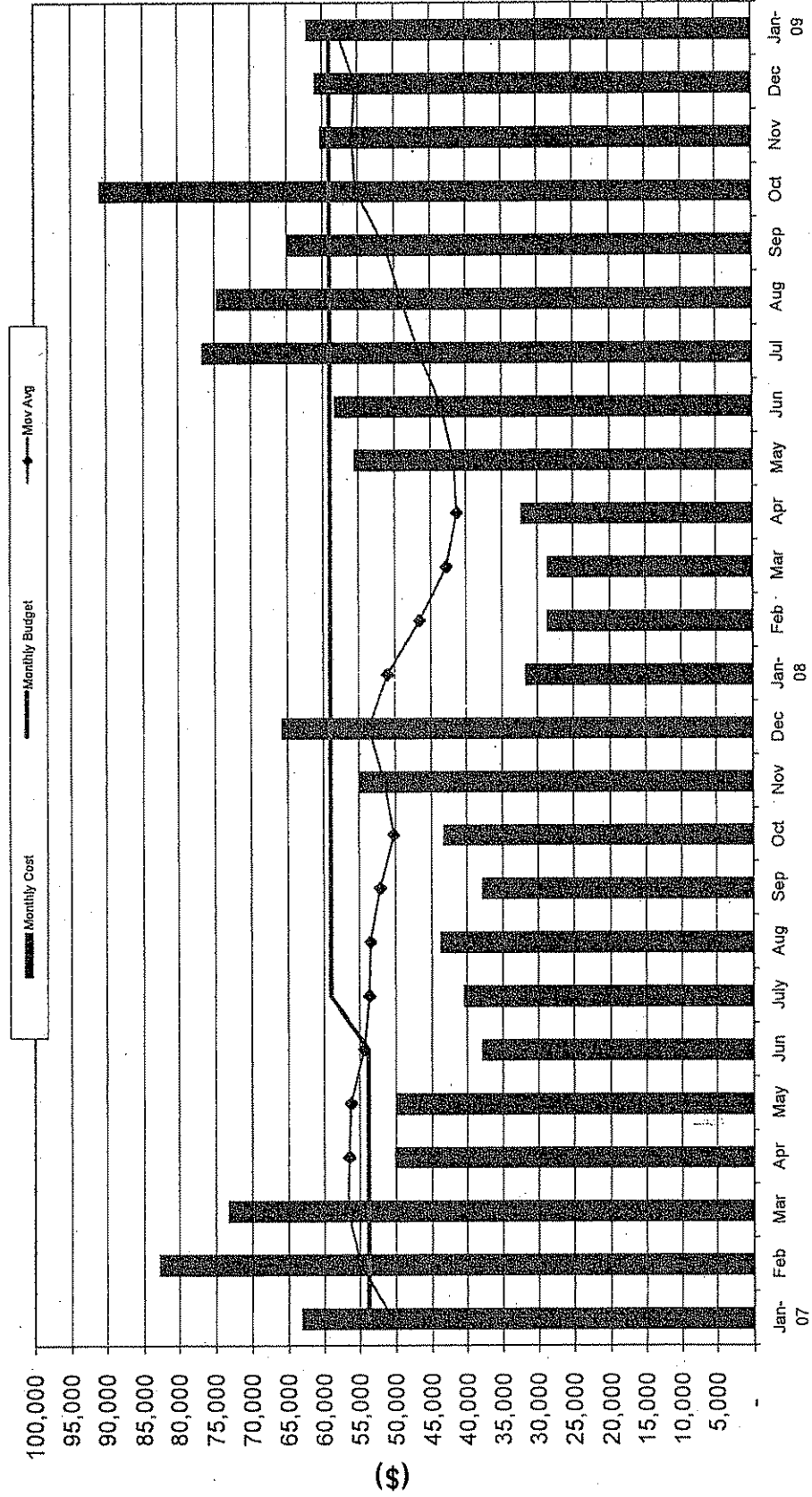
Odor Characterization vs Time January 2009

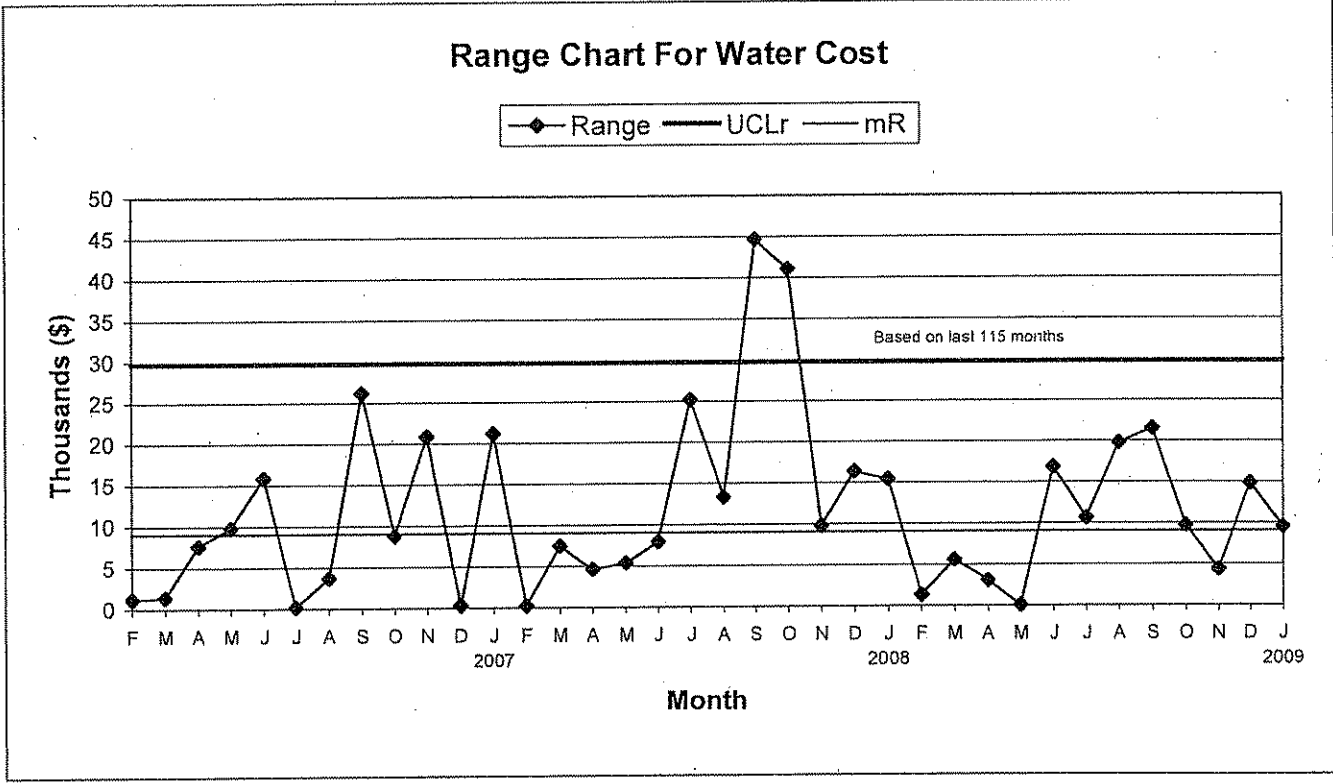
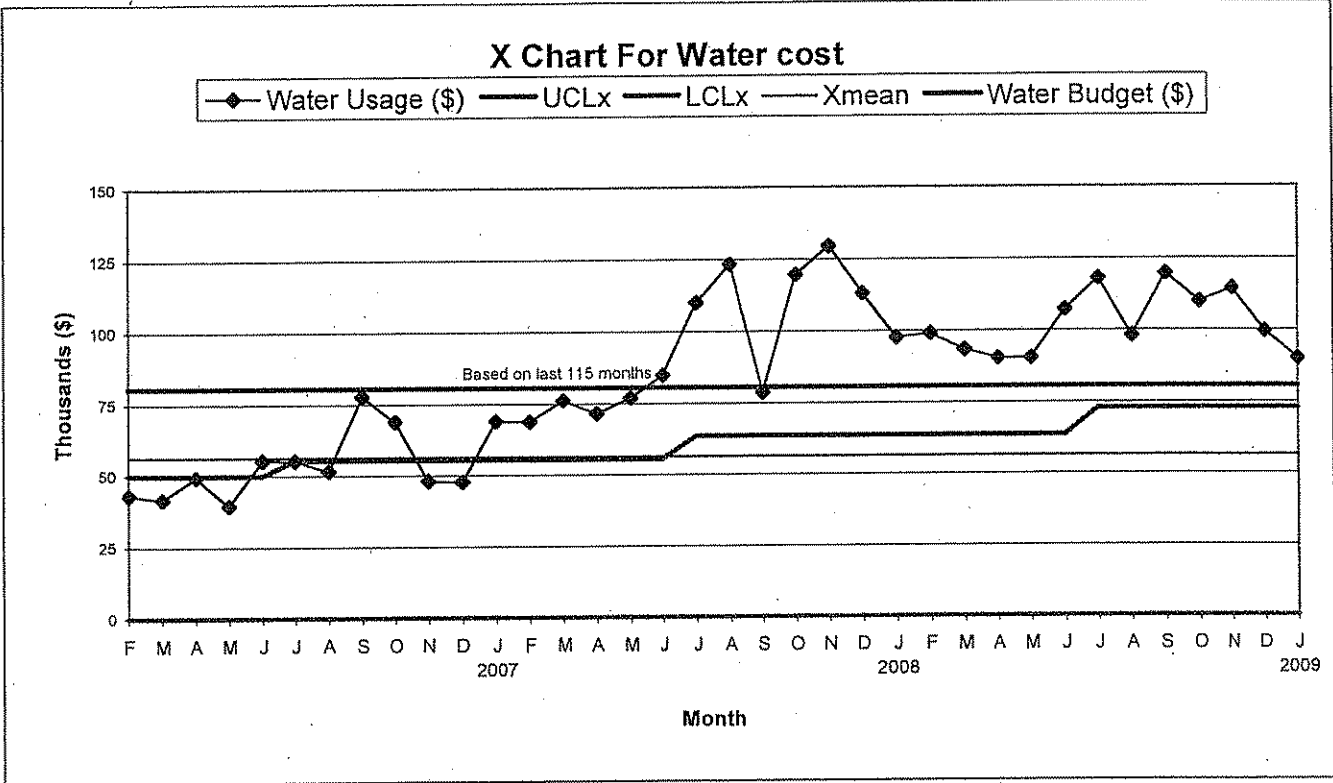


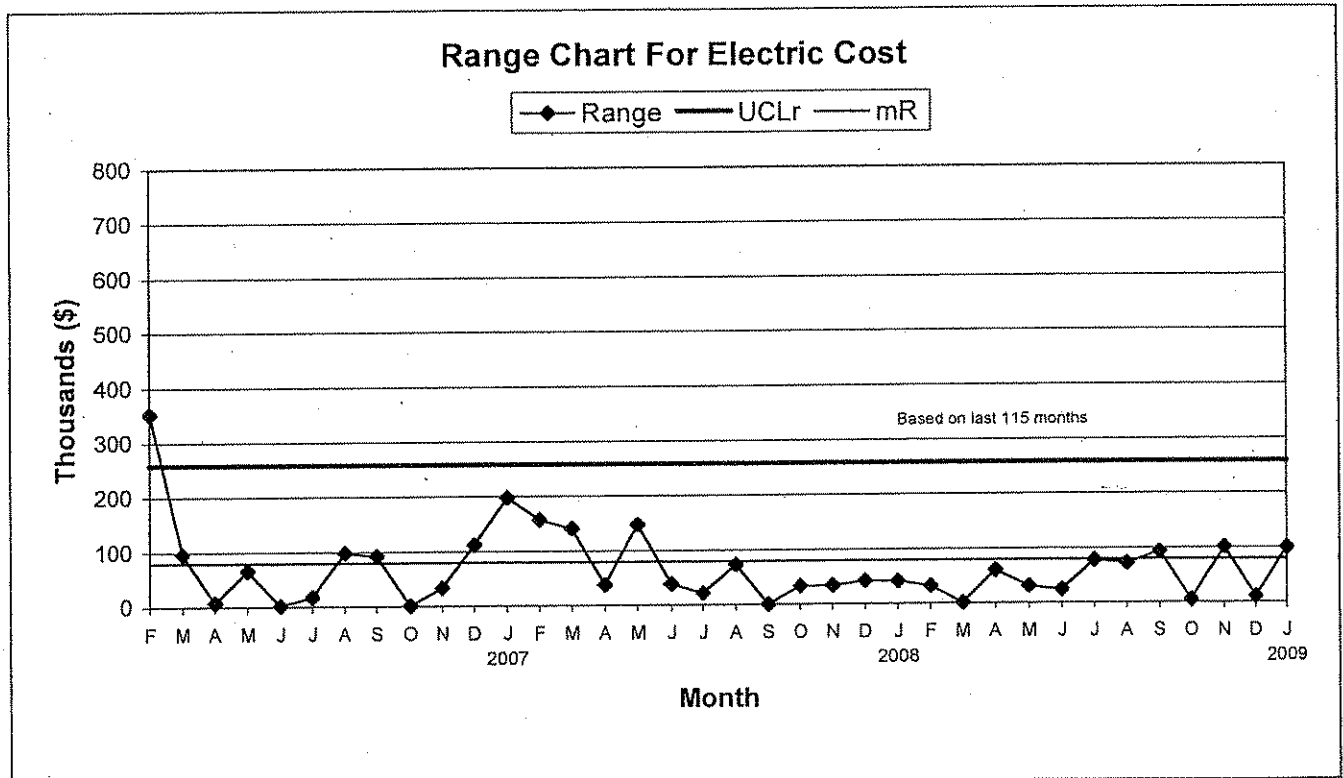
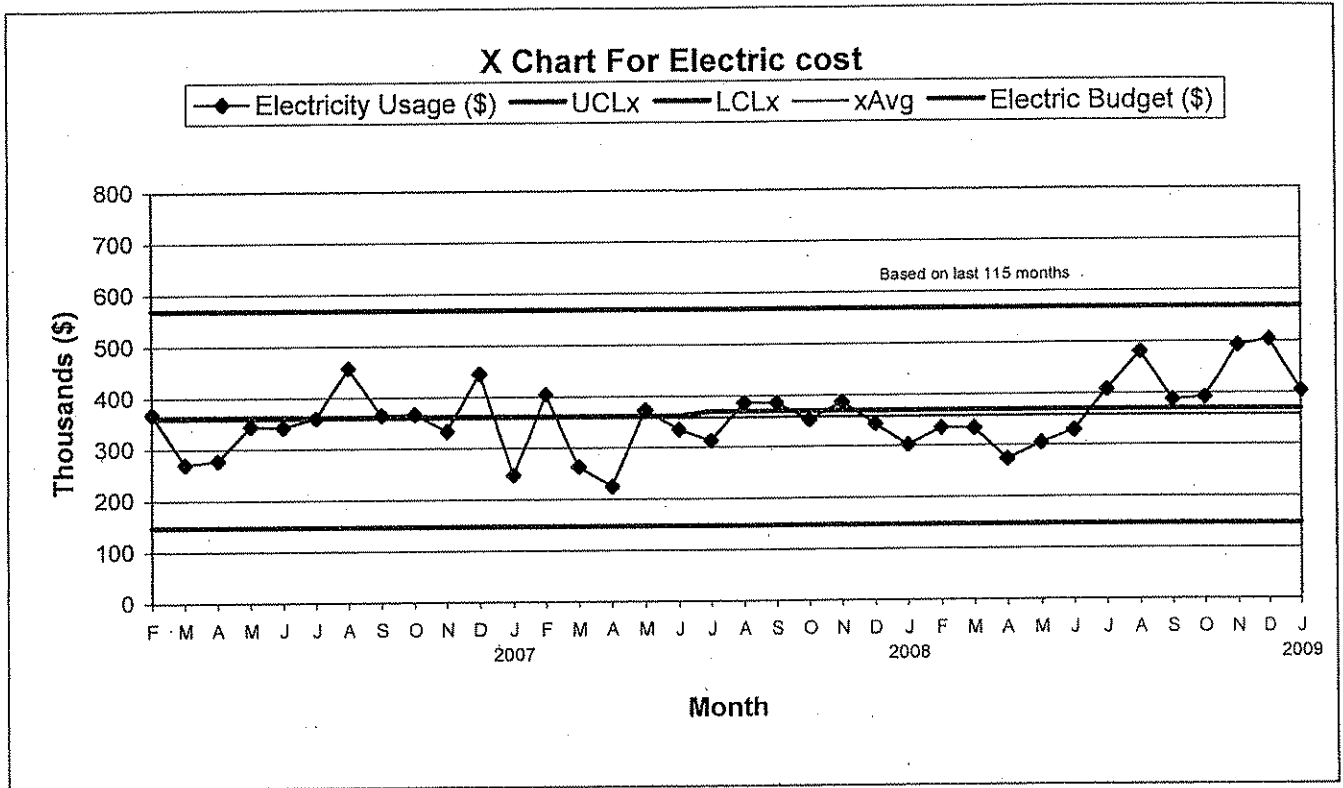
Odor Complaints per Day January 2009



Air Pollution Control NaOH Cost 01/07 - 01/09



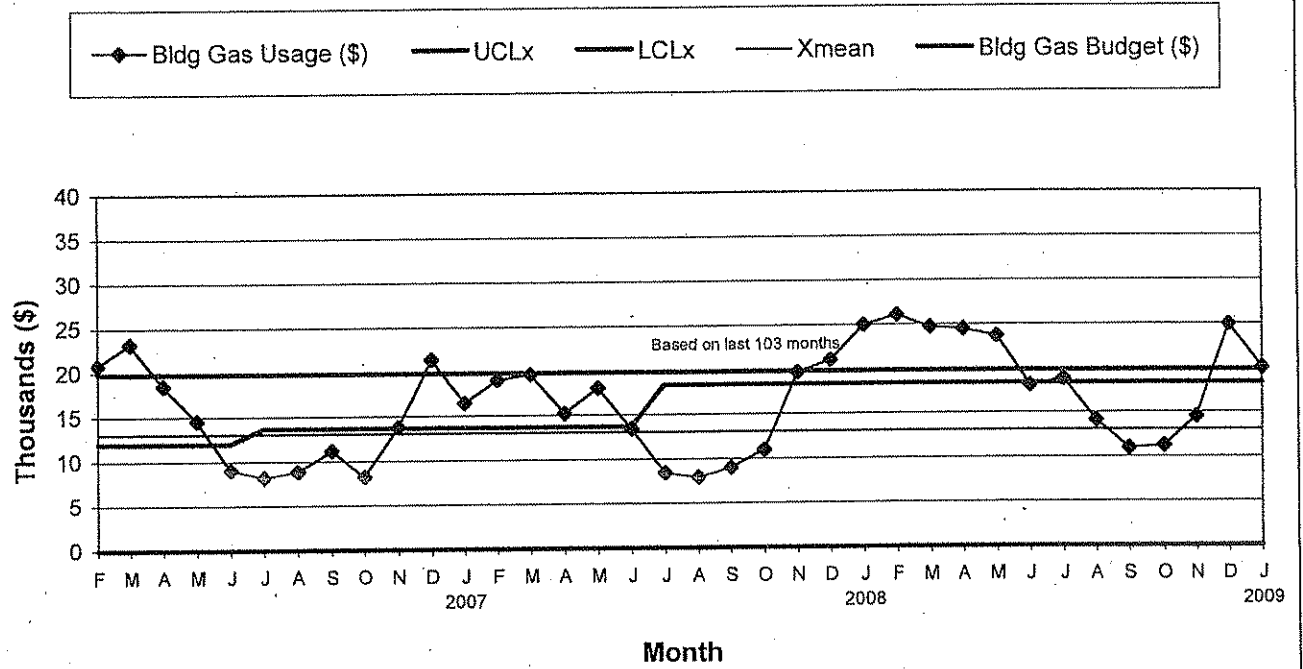




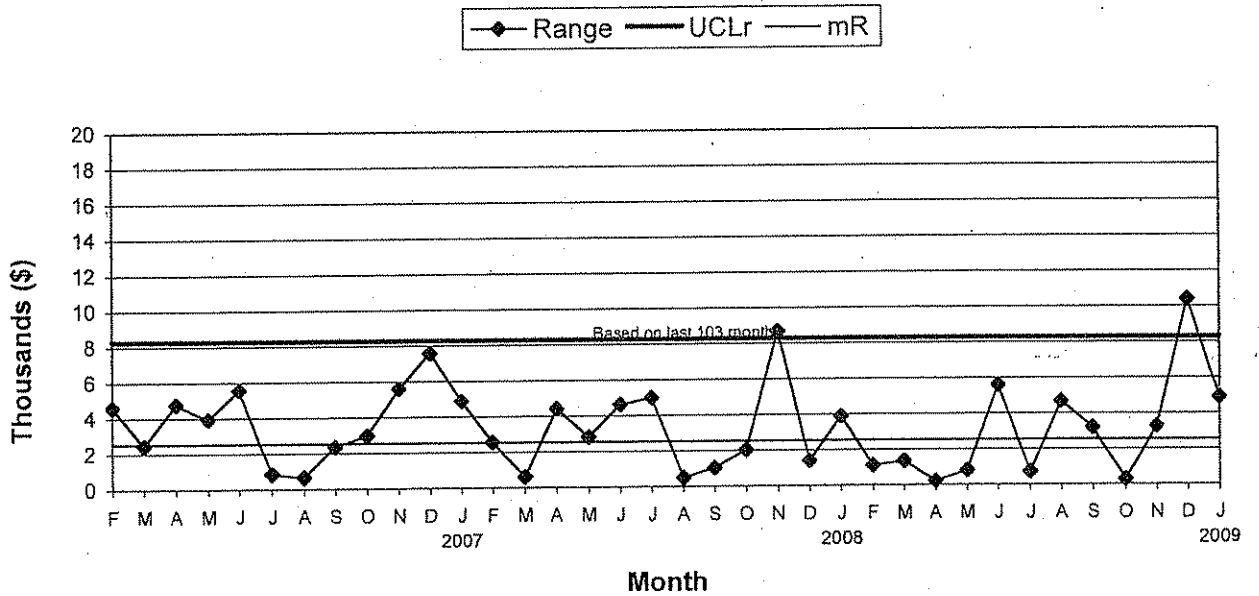
Analysis:

1.

X Chart For Building Heating Cost



Range Chart For Bldg Heating Cost



**HYPERION TREATMENT PLANT
LIQUID TREATMENT OPERATIONS
CHEMICAL USAGE (\$) FOR JANUARY 2009**

Jan-09

CHEMICAL	SECTION	2008-2009 ANNUAL BUDGET	MONTHLY EXPENDITURE	YEAR TO DATE EXPENDITURE	PROJECTED ANNUAL EXPENDITURE	PROJECTED DIFFERENCE FROM BUDGET	% PROJECTED DIFF. FROM BUDGET	UNIT COST (1)	CONTRACT MANAGER	CONTRACT STATUS
ACTIVATED CARBON	APC	709,000	59,083	413,581	709,000	0	0	0.83 /lb	S. Symons	Contract 58679 expires 12/31/08
BDW POLYMER	DEWATERING	2,278,124	209,052	1,624,730	2,785,000	-506,876	-22	1.75 /lb	M. Noguchi	Contract 58631 effective 5/01/08
WASTF POLYMER	THICKENING	547,631	30,255	191,269	328,000	219,631	40	1.75 /lb	M. Noguchi	Contract 58631 effective 5/01/08
ANIONIC POLYMER	PRIMARY	384,360	27,182	167,663	287,000	97,360	25	2.25 /lb	C. Senaya	Contract 58409 expires 2/28/09
FERROUS CHLORIDE	DIGESTER	435,000	112,003	787,166	1,349,000	-914,000	-210	610.44 /dton	R. Palacios	Contract 58750 effective 6/16/08
SODIUM HYPOCHLORITE (2)	SECONDARIES	188,513	17,500	122,500	210,000	-21,487	-11	0.838 /gal	S. Symons	Contract 58260 effective 2/1/08
SODIUM HYPOCHLORITE	APC	1,235,000	67,221	701,396	1,202,000	33,000	3	0.838 /gal	S. Symons	Contract 58260 effective 2/1/08
SODIUM HYDROXIDE	APC	707,000	62,297	490,967	842,000	-135,000	-19	0.743 /gal	S. Symons	Contract 58749 effective 6/1/08
FERRIC CHLORIDE	PRIMARY	2,194,000	261,662	1,747,885	2,986,000	-802,000	-37	571.94 /dton	C. Senaya	Contract 58750 effective 6/16/08
LIQUID OXYGEN	SECONDARIES	141,156	0	50,430	86,000	55,156	39	0.446 /gal	H. Wong	Contract 58440
GRAND TOTAL		8,819,784	846,255	6,297,587	10,794,000	-1,974,216				

(1) Unit cost includes 8.25% sales tax.

(2) Starting January 2000 Sodium hypochlorite in Secondaries includes RAS chlorination.

**HYPERION TREATMENT PLANT
UTILITY USAGE (\$) FOR JANUARY 2009**

SECTION	UTILITY	2008-2009 ANNUAL BUDGET	MONTHLY EXPENDITURE	YEAR TO DATE EXPENDITURE	PROJECTED ANNUAL EXPENDITURE	PROJECTED DIFFERENCE FROM BUDGET	% PROJECTED DIFF. FROM BUDGET	CONTRACT STATUS
PLANT WIDE	NATURAL GAS (Process)	90,000	17	5,574	5,658	84,342	94	Switched to SoCal Gas on November 2003.
PLANT WIDE	NATURAL GAS (Non-Process)	220,000	20,000	114,560	214,560	5,440	2	N/A
PLANT WIDE	STEAM	5,040,145	326,287	2,856,309	4,487,745	552,400	11	N/A
PLANT WIDE	POWER	4,433,025	404,000	3,068,905	5,088,905	-655,880	-15	N/A
PLANT WIDE	WATER	909,720	90,000	753,700	1,203,700	-293,980	-32	N/A
	TOTAL	10,692,890	840,304	6,799,047	11,000,568	-307,678	-3	

TERMINAL ISLAND WATER RECLAMATION DIVISION
MONTHLY PERFORMANCE REPORT
January 2009

OVERALL PLANT PERFORMANCE SUMMARY

The Terminal Island Water Reclamation Division met all NPDES permit requirements for the month of January 2009. The average influent Plant flow was 15.0 mgd. Plant effluent suspended solids averaged less than 1 mg/l with efficiency of above 99% and BOD concentration averaged less than 2 mg/l, resulting in removal efficiency of about 99%.

PERFORMANCE SUMMARY

Plant Flow	15.0 mgd	Effluent SS Concentration	<1 mg/l
02/07-01/09 Average Flow	15.7 mgd	Influent BOD Concentration	286 mg/l
02/07 -01/08 Average Flow	15.5 mgd	BOD Loading	36.1 K#/day
Influent SS Concentration	211 mg/l	BOD Removal	35.9 K#/day
SS Loading	26.5 K#/day	BOD Removal Efficiency	99%
SS Removal	26.3 K#/day	Effluent BOD Concentration	<2 mg/l
SS Removal Efficiency	>99%	Effluent Non-Compliance	0

OPERATIONS

Preliminary/Primary Treatment

For Primary treatment, obtained 59% and 37% removal efficiencies for suspended solids (SS) and BOD respectively. The average primary effluent SS was 82 mg/l and BOD concentration was 175 mg/l.

Secondary Treatment

For the month of January 2009, secondary effluent SS was 9 mg/l and BOD was 7 mg/l. Removal efficiencies were 89% for TSS and 96% for BOD. Other secondary treatment parameters were as follows:

The plant maintained an F/M ratio of 0.20-pound BOD per day, per pound of MLVSS, pH averaged 7.4 and effluent settleable solids were less than 0.04 ml/l.

Tertiary Treatment

Filter effluent SS averaged was less than 1 mg/l; settleable solids averaged less than 0.03ml/l, and

BOD averaged less than 2 mg/l. Turbidity averaged 0.7 NTU.

Advanced Water Treatment Facility

Micro filtration units and Reverse Osmosis (RO) train were in service during the month of January producing about 4.0 MGD of recycled water. Plant delivered about 121 million gallons of product water to the Dominguez gap during this month. TITP delivered an average of 3.9 MGD of blended water to the Dominguez gap for barrier injection. Plant staff continues working with DWP to resolve and improve some of the outstanding operational issues.

Sludge Digestion

An average of 142,000 Gallons per Day (GPD) of blended sludge (3.4% TS) was processed through the digesters with a 20-day average detention time. Total solids destruction was 45% and volatile solids destruction was 56%.

Biosolids Dewatering

An average of 65,000 GPD of digested sludge (1.9% TS) was dewatered at an average polymer dosage of 32.0 lb per ton of digested sludge, producing 38 wtpd of biosolids at 26.2% TS.

Biosolids Reuse

During the month of January, a total of 639 wet tons of Class A Exceptional Biosolids wet cake was hauled to Arizona.

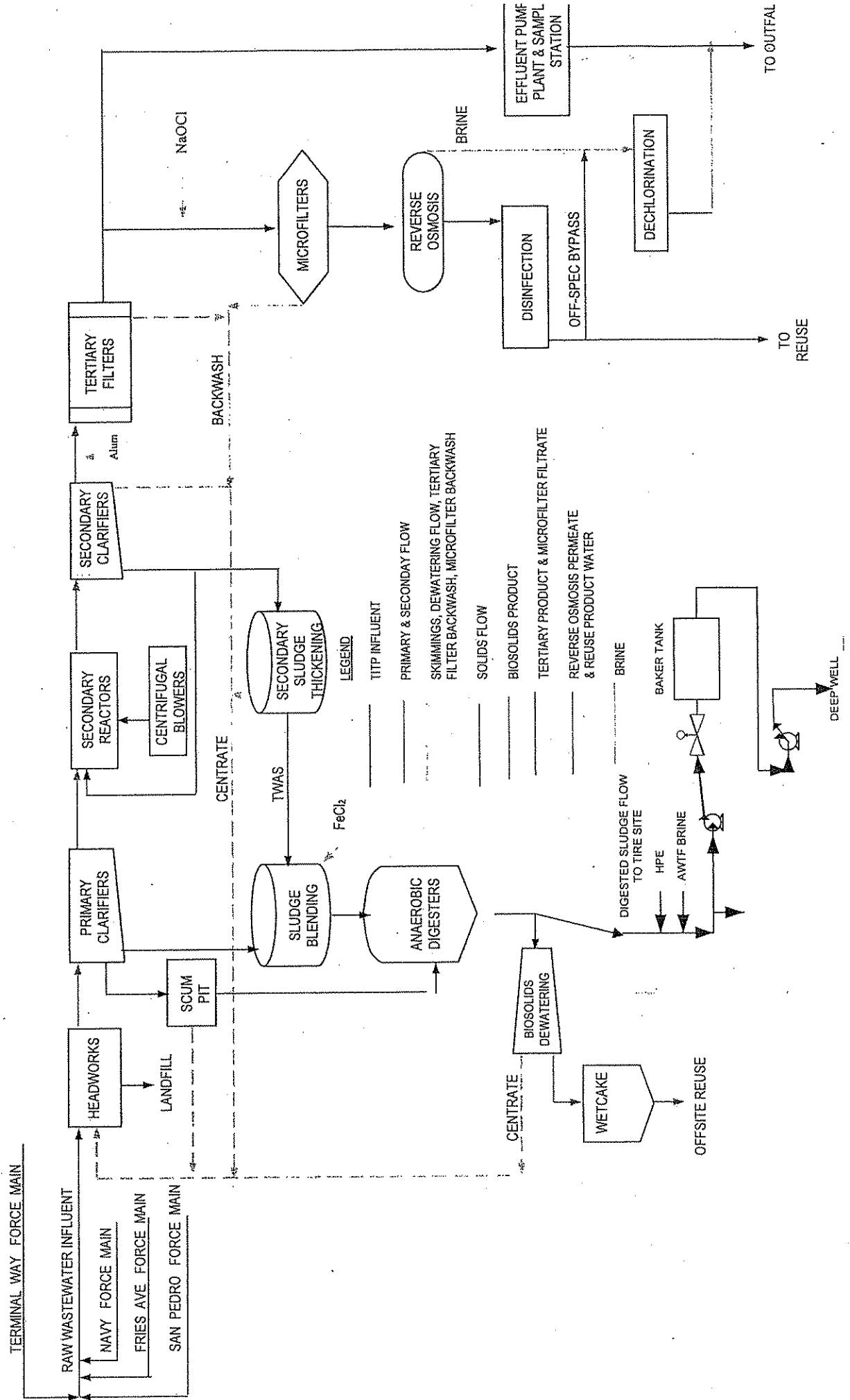
Maintenance:

PLANT WIDE ACTIVITIES FOR THE MONTH OF JANUARY 2009:

- Plant personnel attended Terminal Island Renewable Energy project (TIRE) meeting and also, Control System meetings in January 2009.
- Plant personnel held Supervisors and SPT meetings in January 2009.
- Plant personnel attended Advanced Waste-Water Treatment facility meetings in the month of January 2009.
- In January 2009, plant personnel attended various design projects meetings with EED.

TIWRD Flow schematic

TERMINAL ISLAND WATER RECLAMATION DIVISION PROCESS FLOW SCHEMATIC



CITY OF LOS ANGELES
BUREAU OF SANITATION
TERMINAL ISLAND TREATMENT PLANT

SUMMARY OF MONTHLY REPORT- LIQUID SECTION

DATE	DAY	PLANT INFLUENT										PRIMARY EFFLUENT										AERATION SYSTEM									
		TOT AVE FLOW MGD	TOT MAX FLOW MGD	TSS SOLIDS	PH	BOD TOTAL	OIL & GREASE	SETT. SOLIDS	NH3-N	NO PRIM TANKS IN SERVICE	SUSP SOLIDS	BOD TOTAL	OIL & GREASE	SETT. SOLIDS	% REMOVAL BOD	% REMOVAL SS	NO AER. TANKS IN SERVICE	AVG MLSS	FIM RATIO	AVG MCRT	% VOL	NH3-N OUT	NO2 OUT								
		MGD	MGD	(MG/L)	(M/L/L)	(MG/L)	(MG/L)	(M/L/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(MG/L)	(M/L/L)	%	%		MGIL	LB/IL	DAYS		(MG/L)									
1	THU	14.3	22.2	144.0	7.7	174.0		7.5	4	92	147		0.30	16	36	6	3030	0.14		81.0			60								
2	FRI	12.6	22.1	228.0	7.2	258.0		7.5	4	NS	NS		0.20	NC	NC	6	2810	NC		80.5			67								
3	SAT	14.9	27.4	148.0	7.3	156.0	39	12.0	4	84	132		0.30	15	43	6	3140	0.12	8.4	80.5			67								
4	SUN	15.1	25.1	160.0	7.5	258.0		8.0	4	70	147		0.10	43	56	6	2660	0.17	8.2	79.0		0.09	79								
5	MON	15.5	23.9	200.0	7.2	290.0		17.0	3	78	177		0.10	39	61	6	2515	0.21	6.8	82.0		0.04	72								
6	TUE	15.2	23.8	268.0	7.4	276.0		10.0	4	96	180		0.20	35	64	6	2580	0.21	7.5	82.0		0.06	75								
7	WED	14.3	27.3	256.0	7.5	348.0		15.0	3	102	183		0.20	47	60	6	2625	0.19	10.2	81.5		0.23	66								
8	THU	13.9	21.5	284.0	7.6	336.0		20.0	3	100	219		0.22	35	65	6	2825	0.21		83.0		0.30	58								
9	FRI	15.0	21.8	184.0	7.4	288.0	57	13.0	3	90	183		0.50	36	51	6	2705	0.20		81.0			50								
10	SAT	15.6	24.8	180.0	7.2	246.0		13.0	3	80	141		0.35	43	56	6	2685	0.16		81.0											
11	SUN	15.4	26.0	172.0	7.4	170.0		11.0	3	112	132		0.10	22	35	6	2630	0.16		78.5		0.21	67								
12	MON	15.4	23.8	212.0	7.5	280.0		14.0	3	98	189		0.20	33	54	6	2595	0.23		78.5		0.04	69								
13	TUE	15.5	24.8	192.0	7.3	306.0		10.0	3	82	153		0.15	50	57	6	2625	0.18		79.5		0.02	70								
14	WED	15.5	25.3	200.0	7.6	276.0	60	7.0	3	92	168		0.20	39	54	6	2670	0.19	7.9	80.5		0.03	65								
15	THU	15.5	24.7	204.0	7.4	324.0		14.0	3	80	186		0.25	43	61	6	2555	0.23		78.5			69								
16	FRI	15.4	24.8	224.0	7.6	276.0		3.5	3	82	189		0.20	32	63	6	2645	0.22		79.0			71								
17	SAT	16.1	25.7	244.0	7.4	312.0		7.0	3	76	168		0.20	46	69	6	2595	0.21		80.0			87								
18	SUN	15.9	30.5	120.0	7.7	222.0		8.0	3	68	183		0.10	18	43	6	2670	0.22		79.5			100								
19	MON	15.6	24.9	212.0	7.8	306.0	60	18.0	3	100	216		0.50	29	53	6	2805	0.24		78.5			95								
20	TUE	15.1	25.5	156.0	7.2	312.0	35	12.0	3	74	180		0.40	42	53	6	2830					0.11	97								
21	WED	15.3	24.2	216.0	7.4	282.0		12.0	3	58	183		0.50	35	73	6	3185					0.04	91								
22	THU	15.2	24.7	224.0	7.5	396.0		15.0	3	60	183		0.30	54	73	6	2910	0.18		82.0			91								
23	FRI	15.0	23.2	224.0	7.6	318.0		15.0	3	66	186		0.50	42	71	6	2825	0.20		80.0			82								
24	SAT	16.0	25.7	164.0	7.6	240.0	22	10.0	3	60	156		0.20	35	63	6	2910	0.16		82.5			119								
25	SUN	15.8	26.1	204.0	7.6	240.0		9.0	3	72	141		1.00	41	65	6	2690	0.16		80.5			104								
26	MON	14.0	21.8	236.0	7.6	294.0		15.0	3	72	195		0.30	34	69	6	2475	0.22		79.0		0.20	104								
27	TUE	14.3	24.3	284.0	7.5	414.0		15.0	3	138	201		0.40	51	51	6	2545	0.23		79.5			97								
28	WED	15.0	23.0	272.0	7.5	300.0		12.0	3	70	162		0.40	46	74	6	2360	0.20		80.5			113								
29	THU	13.7	22.5	304.0	7.4	340.0		14.0	3	84	198		0.50	42	72	6	2360	0.23		80.0			81								
30	FRI	14.5	22.3	204.0	7.6	354.0		14.0	4	48	210		0.20	41	76	6	2370	0.25		80.5			87								
31	SAT	15.8	28.2	216.0	7.6	282.0		18.0	4	86	192		1.00	32	60	6	2550	0.24		80.0			89								
TOTAL																															
MAXIMUM		16.1	30.5	304	7.8	414	60	20.0	4	138	219		1.00	54	76	6	3185	0.25	10.2	83		0	115								
MINIMUM		12.6	21.5	120	7.2	156	22	3.5	3	48	132		0.10	15	35	6	2360	0.12	6.8	79		0	50								
AVERAGE		15.1	24.6	211	7.5	286	46	12.1	3	82	176		0.32	37	59	6	2690	0.20	8.2	80		0	81								

LA-0492

CITY OF LOS ANGELES
BUREAU OF SANITATION
TERMINAL ISLAND TREATMENT PLANT

SUMMARY OF MONTHLY REPORT - PLANT EFFLUENT

DATE	DAY	PLANT EFFLUENT											PA % REMOVAL
		TOT AVG FLOW MGD	CHLORINE RES.	BOD (MG/L)	TSS (MG/L)	OIL & GREASE (MG/L)	TURBIDITY NTU	pH (MG/L)	NH3-N (MG/L)	SET. SOLIDS (MG/L)	TEMP F	TSS %	
1	THU	13.5	<0.01	<2	1		0.5	7.4		<0.03	77	99	
2	FRI	9.3	<0.01	2	1		0.6	7.3	<0.05	<0.03	76	100	
3	SAT	11.0	<0.01	<2	2	<3	0.6	7.4		<0.03	76	99	
4	SUN	11.9	<0.01	2	1		0.6	7.4		<0.03	76	99	
5	MON	12.5	<0.01	2	1		0.9	7.4		<0.03	76	100	
6	TUE	11.2	<0.01	2	1		0.6	7.4		<0.03	75	100	
7	WED	10.7	<0.01	3	1		0.1	7.2		0.03	74	100	
8	THU	11.5	<0.01	3	2		1.0	7.3		<0.03	75	99	
9	FRI	11.1	<0.01	3	1	<3	0.8	7.3		0.04	76	99	
10	SAT	11.6	<0.01	2	1		0.7	7.4		0.03	76	99	
11	SUN	11.6	<0.01	2	2		0.8	7.3		0.08	76	99	
12	MON	13.5	<0.01	2	1		0.6	7.3		<0.03	76	100	
13	TUE	13.0	<0.01	2	2		0.8	7.4		<0.03	77	99	
14	WED	13.1	<0.01	2	1	<3	0.5	7.5		<0.03	77	100	
15	THU	13.0	<0.01	2	1		1.1	7.4		<0.03	74	100	
16	FRI	12.9	<0.01	2	2		0.8	7.5		<0.03	76	99	
17	SAT	13.6	<0.01	2	1		0.7	7.3		0.08	77	100	
18	SUN	13.4	<0.01	<2	1		0.8	7.4		<0.03	77	99	
19	MON	13.1	<0.01	2	2		0.6	7.3		<0.03	77	99	
20	TUE	12.6	<0.01	2	1	<3	0.7	7.4		0.03	77	99	
21	WED	12.8	<0.01	2	1		0.5	7.4		<0.03	77	100	
22	THU	12.7	<0.01	2	<1		0.8	7.7		0.03	77	100	
23	FRI	12.8	<0.01	2	1		0.5	7.6		<0.03	77	100	
24	SAT	13.5	<0.01	2	2		0.5	7.6		<0.03	77	99	
25	SUN	13.3	<0.01	2	2	<3	0.6	7.7		<0.03	77	99	
26	MON	12.4	<0.01	2	1		0.9	7.5		0.03	76	100	
27	TUE	11.8	<0.01	<2	1		0.4	7.7		<0.03	75	100	
28	WED	12.5	<0.01	2	2		0.4	7.7		<0.03	75	99	
29	THU	11.2	<0.01	2	1		0.5	7.5		<0.03	75	100	
30	FRI	12.3	<0.01	2	1		0.5	7.5		<0.03	75	100	
31	SAT	13.8	<0.01	2	1		0.9	7.5		<0.03	76	100	
TOTAL													
MAXIMUM		13.8	<0.01	3	2	<3	1.1	7.7	<0	0.08	77	100	
MINIMUM		9.3	<0.01	<2	<1	<3	0.1	7.2	<0	<0.03	74	99	
							0.7	7.4	<0.05	<0.03	76	99	

CITY OF LOS ANGELES
 BUREAU OF SANITATION
 TERMINAL ISLAND TREATMENT PLANT
 SUMMARY OF MONTHLY REPORT - SOLID SECTION

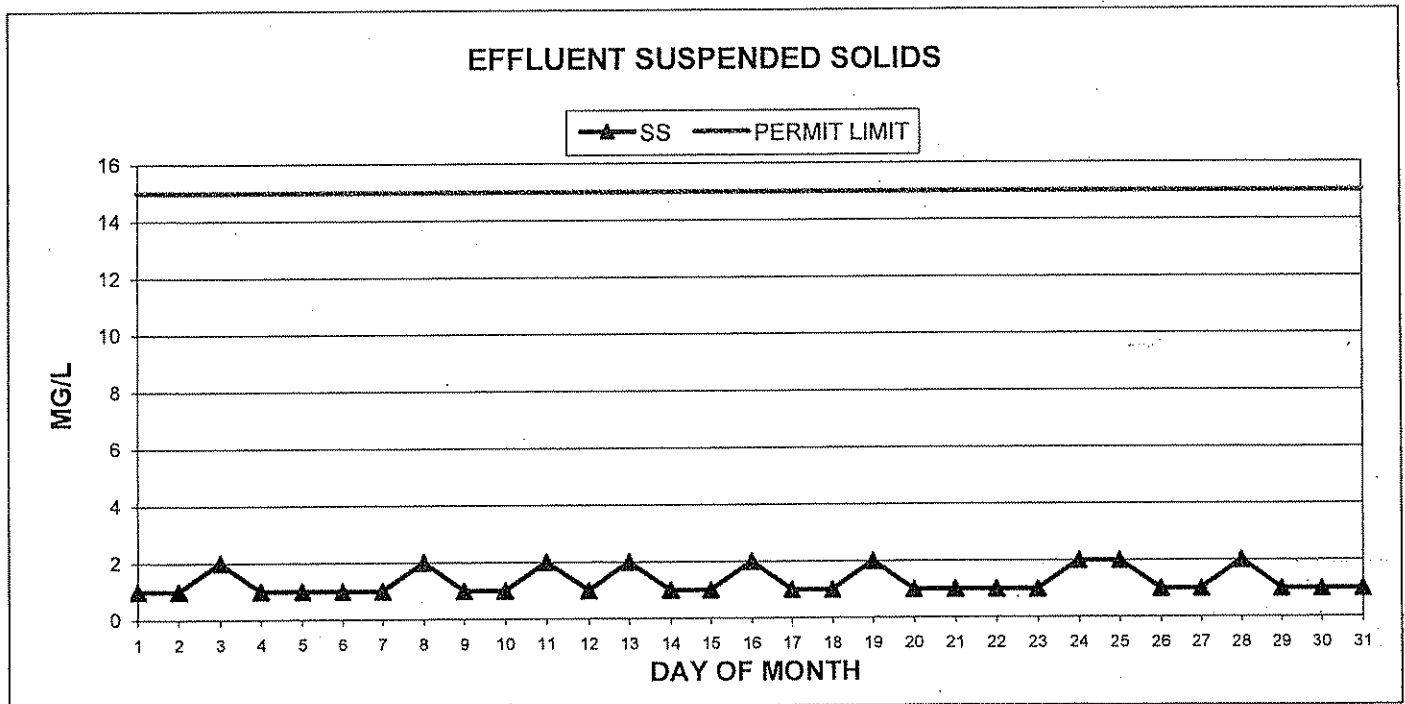
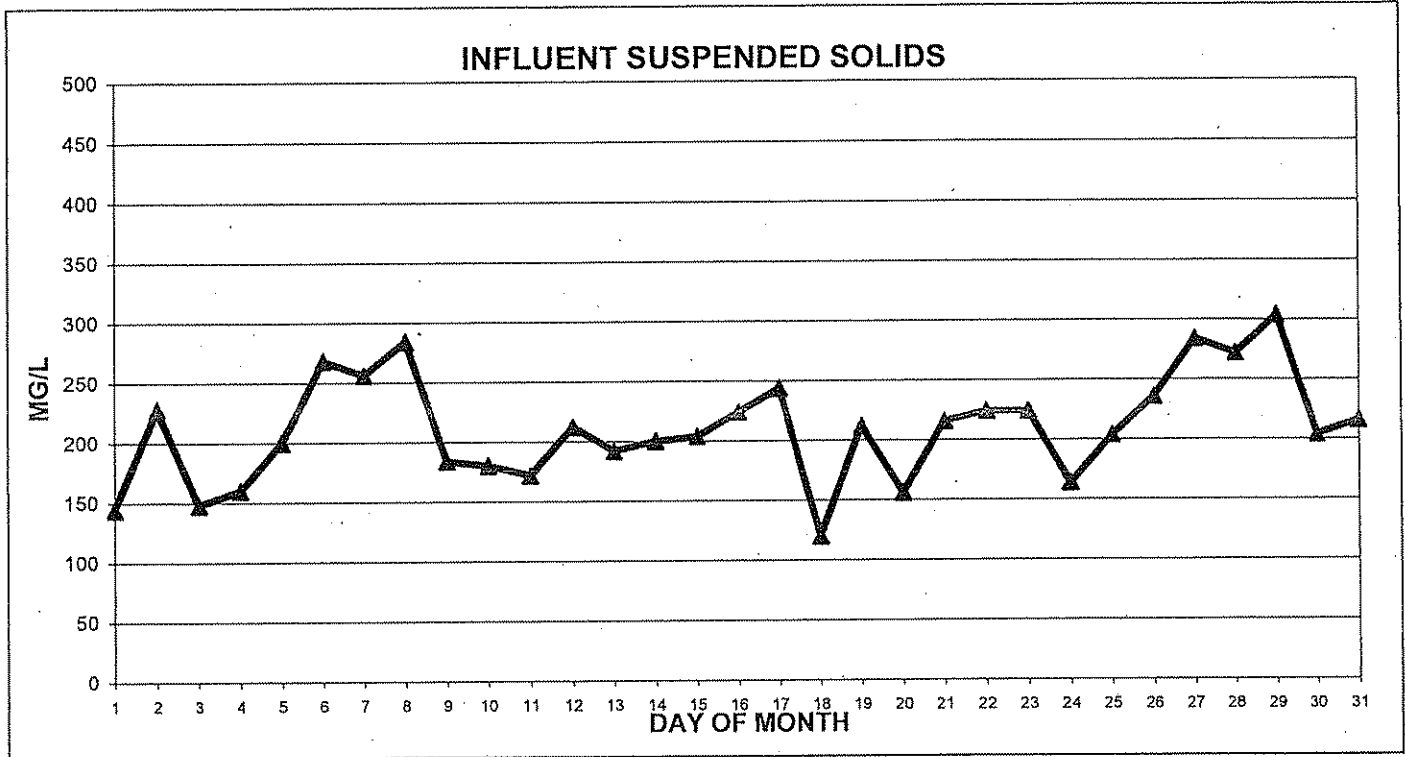
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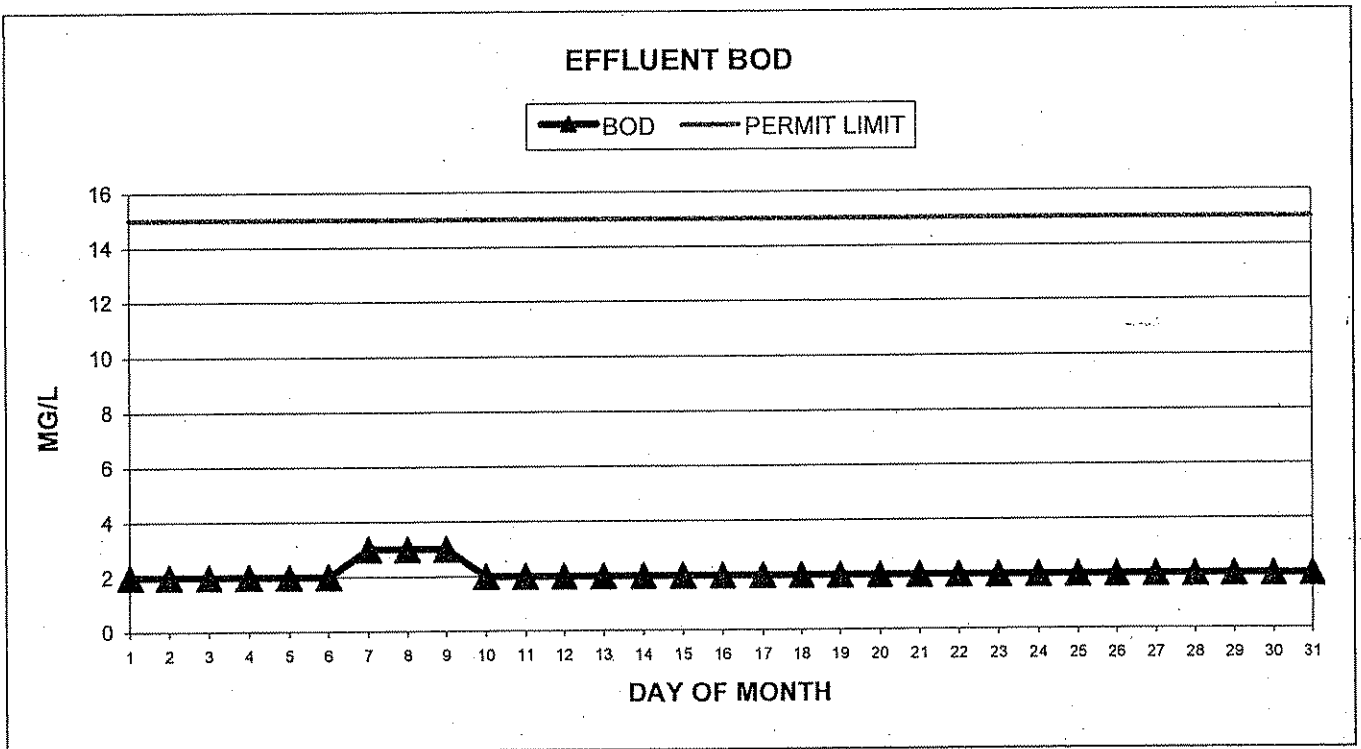
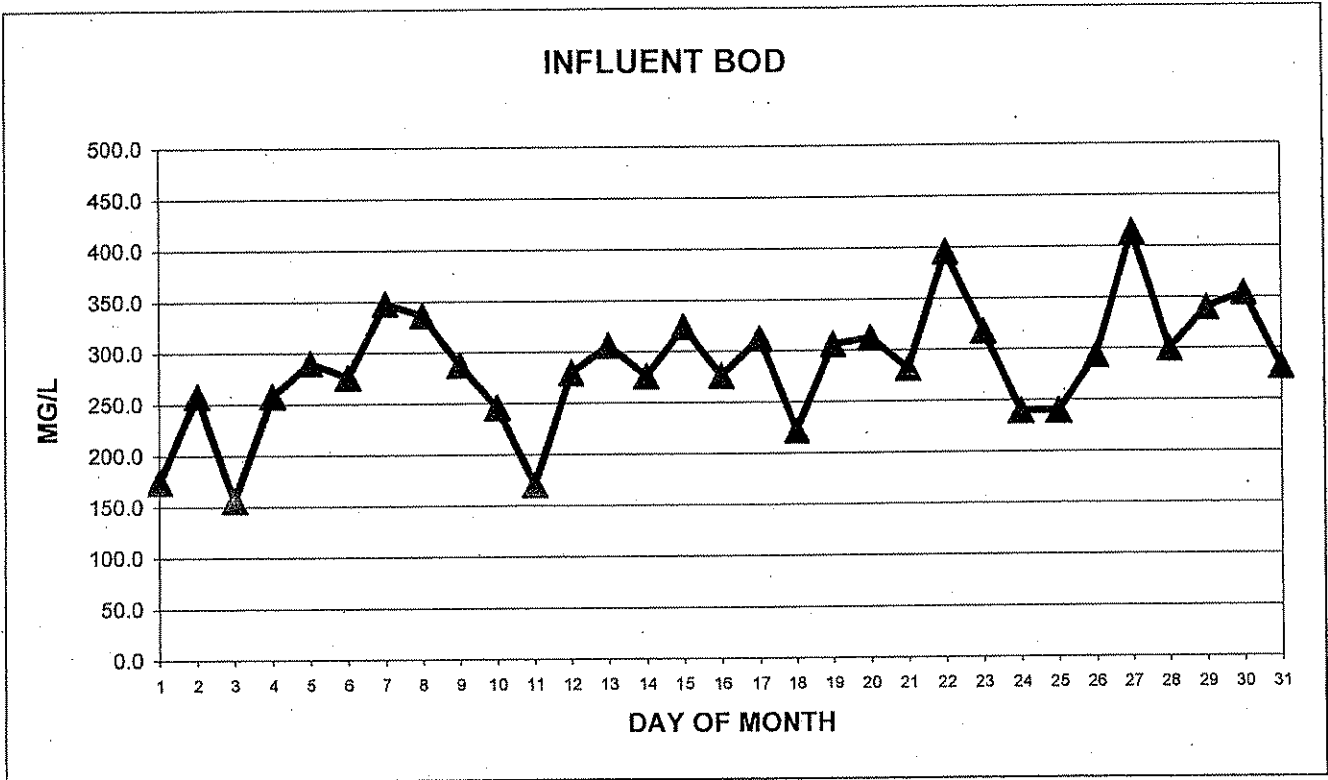
DATE	BLENDED DIGESTER FEED											DIGESTED SLUDGE						GAS			DEWATERING		BIOSOLIDS			POWER GEN
	TOT FLOW	KGAL	% TS	% TWS	% LOADING	DIGS IN SERV.	% TS	% NS	TS LOADING	TS LOADING	VS DESTROYED	VS DESTROYED	PH AVG	ALK AVG	VOA AVG	VOALK RATIO AVG	TEMP AVG	STEAM ADDED	KSCF	FEED FLOW	POLY, USED	WET CAKE HAULED	% CAKE	% TRUCK	RWH	
1	THU	178	3.39	76	50600	3	2.21	58	0.119	19887	60	7.2					131.9	76890	255	155	85	27			0	
2	FRI	182	4.56		68750	3						7.4					132.1	83700	255	80	48	82			0	
3	SAT	143	5.35		64280	3	1.89					7.3					132.3	56310	338	0	103	43			0	
4	SUN	143	3.52	74	42250	3	1.82	54	0.097	19463	58	7.2					132.1	82910	311	177	105	49			0	
5	MON	157	3.40	75	44750	3	1.92	55	0.104	19660	59	7.3					132.3	78280	269	98	75	0			0	
6	TUE	167	3.40	75	47590	3	1.48	56	0.111	23674	54	7.3					132.2	67250	173	160	103	49			0	
7	WED	137	3.54	75	40700	3	2.09	57	0.097	16834	56	7.3					132.0	60730	269	159	101	50			0	
8	THU	123	3.60	74	37320	3	1.89	55	0.090	16845	57	7.3					132.2	87310	254	112	83	50			0	
9	FRI	128	2.44		36940	3	1.54					7.3					132.5	61350	299	127	123	25			0	
10	SAT	122	3.92		40270	3	1.88					7.2					132.4	56970	258	165	133	51			0	
11	SUN	139	2.89	71	33770	3	1.88	55	0.079	11898	50	7.3					132.6	79380	250	135	94	25			0	
12	MON	126	2.97	74	31480	3			0.077			7.3					132.5	44880	297	10	24	25			0	
13	TUE	148	3.32	76	41220	3			0.102			7.3		2850	132	0.046	132.2	58090	248			23			0	
14	WED	141	3.30	76	39030	3			0.086			7.2					131.7	93500	292			0			0	
15	THU	137	3.26		37480	3						7.5		2830	197	0.070	132.1	83460	313	0	0	0			0	
16	FRI	115	NR		NC	3						7.4					132.2	52830	272						0	
17	SAT	130	3.26		35550	3	2.02					7.2					132.1	80270	233	157	123	27			0	
18	SUN	124	3.23		35620	3	1.83					7.2					132.4	66680	295	163	144	25			0	
19	MON	123	3.05		31510	3	2.00					7.3					132.5	53200	243	41	13	25			0	
20	TUE	146	3.70		45400	3						7.4					132.2	64210	230			45			0	
21	WED	139	3.32		38610	3						7.2					132.2	80210	307						0	
22	THU	144	3.40	75	41100	3			0.097			7.2		2720	152	0.056	132.1	50510	286						0	
23	FRI	150	3.47		43740	3	NS					7.4					131.9	77780	286						0	
24	SAT	151	3.33		42270	3	1.79					7.4					132.2	76850	295	170	168	25			0	
25	SUN	144	2.97		36920	3	1.84					7.2					132.3	74180	282	177	141	25			0	
26	MON	154	3.01	75	39510	3	1.42	58	0.093	18533	54	7.2					131.7	60940	245	1	34	25			0	
27	TUE	141	3.29	74	38940	3	NS					7.2					131.5	75660	317						0	
28	WED	145	3.16	76	38400	3			0.094			7.2					131.5	76870	286						0	
29	THU	137	3.10		35680	3	NS					7.4					131.5	77080	261						0	
30	FRI	128	3.04	74	32510	3	NS	NS	0.080		NC	7.4					131.8	58610	297						0	
31	SAT	154.29	2.74		35490	3	NS					7.2					131.4	57120	287	81	59				0	
	TOTAL																									
	MAXIMUM	182	5.35	76	69750	3	2.21	58	0.119	23674	60	30.0		2850	197	0.070	132.5	87310	338	177	168	82		4	0	
	MINIMUM	115	2.74	71	31460	3	1.42	54	0.077	11898	50	20.0		2720	132	0.046	131.4	44880	173	0	0	0		0	0	
	AVERAGE	142	3.40	75	40849	3	1.86	56	0.085	18362	55	25.2		2800	160	0.057	132.1	67744	272	106	88	34		26	1	

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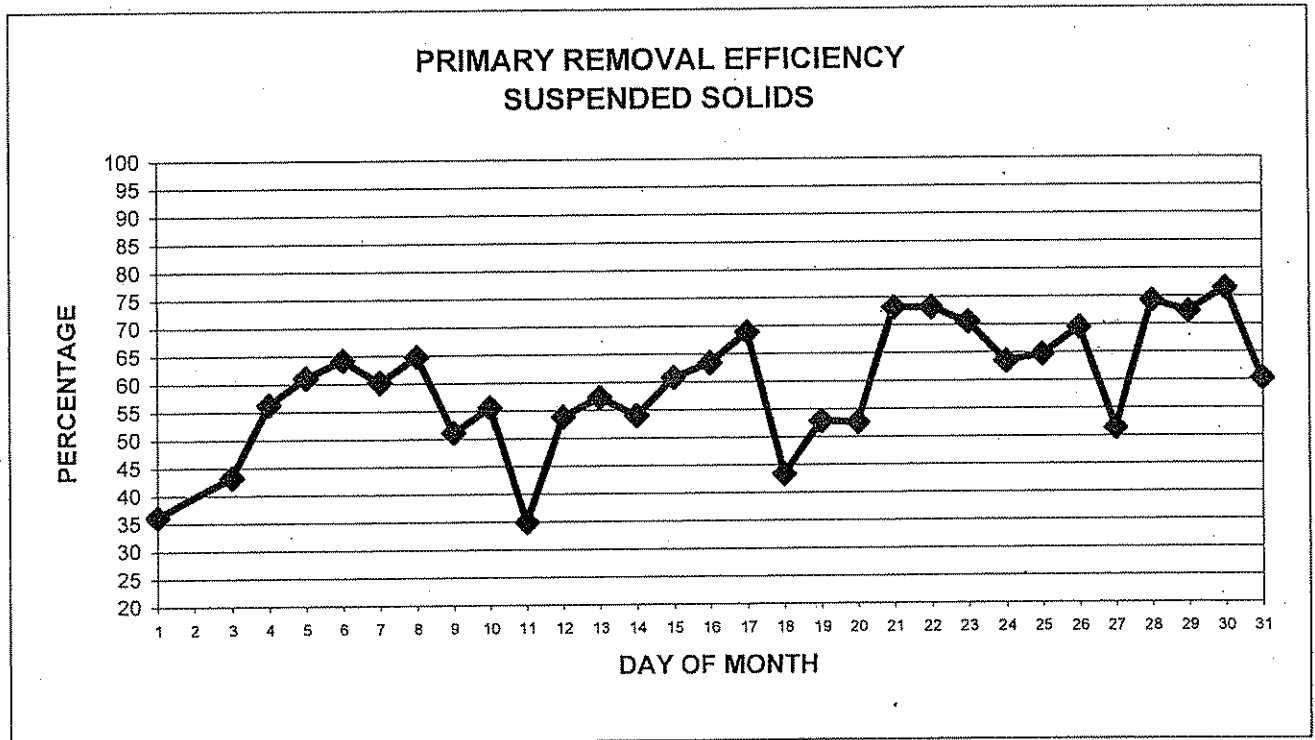
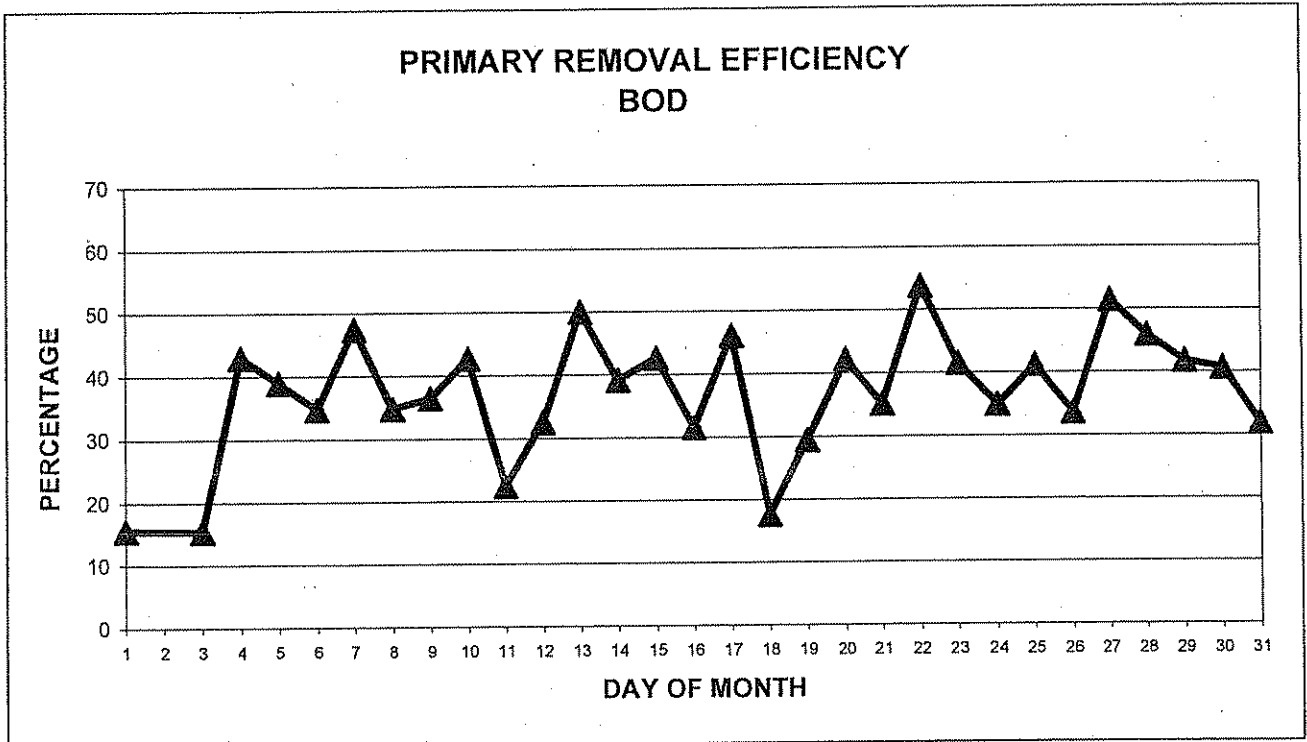
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 TERMINAL ISLAND TREATMENT PLANT
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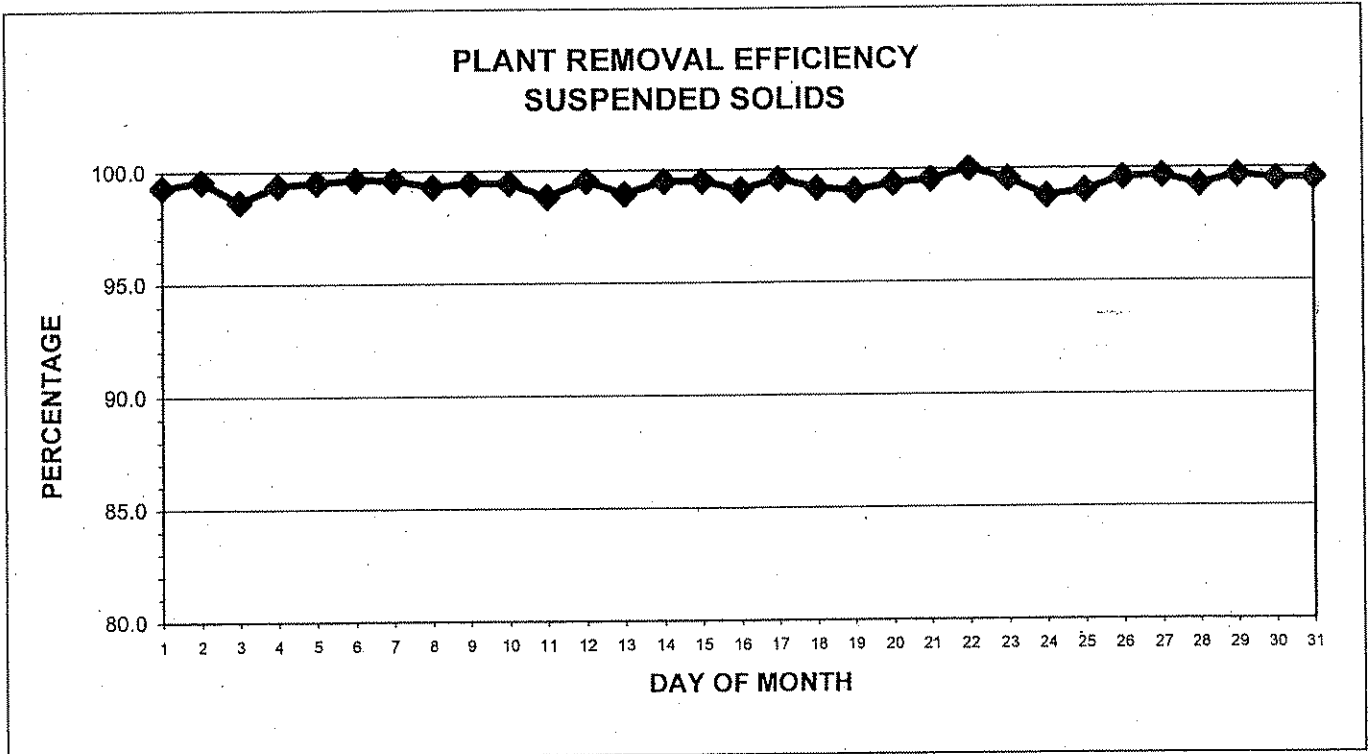
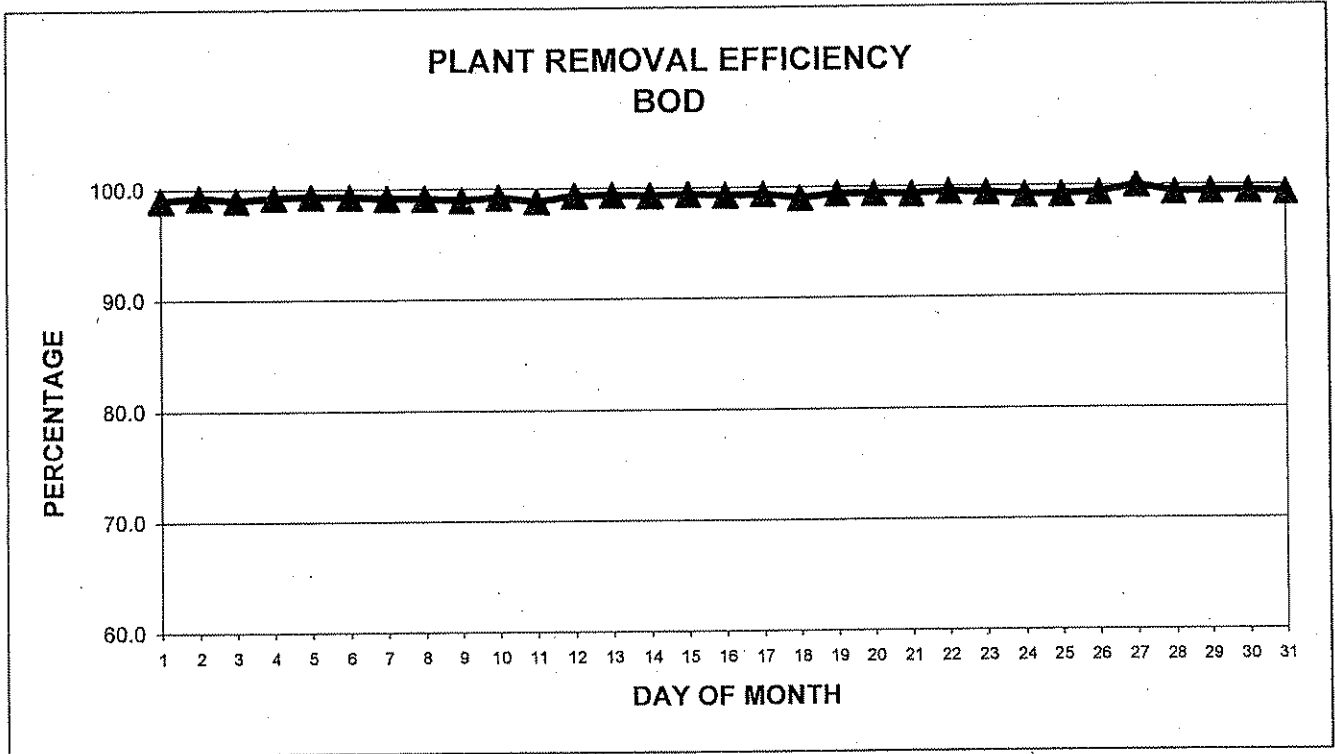
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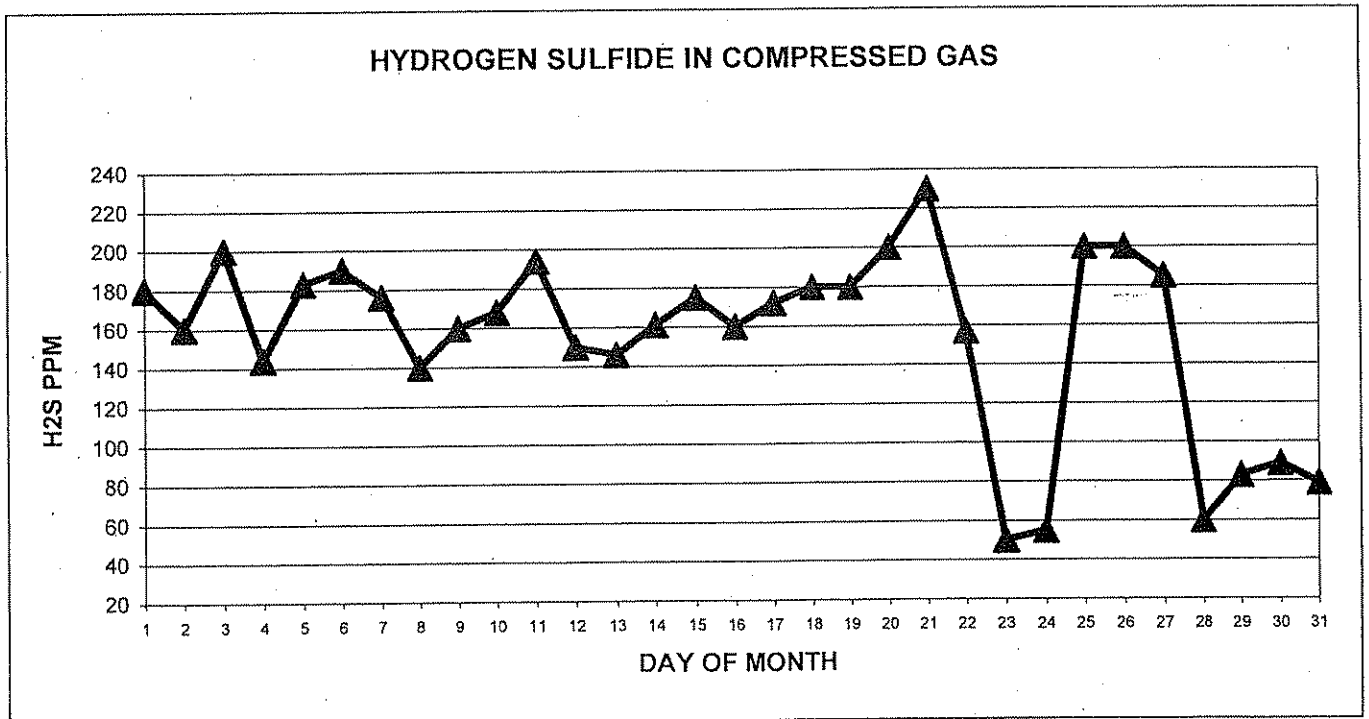
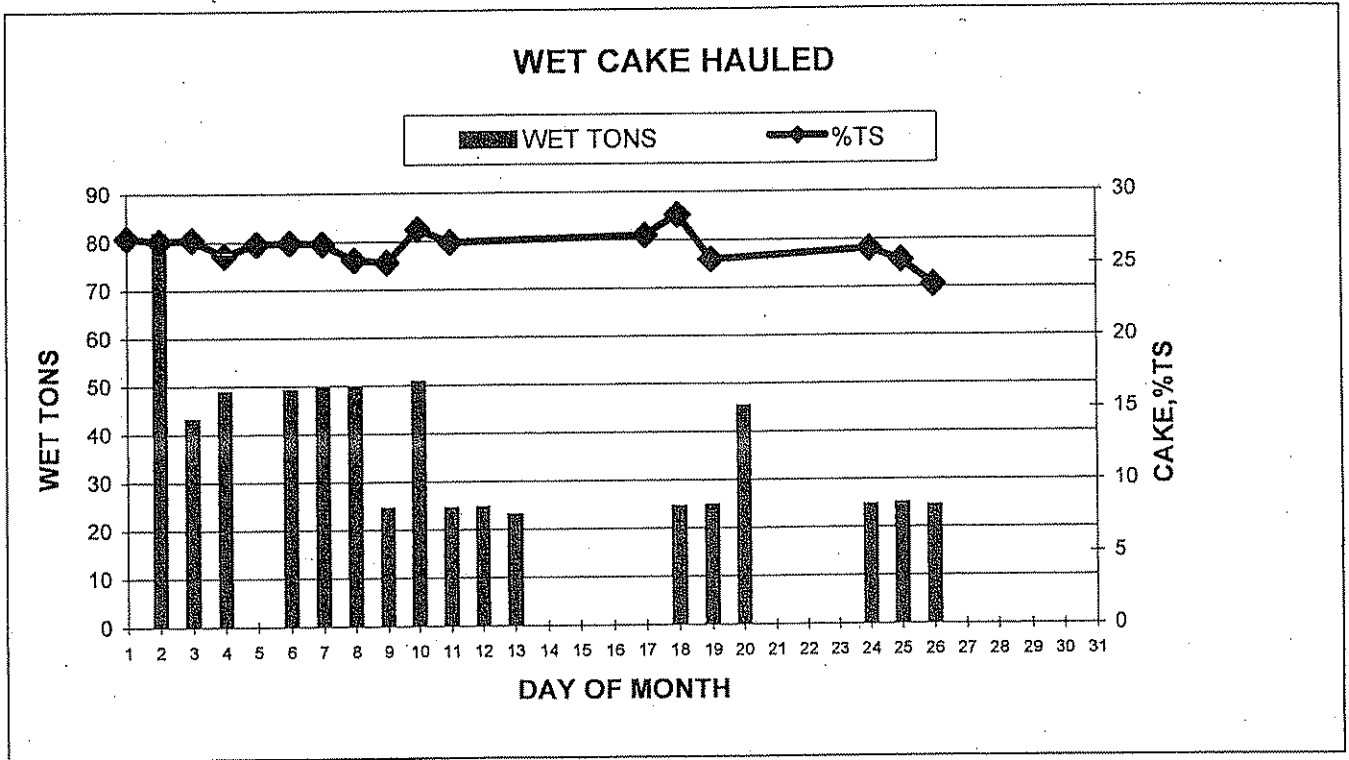
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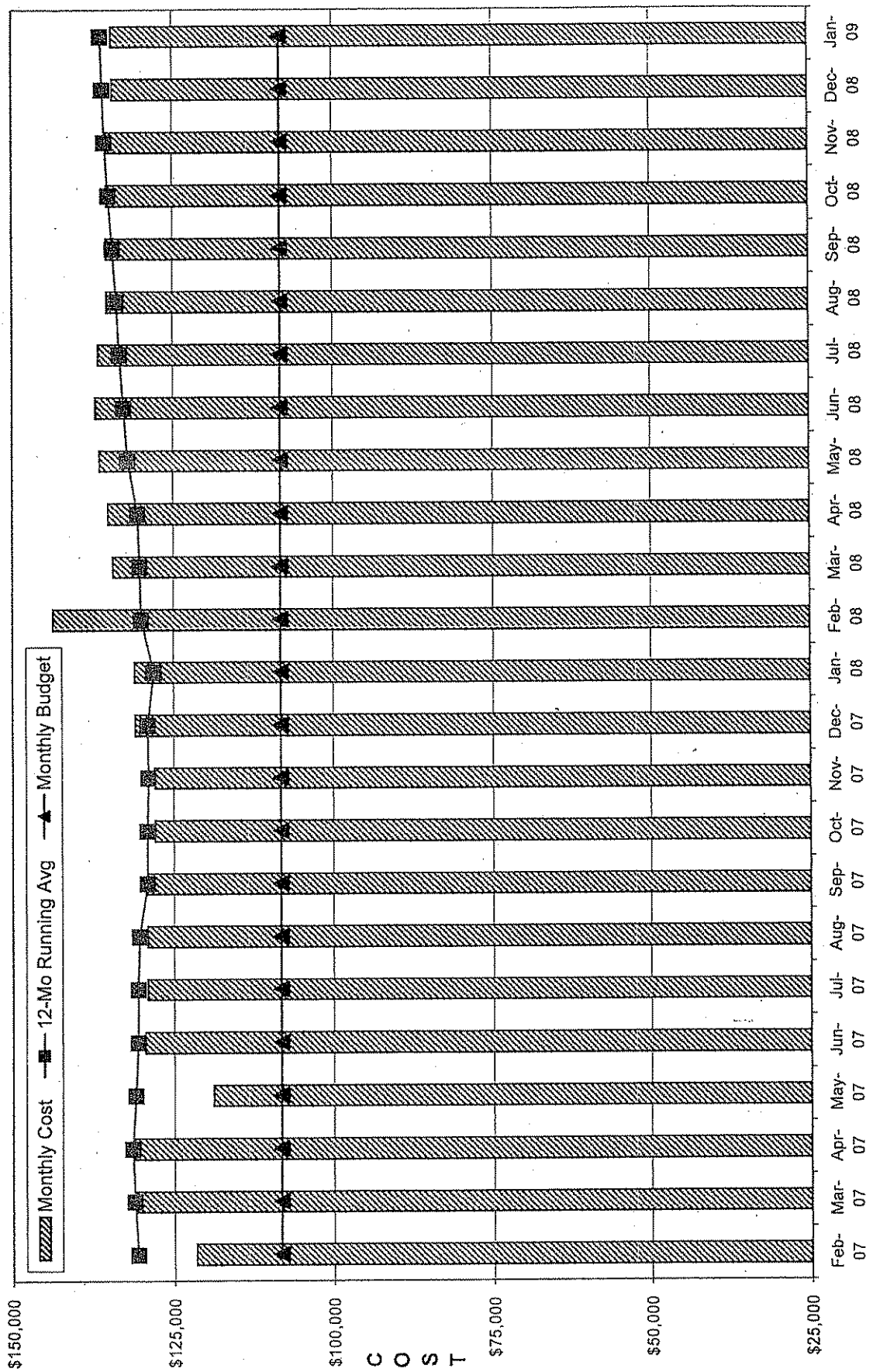
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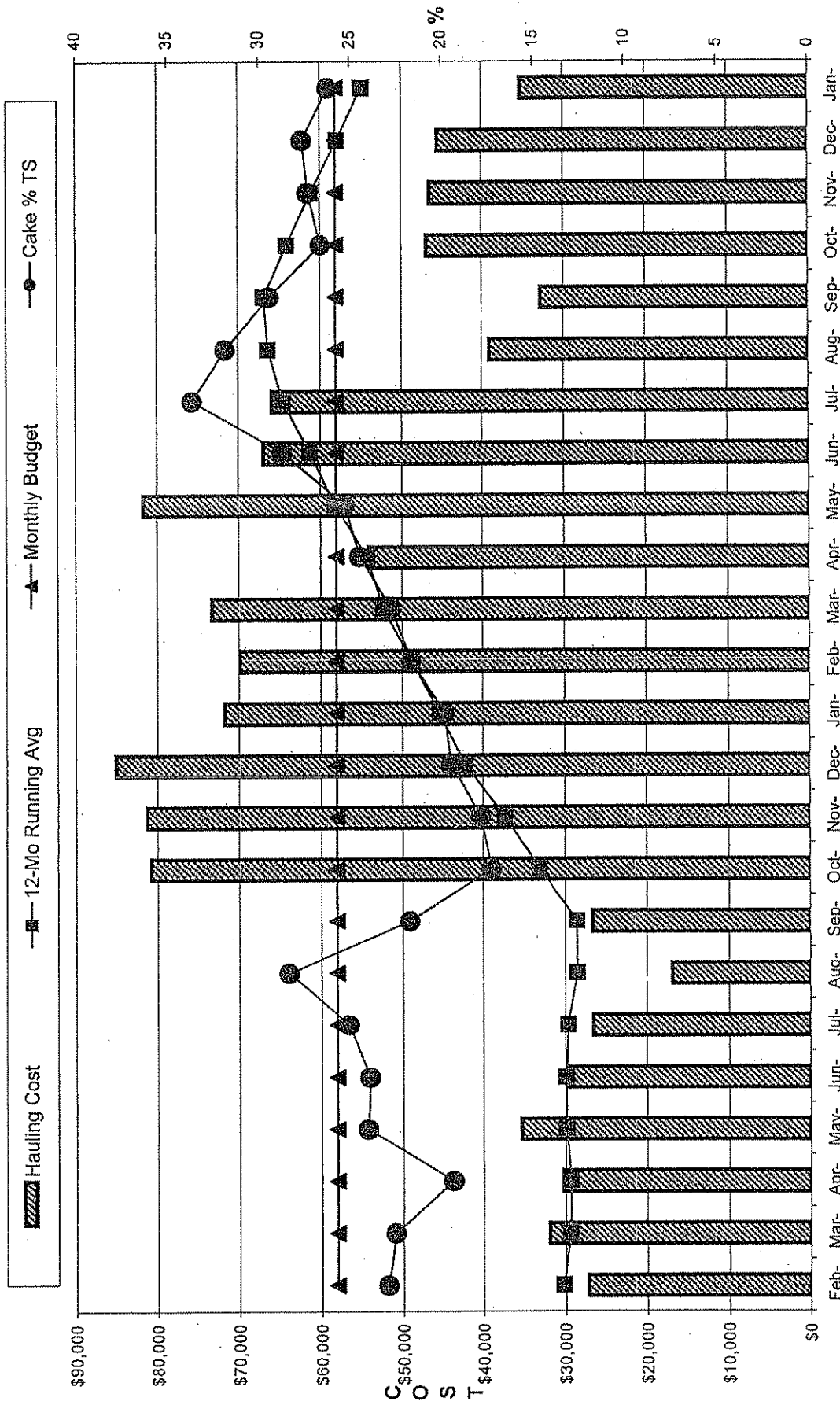
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January 2009



TWRP POWER COSTS (02/07 - 01/09)

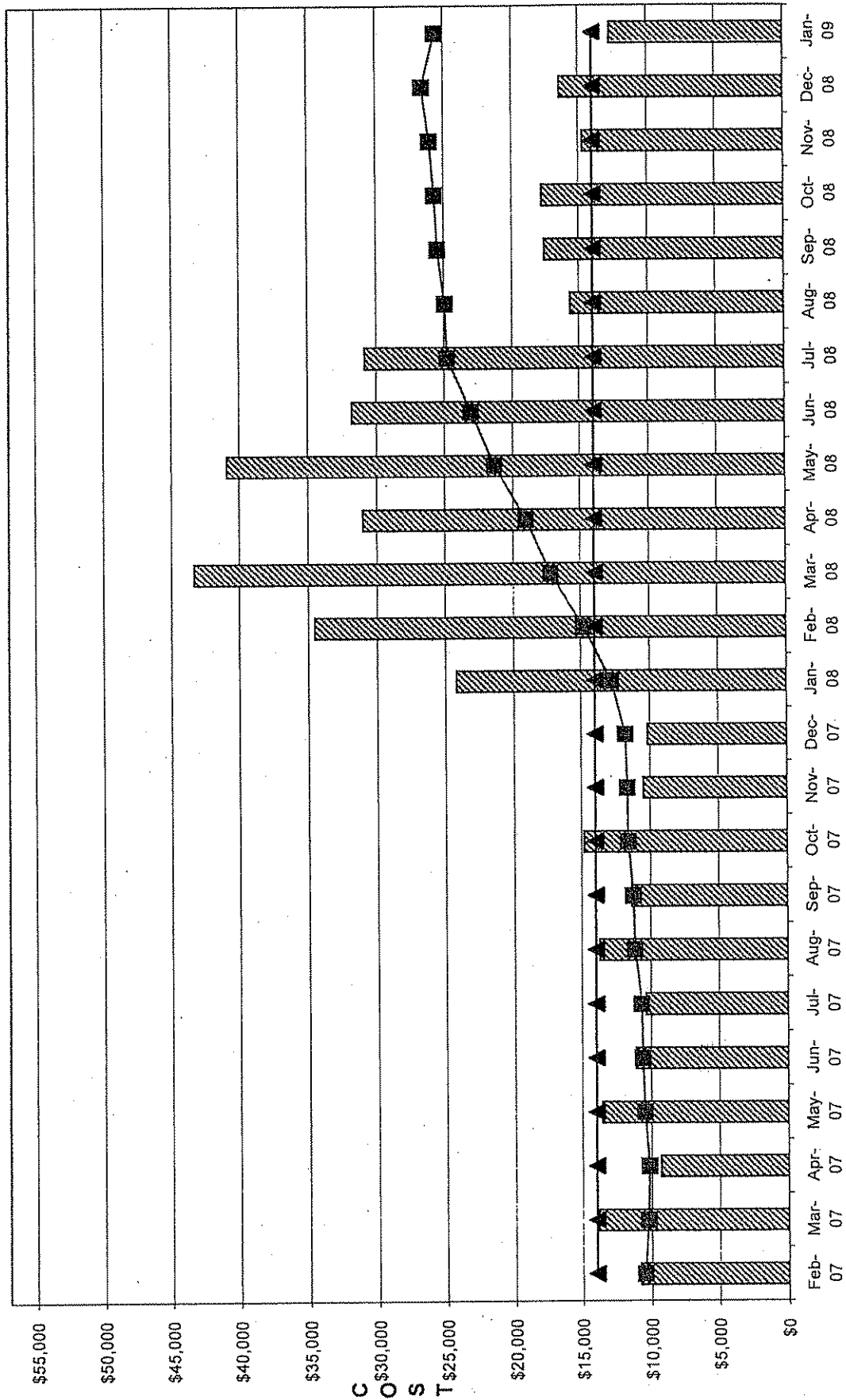


TIWRP BIOSOLID COST (02/07-01/09)

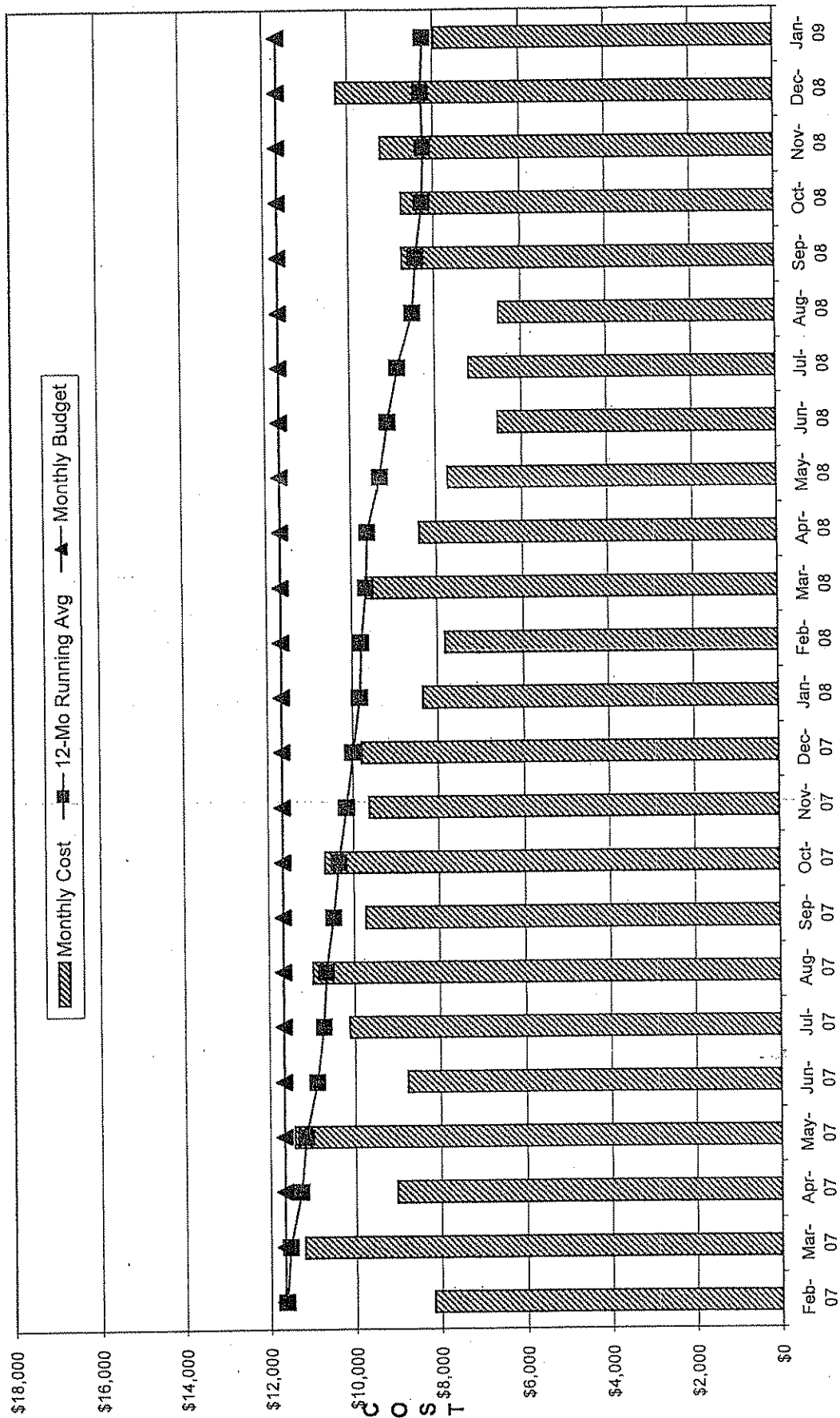


TIWRP POLYMER COSTS (02/07 - 01/09)

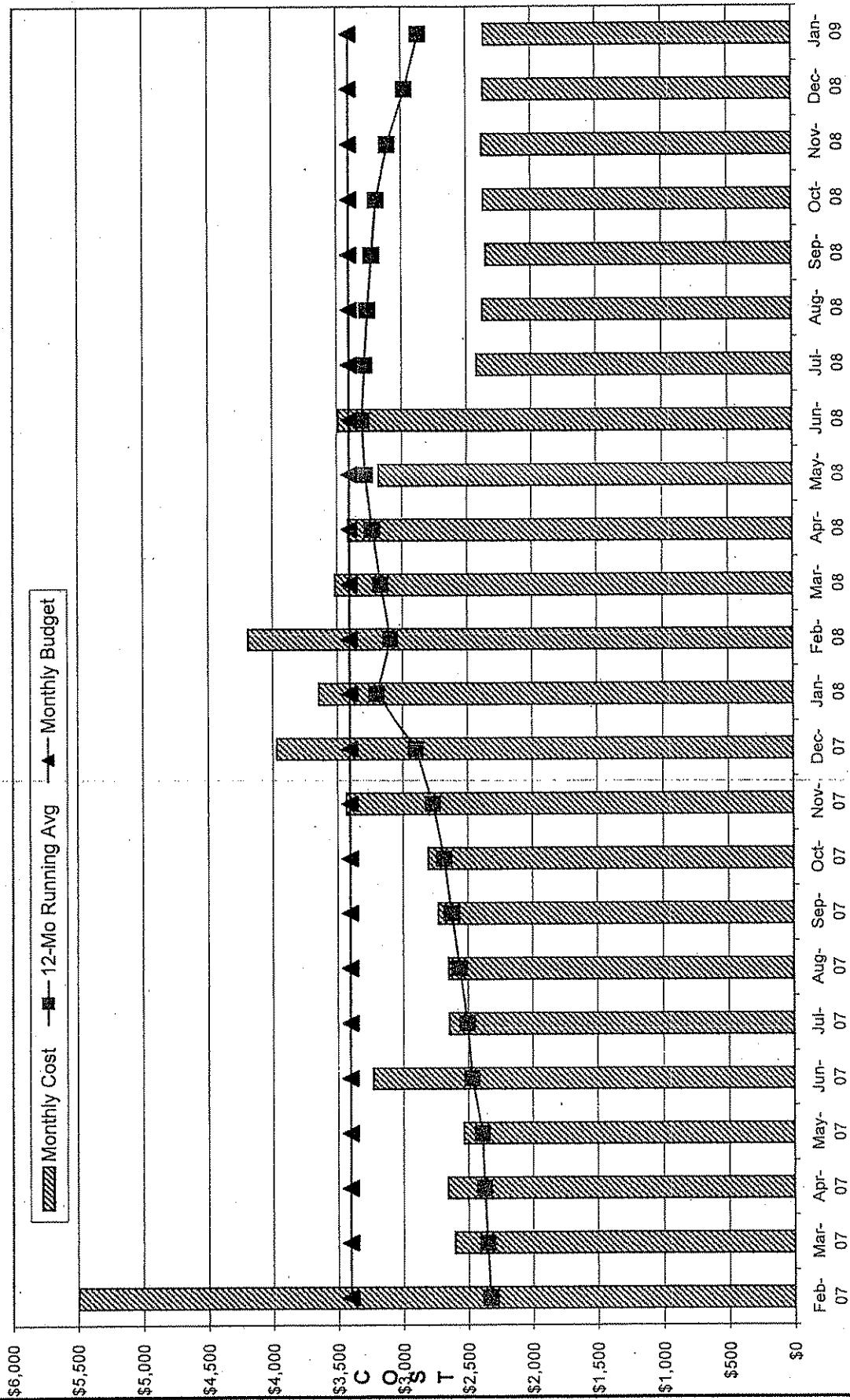
Monthly Cost
 12-Mo Running Avg
 Monthly Budget



TWRP FERROUS CHLORIDE COSTS (02/07 -01/09)



TIWRP WATER COSTS (02/07 - 01/09)



DONALD C. TILLMAN WATER RECLAMATION PLANT
MONTHLY PERFORMANCE REPORT
JANUARY 2009

OVERALL PLANT PERFORMANCE SUMMARY

The Donald C. Tillman Water Reclamation Plant had one exceedance of its NPDES permit and no results in excess of its Water Recycling permit for the month of January. The exceedance was for chlorine residual on January 7th. A value of 5 mg/L was recorded for approximately 10 minutes due to a total power outage that the plant experienced.

Plant Influent Flow	49.0 mgd	NPDES Non-compliance	1
02/08 – 01/09 Avg Inf Flow	49.4 mgd	Average Effluent Turbidity	1.1 ntu
Plant Effluent Flow	34.7 mgd	Oil and Grease	< 3 mg/l
02/08– 01/09 Avg Eff Flow	34.5 mgd	Effluent pH	7.2
Influent SS concentration	232 mg/l	Influent BOD₅ concentration	344 mg/l
Effluent SS concentration	0.8 mg/l	Effluent BOD₅ concentration	< 3 mg/l
SS Removal Efficiency	> 99.9%	BOD Removal Efficiency	> 99%

OPERATIONS

Primary Treatment

Primary treatment removal efficiency for suspended solids and BOD₅ were 69% and 46% respectively. The average primary effluent suspended solids concentration was 71 mg/l and the average primary effluent BOD₅ concentration was 179 mg/l.

Secondary Treatment

Phase I secondary effluent suspended solids averaged 5 mg/l and BOD₅ averaged 9 mg/l. Removal efficiencies were 93% for suspended solids and 95% for BOD₅.

Phase I operated at an average total MCRT of 12.1 days and an F/M ratio of 0.23 lb BOD₅/day/lb MLVSS.

Phase II was taken out of service on April 1st, 2007 to accommodate NdeN construction.

Tertiary Treatment

Filter influent flow in Phase I averaged 15.9 mgd to the sand filters, which translates to a loading of 1.0 gpm/ft². Influent flow to the cloth filters averaged 17.4 mgd, which translates to a loading of 3.8 gpm/ft². Total filter effluent turbidity averaged 1.5 NTU.

Chemical Usage

The total amount of sodium hypochlorite (NaOCl) used this month was 98,818 gallons. The initial chlorine residual entering the Phase I contact tank averaged 7.1 mg/L.

The total amount of sodium bisulfite (NaHSO₃) used this month was 34,077 gallons. The remaining chlorine residual requiring dechlorination averaged 6.0 mg/L.

The total amount of neat polymer used in aeration and for filter coagulation this month was 68,620 gallons.

The total amount of ammonia used to aid in disinfection this month was 12,045 gallons.

January 2009 Plant Effluent Results

Suspended Solids	0.8 mg/L	Total Dissolved Solids	554 mg/L
BOD₅	< 3 mg/L	NH₃-N	1.1 mg/L
Settleable Solids	< 0.1 mg/L	NO₂-N	0.05 mg/L
Average Turbidity	1.1 ntu	NO₃-N	5.5 mg/L
Maximum Turbidity	1.2 ntu	Organic N	2.3 mg/l
pH	7.2	E-Coli	<1
Temperature	73° F	Fecal Coliform (Median)	<1
Chloride	145 mg/L	Total Coliform (Median)	<1

Plant Effluent Use

Effluent is used in three flow-through aesthetic lakes, golf course irrigation, and is also used within the Plant for irrigation, fire suppression, industrial cooling, tank washdown, and chemical dilution. The following table summarizes Plant effluent flows at DCT.

LOCATION	AMOUNT (MGD)	USE
Los Angeles River	6.4	River Flow
Japanese Garden Lake	3.3	Aesthetic Lake
Lake Balboa	13.7	Aesthetic Lake
Wildlife Lake	5.5	Aesthetic Lake
Plant Use (HPE+LPE)	2.4	In-Plant uses
DWP Reuse	1.9	Golf course irrigation & cooling

MAINTENANCE SECTION

GENERAL:

- PM Work Orders Performed: 269 PMs completed during the month of January
- CM Work Orders Completed: 119 CMs completed during the month of January
- Blower Building and aeration system construction almost complete, all supervisors assisting with punch list and start up activities

PROJECTS:

- NdeN construction and startup 99% complete
- New Aqua Diamond filter installation
- Work-plan Activities ongoing
- VPP Certification Project ongoing
- New Lab building project is ramping up.
- Wet weather emergency pump back system completed

ELECTRICAL SHOP:

DCT

- Provide start up assistance for C-6158
- Provide start up and testing assistance of Storm water pumps
- Replaced lube oil motor on Screw pump #4

- Removed Balboa pump from AT #18
- Swapped out Balboa pump (East)
- Repaired failed Spike station water champ 7A
- Modified control circuit on Spike station gravity valves to latch open on power fail until reset
- Checked out heat trace system at Spike station
- Replaced battery on RAS #1 FCV
- Ran conduit and wire for new Temp & Humidity probe in old blower plenum
- Repaired Bleach tank D feed valve
- Replaced temp sump pump (Chlorine contact tanks)
- Repaired South gate
- Completed monthly PMs

LAG

- Worked on VPP items

- Repaired problems on Final collector #1
- Checked out AC units on lunch trailer and ConAd trailer
- Reinstalled recycle pump in AT #6
- Completed installation, hook up & testing of PAC #3 motor
- Worked on plant sump pumps
- Plant relamping
- Completed monthly PMs

FACILITIES SECTION:

DCT –BR

- Installed protective Lexan over Manlift control console
- Replaced a/c filter at Japanese Garden office trailer
- Relocated Lab conference room furniture for carpet contractor
- Repaired door closer at Headworks Bldg.
- Installed pipe rack in rear of Chlorine Bldg.

LA/G-BR

- Hung Safety Awards in Conference Room
- Installed "Irrigation by Reclaimed Water" signs
- Adapted conference table to accept 'Frisbee' wiring
- Spent time cleaning craft storage containers

DCT/PA

- Completed refinishing of second side of Serpentine rail
- Repainted maintenance conference room walls
- Power-washed east & west walkways & ceilings near maintenance lunchroom
- Repainted west gate near JGF maintenance yard
- Began repainting metal fence near JGF greenhouse

LA/G PA

- Painted "Headworks" on Headworks Bldg.
- Straightened up 'Paint Shop' & store room

DCT – PL

- Repaired 20" butterfly valve on Primary Tank # 27
- Repaired leaking union on discharge side of Hypo pump 'A'

- Tightened leaking connection on chilled water pump
- Repaired leak on suction side of Hypo pump 'A'
- Replaced check valve on Ammonia tank fill line
- Repaired drinking fountain at JGF Shoin Bldg.
- Cleaned Spike Station strainers
- Installed 6" airline to sewer on Channel #2
- Repaired bad fittings on SO3 expansion tank
- Repaired leaking tubing on Odor Station 1
- Repaired leaking pump diaphragm on NAHSO3 pump 'B'
- Installed plug in Admin Ladies restroom floor drain
- Dismantled and trouble-shot Filto-mat in new Blower Bldg.
- Installed 'down-comers' for Aerator # 4 acid wash
- Assisted mechanics with relocation of CCT dewatering pump

LA/G – PL

- Installed liquid bleach system in Hypo pump room
 - Converted ammonia wet scrubber from potable to HPE
 - Repaired 3-way valve on Sand Filter # 2
 - Repaired polymer metering pump # 1
 - Repaired leaks on discharge valve of Hypo pump # 3
 - Repaired leaks on discharge side of Hypo pump # 1
-
- Replace ballcock on Con-Ad Inspectors' trailer toilet

MECHANIC SHOP:

- Removed dewatering pump from aeration to Lake Balboa pumping station
 - Completed bearing installation on Screw Pump #1
 - Replaced check balls on Bleach Pump E
 - Replaced worn bearings on vent fan for final gallery vent fan
 - Installed Phase 2 effluent flow meter for Instrumentation
 - Constructed foul air waste line for odor control
-
- Replaced check valve on Bi-Sulfite pump B
 - Replaced broken drive chain for cloth filter #2
 - Replaced broken shear pin on Final Tank #18 (call in)
 - Made repairs to entrance gates to service area and cesspool facilities

- Installed and aligned Blower Motor #3 (LAG)
- Replaced guide vane bearings on Blower #1 (LAG)
- Repaired worn actuator arm on Blower #1 (LAG)
- Made extensive repairs to Final Tank #3 and #7 (LAG)

WRD Instrument shops

DCT

- 1 WO was cancelled: 0 CNMT, 0 CNOP, 0 CNWO, 1 EQNA, 0 CNR, 0 DUP and 0 PNA.
- 77 PMs were completed as planned.
- 32 Correctives were completed.
- Call-ins: None

LAG

- 67 PMs were completed.
- 12 Correctives were completed.
- WO was cancelled: 0 CNOP, 1 CNMT, 2 CNWO, 0 EQNA.

**DONALD C. TILLMAN WATER RECLAMATION PLANT
SUMMARY OF OVERALL TREATMENT
PLANT EFFLUENT QUALITY**

PAGE 1 C

January 2009

DATE	DAY	SUSPENDED SOLIDS			BOD ₅			SETTLABLE SOLIDS			O & G		TURBIDITY		Cl ₂ Res		pH	TEMP		METER AVG D.O.	CI	SO4	TDS	MBAS	NH ₃ -N	ORG-N	NO ₂ -N	NO ₃ -N	COLIFORM	
		PLANT INF	PLANT EFF	REM EFF	PLANT INF	PLANT EFF	REM EFF	PLANT INF	PLANT EFF	REM EFF	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	mg/L										Deg F	Deg C
1	THU	232	<1.0	100	3	99	13	<0.1	>99.2	0.7	0.7	0.7	0.7	0.0	<0.1	7.2	72	6.6											<1	
2	FRI	252	<1.0	100	459	3	99	12	<0.1	>99.2	0.7	0.7	0.7	0.0	<0.1	7.0	72	6.7	145	116	554	0.10	1.6	2.3	0.05	5.5			<1	
3	SAT	198	<1.0	>99	512	3	99	11	<0.1	>99.1	0.7	0.7	0.0	0.0		7.0	73	6.6										<1		
4	SUN	268	<1.0	100	360	<3	>99	13	<0.1	>99.2	0.6	0.7	0.0	0.0		7.1	72	6.6					1.3					<1		
5	MON	206	<1.0	100	446	<3	>99	12	<0.1	>99.2	0.6	0.7	0.0	0.0	<0.1	7.3	72	6.7										<1		
6	TUE	218	<1.0	100	300	3	99	13	<0.1	>99.2	0.6	0.7	0.0	0.0	<0.1	7.3	72	6.7										<1		
7	WED	234	<1.0	100	258	<3	>99	13	<0.1	>99.2	0.7	0.9	5.0	5.0	<0.1	7.2	72	6.9										<1		
8	THU	216	<1.0	100	421	3	99	12	<0.1	>99.2	0.8	0.8	0.0	0.0	<0.1	7.2	72	7.1										<1		
9	FRI	236	<1.0	100	301	3	99	13	<0.1	>99.2	1.0	1.0	0.0	0.0	<0.1	7.1	73	7.2										<1		
10	SAT	246	<1.0	100	288	3	99	14	<0.1	>99.3	1.1	1.4	0.0	0.0		7.1	72	7.4										<1		
11	SUN	216	1.2	99	442	4	99	13	<0.1	>99.2	1.2	1.2	0.0	0.0		7.2	72	7.2										<1		
12	MON	240	<1.0	100	353	4	99	15	<0.1	>99.3	1.3	1.3	0.0	0.0	<0.1	7.2	73	7.5									<1			
13	TUE	256	<1.0	100	431	4	99	14	<0.1	>99.3	1.2	1.3	0.0	0.0	<0.1	7.3	74	7.8				0.10	0.8				<1			
14	WED	238	1.2	99	292	3	99	14	<0.1	>99.3	1.3	1.3	0.0	0.0	<0.1	7.3	74	7.4										<1		
15	THU	230	1.6	99	265	3	99	16	<0.1	>99.4	1.5	1.8	0.0	0.0	<0.1	7.0	74	7.1										<1		
16	FRI	226	1.7	99	315	3	99	14	<0.1	>99.3	1.4	1.5	0.0	0.0	<0.1	7.2	74	7.0										<1		
17	SAT	220	<1.0	100	472	3	99	14	<0.1	>99.3	1.1	1.1	0.0	0.0		7.4	73	6.9										<1		
18	SUN	218	1.2	99	330	<3	>99	11	<0.1	>99.1	0.8	1.0	0.0	0.0		7.5	73	6.9										<1		
19	MON	278	<1.0	100	494	3	99	14	<0.1	>99.3	0.9	1.1	0.0	0.0	<0.1	7.4	73	7.5										<1		
20	TUE	250	1.3	99	275	3	99	16	<0.1	>99.4	1.1	1.1	0.0	0.0	<0.1	7.4	74	7.1										<1		
21	WED	232	1.2	99	396	3	99	12	<0.1	>99.2	1.2	1.2	0.0	0.0	<0.1	7.3	74	7.6										<1		
22	THU	238	2.0	99	241	4	98	14	<0.1	>99.3	1.6	1.9	0.0	0.0	<0.1	7.4	72	7.2										<1		
23	FRI	216	2.1	99	282	4	99	14	<0.1	>99.3	1.7	1.9	0.0	0.0	<0.1	7.2	73	7.1										<1		
24	SAT	266	1.6	99	338	3	99	14	<0.1	>99.3	1.5	1.9	0.0	0.0		7.3	73	7.1										<1		
25	SUN	230	1.6	99	259	4	98	13	<0.1	>99.2	1.5	1.6	0.0	0.0		7.3	73	7.1										<1		
26	MON	248	1.2	100	363	3	99	13	<0.1	>99.2	<3	1.4	1.6	0.0	<0.1	7.3	72	7.1										<1		
27	TUE	216	1.4	99	253	3	99	11	<0.1	>98.1	1.4	1.4	1.5	0.0	<0.1	7.3	72	7.3										<1		
28	WED	234	1.4	99	254	3	99	17	<0.1	>99.4	1.4	1.6	0.0	0.0	<0.1	7.2	72	7.3										<1		
29	THU	136	1.1	99	308	3	99	10	<0.1	>99.0	1.2	1.4	0.0	0.0	<0.1	7.2	73	7.3										<1		
30	FRI	224	1.3	99	289	3	99	16	<0.1	>99.4	1.1	1.3	0.0	0.0	<0.1	7.3	73	7.2										<1		
31	SAT	268	1.2	100	419	<3	>99	14	<0.1	>99.3	0.9	1.0	0.0	0.0		7.3	73	7.3										<1		
MAXIMUM		278	2.1	100	512	4	99	17	<0.1	>99.4	<3	1.7	1.9	5.0	<0.1	7.5	74	7.8	145	116	554	0.10	1.6	2.3	0.05	5.5	<1			
MINIMUM		136	<1.0	>99	241	<3	98	10	<0.1	>99.0	<3	0.6	0.7	0.0	<0.1	7.0	72	6.6	145	116	554	0.10	0.8	2.3	0.05	5.5	<1			
AVERAGE		232	0.8	>100	344	<3	>99	13	<0.1	>99.2	<3	1.1	1.2			7.2	73	7.1	145	116	554	0.10	1.1	2.3	0.05	5.5				

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**DONALD C. TILLMAN WATER RECLAMATION PLANT
SUMMARY OF CHEMICAL USE**

DATE	DAY	AMMONIA				POLYMER				SODIUM HYPOCHLORITE				SODIUM BISULFITE			
		PH-1 SEC DOSE ppm	PH-2 SEC DOSE ppm	PH-1 SEC TOTAL gpd	PH-2 SEC TOTAL gpd	PH-1 AER DILUTE gpd	PH-2 AER DILUTE gpd	PH-1 FILTER DOSE ppm	PH-2 FILTER DOSE ppm	TOT NEAT USE gpd	PH-1 TOTAL gpd	PH-2 TOTAL gpd	TOTAL USE gpd	DECHLOR FLOW gpd	SPRIKE STN FLOW 7C gpd	SPRIKE STN FLOW 7D gpd	NaHS TOTI gpd
1	THU	0.8	NC	417	0	417	0	0.05	0.05	3177	3242	0	0	1189	0	0	118
2	FRI	0.8	NC	392	0	393	0	0.05	0.05	3812	3256	0	0	1158	0	1	115
3	SAT	0.8	NC	402	0	402	0	0.05	0.05	3813	3259	0	0	1130	0	0	113
4	SUN	0.8	NC	400	0	400	0	0.05	0.05	3813	3228	0	0	1084	0	0	108
5	MON	0.8	NC	400	0	400	0	0.05	0.05	3812	3237	0	0	1132	14	123	126
6	TUE	0.8	NC	389	0	389	0	0.05	0.05	3812	3229	0	0	1132	0	0	113
7	WED	0.8	NC	398	0	398	0	0.05	0.05	3177	3153	0	0	1180	84	30	129
8	THU	0.8	NC	392	0	392	0	0.05	0.05	3812	3358	0	0	1129	2	5	113
9	FRI	0.8	NC	402	0	402	0	0.05	0.05	3177	3596	0	0	1159	0	0	115
10	SAT	0.8	NC	393	0	393	0	0.05	0.05	3177	3457	0	0	1118	0	0	111
11	SUN	0.8	NC	380	0	380	0	0.05	0.05	2542	3338	0	0	1044	0	0	104
12	MON	0.8	NC	334	0	334	0	0.05	0.05	2542	2936	0	0	867	0	0	86
13	TUE	0.8	NC	316	0	316	0	0.05	0.05	2541	2659	0	0	760	0	0	76
14	WED	0.8	NC	373	0	373	0	0.05	0.05	1906	2965	0	0	864	18	0	88
15	THU	0.8	NC	371	0	371	0	0.05	0.05	1906	2981	0	0	973	0	0	97
16	FRI	0.8	NC	388	0	388	0	0.05	0.05	1906	3180	0	0	1026	9	17	105
17	SAT	0.9	NC	391	0	391	0	0.05	0.05	1271	3044	0	0	1036	0	0	103
18	SUN	0.9	NC	384	0	385	0	0.05	0.05	1906	2971	0	0	1010	0	61	107
19	MON	0.9	NC	389	0	389	0	0.05	0.05	1271	3109	0	0	1021	0	0	102
20	TUE	0.8	NC	385	0	385	0	0.05	0.05	1271	3094	0	0	1050	0	0	105
21	WED	0.8	NC	388	0	388	0	0.05	0.05	1271	3201	0	0	1038	0	0	103
22	THU	0.9	NC	418	0	418	0	0.05	0.05	635	3408	0	0	1173	0	0	117
23	FRI	0.8	NC	404	0	404	0	0.05	0.05	635	3226	0	0	1148	0	0	114
24	SAT	0.8	NC	394	0	394	0	0.05	0.05	1271	3155	0	0	1106	0	0	110
25	SUN	0.9	NC	399	0	399	0	0.05	0.05	636	3186	0	0	1225	0	0	122
26	MON	0.8	NC	407	0	407	0	0.05	0.05	635	3311	0	0	1278	0	0	127
27	TUE	0.8	NC	372	0	372	0	0.05	0.05	635	3241	0	0	1143	0	0	114
28	WED	0.9	NC	410	0	410	0	0.05	0.05	1906	3110	0	0	1156	0	0	115
29	THU	0.8	NC	389	0	389	0	0.05	0.05	1906	3174	0	0	1142	0	0	114
30	FRI	0.8	NC	386	0	386	0	0.05	0.05	2006	3328	0	0	1133	0	0	113
31	SAT	0.8	NC	378	0	378	0	0.05	0.05	2439	3187	0	0	1106	0	0	110
MAXIMUM		0.9	NC	418	0	418	0	0.05	0.05	3813	3596	0	0	1278	84	123	125
MINIMUM		0.8	NC	316	0	316	0	0.05	0.05	635	2659	0	0	760	0	0	76
TOTAL				12,040	5	12,045	0			68,620	98,818	0	0	33,708	129	240	34.0
AVERAGE		0.8	NC	388	0	389	0	0.05	0.05	2214	3188	0	0	1087	4	8	105

January 2009

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**DONALD C. TILLMAN WATER RECLAMATION PLANT
SUMMARY OF FLOWS**

PAGE 3 C

DATE	DAY	PLANT INFLUENT Q			PRI SLUDGE Q	PRI EFF Q CH-2 TO AVORS	AERATION INF		SIDESTREAM FLOWS AFTER AERATION INFLUENT FLOW				CHLOR CNTCT INF		EFFLUENT FLOWS DISCHARGING IN LA RIVER					DWP Q			
		AVG FLOW	MAX FLOW	MIN FLOW			PH-1 FLOW	PH-2 FLOW	PH-1 WAS	PH-2 WAS	PH-1 FILT BW	PH-2 FILT BW	TOT SIDESTRM BW/AFTR AERATION	PH-1 FLOW	PH-2 FLOW	PLANT EFF WEIR	BALBOA LAKE	WILDLIFE LAKE	JAPAN GARDEN		TOTAL EFF FLOW		
1	THU	2.0	43.5	53.0	0.6	5.0	37.7	0.0	2.0	0.0	0.8	0.0	0.5	0.0	34.4	0.0	8.4	12.3	5.6	3.5	29.8	2.5	
2	FRI	2.1	45.7	59.5	0.9	6.7	38.2	0.0	2.4	0.0	0.6	0.0	0.5	0.0	34.6	0.0	9.8	12.3	5.6	3.5	31.3	1.2	
3	SAT	2.1	44.7	54.6	0.9	5.9	37.9	0.0	2.2	0.0	0.6	0.0	0.6	0.0	34.5	0.0	9.9	12.3	5.6	3.5	31.4	1.2	
4	SUN	2.0	43.7	56.0	0.9	5.4	37.4	0.0	2.3	0.0	0.6	0.0	0.6	0.0	33.9	0.0	7.8	12.3	5.6	3.5	29.3	2.5	
5	MON	2.0	44.9	52.9	0.9	5.7	38.3	0.0	2.2	0.0	0.5	0.0	0.6	0.0	34.9	0.0	9.6	12.3	5.6	3.4	31.0	1.8	
6	TUE	2.2	46.0	54.3	0.9	6.2	38.9	0.0	2.3	0.0	0.5	0.0	0.7	0.0	35.3	0.0	9.8	12.2	5.6	3.4	31.1	2.0	
7	WED	2.6	46.3	55.3	0.9	7.9	37.6	0.0	2.4	0.0	0.6	0.0	0.8	0.0	33.8	0.0	11.5	9.0	5.2	3.5	29.3	2.4	
8	THU	2.1	45.9	55.5	0.8	6.4	38.6	0.0	2.3	0.0	0.6	0.0	0.7	0.0	35.1	0.0	9.5	12.3	5.4	3.8	31.1	1.8	
9	FRI	2.0	47.4	57.7	0.9	7.5	39.0	0.0	2.4	0.0	0.5	0.0	0.5	0.0	35.7	0.0	10.0	12.3	5.5	3.8	31.6	1.9	
10	SAT	1.9	43.7	51.9	0.8	5.0	37.8	0.0	2.2	0.0	0.4	0.0	0.4	0.0	34.8	0.0	9.2	12.2	5.5	3.7	30.6	2.4	
11	SUN	2.4	44.0	56.1	0.9	6.0	37.0	0.0	2.4	0.0	0.4	0.0	0.8	0.0	33.5	0.0	8.9	12.2	5.6	3.4	30.1	1.2	
12	MON	2.3	41.9	54.4	0.9	7.4	33.6	0.0	2.5	0.0	0.6	0.0	0.6	0.0	30.0	0.0	5.5	12.2	5.5	3.4	26.6	2.5	
13	TUE	2.5	41.7	51.6	0.8	9.5	31.3	0.0	2.8	0.0	0.9	0.0	0.3	0.0	27.4	0.0	1.8	12.3	5.5	3.4	23.1	2.5	
14	WED	2.0	44.7	53.2	0.8	9.4	34.5	0.0	2.6	0.0	1.0	0.0	0.4	0.0	30.5	0.0	4.3	12.3	5.5	3.4	25.6	2.5	
15	THU	2.3	45.7	56.3	0.8	8.8	36.1	0.0	2.3	0.0	0.7	0.0	0.4	0.0	32.6	0.0	7.0	12.5	5.6	3.4	28.4	2.5	
16	FRI	2.1	44.4	54.3	0.8	8.3	35.2	0.0	2.4	0.0	0.5	0.0	0.4	0.0	31.9	0.0	3.4	15.5	5.5	3.4	27.8	2.6	
17	SAT	2.2	42.7	55.1	0.8	7.6	34.4	0.0	2.5	0.0	0.6	0.0	0.3	0.0	30.7	0.0	4.0	15.4	5.5	3.2	27.3	2.3	
18	SUN	2.1	44.8	57.9	0.9	9.7	34.3	0.0	2.6	0.0	0.6	0.0	0.3	0.0	30.9	0.0	3.5	15.3	5.5	3.2	27.5	2.4	
19	MON	2.1	46.4	65.2	0.8	10.9	34.7	0.0	2.8	0.0	0.6	0.0	0.4	0.0	30.7	0.0	4.0	15.4	5.5	3.2	28.1	1.2	
20	TUE	2.0	44.7	53.6	0.8	9.0	34.9	0.0	2.3	0.0	0.5	0.0	0.3	0.0	31.7	0.0	4.2	15.4	5.5	3.2	27.5	2.4	
21	WED	1.9	44.9	50.3	0.9	9.6	34.4	0.0	2.0	0.0	0.3	0.0	0.4	0.0	31.7	0.0	4.1	15.4	5.5	3.0	27.9	2.4	
22	THU	1.7	45.0	54.8	0.9	9.7	34.4	0.0	0.6	0.0	0.1	0.0	0.3	0.0	33.4	0.0	5.8	15.5	5.5	3.0	29.8	1.2	
23	FRI	1.6	45.3	54.5	0.9	9.6	34.9	0.0	1.3	0.0	0.4	0.0	0.4	0.0	32.8	0.0	6.0	14.9	5.5	2.9	29.3	1.8	
24	SAT	1.7	45.3	59.1	0.8	10.2	34.3	0.0	1.5	0.0	0.7	0.0	0.5	0.0	31.7	0.0	4.9	14.8	5.5	2.8	28.0	1.8	
25	SUN	1.5	45.2	60.5	0.8	10.2	34.2	0.0	1.4	0.0	0.6	0.0	0.3	0.0	31.8	0.0	5.5	14.8	5.5	3.0	28.7	1.1	
26	MON	1.7	45.4	52.7	0.9	9.1	35.5	0.0	1.2	0.0	0.8	0.0	0.4	0.0	33.3	0.0	6.6	14.5	5.5	3.0	29.7	1.3	
27	TUE	1.8	45.6	53.9	0.9	9.3	35.4	0.0	1.4	0.0	0.7	0.0	0.4	0.0	33.0	0.0	6.2	14.8	5.6	3.0	29.5	1.2	
28	WED	2.2	46.0	53.7	0.9	9.5	35.6	0.0	1.6	0.0	0.8	0.0	0.4	0.0	32.8	0.0	4.6	15.1	5.5	2.8	28.1	2.4	
29	THU	2.1	46.0	52.8	0.8	9.5	35.6	0.0	1.7	0.0	0.8	0.0	0.3	0.0	32.8	0.0	4.9	15.2	5.5	2.9	28.5	1.6	
30	FRI	2.0	47.4	54.9	0.9	10.0	36.5	0.0	1.7	0.0	0.8	0.0	0.4	0.0	33.6	0.0	5.0	15.2	5.5	3.3	29.0	2.4	
31	SAT	2.2	44.9	56.2	0.8	8.9	35.3	0.0	1.6	0.0	0.7	0.0	0.3	0.0	32.6	0.0	3.9	15.1	5.5	3.5	28.1	2.5	
MAXIMUM		2.6	47.4	65.2	0.9	10.9	39.0	0.0	2.8	0.0	1.0	0.0	0.8	0.0	35.7	0.0	11.5	15.5	5.6	3.6	31.6	2.6	
MINIMUM		1.5	41.7	50.3	0.8	5.0	31.3	0.0	0.6	0.0	0.1	0.0	0.3	0.0	27.4	0.0	1.8	9.0	5.2	2.8	23.1	1.1	
TOTAL																							
AVERAGE		2.0	45.0	55.2	0.9	8.2	35.9	0.0	2.1	0.0	0.6	0.0	0.5	0.0	32.8	0.0	6.4	13.7	5.5	3.3	28.9	1.9	

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AE - Analyst Error
IF - Instrument Failure
NS - Not Sampled
NR - Not Representative
FU - Future

**DONALD C. TILLMAN WATER RECLAMATION PLANT
SUMMARY OF PRELIMINARY/PRIMARY TREATMENT**

January 2009

DATE	DAY	HEADWORKS INFLUENT					HEADWORKS										PRIMARY										COD	
		AVG Q mgd	MAX Q mgd	MIN Q mgd	EQUAL RET Q mgd	GRIT FLOW mgd	SUSP SOL mg/L	SETT SOL mg/L	BOD ₅ mg/L	DISS SULF mg/L	pH	TEMP Deg F	PRI INF Q mgd	TANKS		SLUDGE Q mgd	DET TIME hr	SOR gpd/ft ²	PEAK SOR gpd/ft ²	SUSP SOL		SETTLE SOL		BOD ₅				
														#	IS					EFF mg/L	REM EFF %	EFF mg/L	REM EFF %	EFF mg/L	REM EFF %	EFF mg/L	REM EFF %	
1	THU	43.5	53.0	32.5	3.1	2.0	232	13	300	7.4	73	43.5	11		0.8	2.2	990	1205	72	69	0.1	99.2	187	38	410			
2	FRI	45.7	59.5	26.3	2.7	2.1	252	12	459	7.5	73	45.7	11		0.9	2.1	1040	1351	92	63	0.1	99.2	194	58				
3	SAT	44.7	54.6	30.9	2.8	2.1	198	11	512	7.3	73	44.7	11		0.9	2.1	1016	1240	64	88	0.2	98.2	186	64				
4	SUN	43.7	56.0	29.0	2.8	2.0	268	13	360	7.4	73	43.7	11		0.9	2.2	993	1273	66	75	0.3	97.7	172	52	402			
5	MON	44.9	52.9	27.8	2.9	2.0	206	12	446	7.5	72	44.9	11		0.9	2.1	1019	1202	78	62	0.1	99.2	205	54	386			
6	TUE	46.0	54.3	31.9	2.8	2.2	218	13	300	7.2	72	46.0	11		0.9	2.1	1046	1233	56	74	0.2	98.5	168	44	406			
7	WED	46.3	55.3	30.6	2.8	2.6	234	13	258	7.6	73	46.3	11		0.9	2.0	1053	1258	68	71	0.3	97.7	157	39	398			
8	THU	45.9	55.5	30.1	2.7	2.1	216	12	421	7.4	73	45.9	11		0.8	2.1	1043	1262	76	65	0.1	99.2	185	56	448			
9	FRI	47.4	57.7	31.1	2.8	2.0	236	13	301	7.5	73	47.4	11		0.9	2.0	1077	1310	74	69	0.2	98.5	173	43				
10	SAT	43.7	51.9	30.8	2.8	1.9	246	14	288	7.2	73	43.7	11		0.8	2.2	992	1179	74	70	0.3	97.9	151	48				
11	SUN	44.0	56.1	26.5	2.8	2.4	216	13	442	7.3	73	44.0	11		0.9	2.2	1000	1274	64	70	0.3	97.7	205	54	408			
12	MON	41.9	54.4	29.6	2.8	2.3	240	15	363	7.7	73	41.9	11		0.9	2.3	953	1237	64	73	0.4	97.3	191	46	410			
13	TUE	41.7	51.6	30.8	2.7	2.5	256	14	431	7.6	73	41.7	11		0.8	2.3	947	1172	80	69	0.3	97.9	176	59	402			
14	WED	44.7	53.2	33.6	3.0	2.0	238	14	292	7.4	73	44.7	11		0.8	2.1	1016	1208	74	69	0.2	98.6	201	31	394			
15	THU	45.7	56.3	32.3	2.7	2.3	230	16	265	7.2	74	45.7	11		0.8	2.1	1038	1278	78	66	0.3	98.1	176	34	450			
16	FRI	44.4	54.3	32.4	2.7	2.1	226	14	315	7.4	73	44.4	11		0.8	2.1	1009	1234	70	69	0.2	98.6	178	43				
17	SAT	42.7	55.1	32.5	2.7	2.2	220	14	472	7.6	74	42.7	11		0.8	2.2	971	1252	62	72	0.3	97.9	181	62				
18	SUN	44.8	57.9	29.4	2.7	2.1	218	11	330	7.6	73	44.8	11		0.9	2.1	1018	1317	52	76	0.1	99.1	177	46				
19	MON	46.4	65.2	31.3	2.4	2.1	278	14	434	7.8	73	46.4	11		0.8	2.0	1055	1481	76	73	0.3	97.9	178	59	410			
20	TUE	44.7	53.6	32.9	2.7	2.0	250	16	275	7.6	73	44.7	11		0.8	2.1	1016	1219	78	69	0.2	98.8	188	32	400			
21	WED	44.9	50.3	33.6	3.5	1.9	232	12	396	7.6	74	44.9	11		0.9	2.1	1020	1144	72	69	0.3	97.5	157	60	382			
22	THU	45.0	54.8	33.1	3.9	1.7	238	14	241	7.8	74	45.0	11		0.9	2.1	1023	1245	76	68	0.2	98.6	177	27	392			
23	FRI	45.3	54.5	34.7	3.1	1.6	216	14	282	7.6	74	45.3	11		0.9	2.1	1030	1239	70	68	0.2	98.6	180	36				
24	SAT	45.3	59.1	31.2	2.7	1.7	266	14	338	7.5	73	45.3	11		0.8	2.1	1030	1342	70	74	0.3	97.9	167	51				
25	SUN	45.2	60.5	30.5	3.1	1.5	230	13	259	7.6	73	45.2	11		0.8	2.1	1028	1375	56	76	0.2	98.5	168	35	402			
26	MON	45.4	52.7	31.8	2.8	1.7	248	13	363	7.8	73	45.4	11		0.9	2.1	1033	1197	66	73	0.3	97.7	174	52	398			
27	TUE	45.6	53.9	32.0	2.7	1.8	216	11	253	7.7	73	45.6	11		0.9	2.1	1037	1226	78	64	0.4	96.4	201	21	428			
28	WED	46.0	53.7	32.6	2.7	2.2	234	17	254	7.7	73	46.0	11		0.9	2.1	1045	1219	76	68	0.3	98.2	169	33	388			
29	THU	46.0	52.8	31.9	2.8	2.1	136	10	308	7.6	73	46.0	11		0.8	2.1	1045	1200	68	50	0.2	98.0	169	45	356			
30	FRI	47.4	54.9	31.1	2.8	2.0	224	16	289	7.4	74	47.4	11		0.9	2.0	1077	1248	74	67	0.4	97.5	187	35				
31	SAT	44.9	56.2	32.3	2.8	2.2	268	14	419	7.5	74	44.9	11		0.8	2.1	1020	1277	70	74	0.3	97.9	174	58				
	MAXIMUM	47.4	65.2	34.7	3.9	2.6	278	17	512	7.8	74	47.4	11		0.9	2.3	1077	1481	92	76	0.4	99.2	205	64	450			
	MINIMUM	41.7	50.3	26.3	2.4	1.5	136	10	241	<0.03	7.2	72	41.7	11	0.8	2.0	947	1144	52	50	0.1	96.4	151	21	356			
	AVERAGE	45.0	56.2	31.2	2.8	2.0	232	13	344	<0.05	7.5	73	45.0	11	0.9	2.1	1022	1255	71	69	0.2	98.2	179	46	404			

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AE - Analyst Error IF - Instrument Failure NC - Not Calculable NS - Not Sampled NR - Not Representative FU - Failure

**DONALD C. TILLMAN WATER RECLAMATION PLANT
SUMMARY OF SECONDARY TREATMENT
PHASE ONE**

January 2009

DATE	DAY	PHASE ONE FLOWS						AERATION SYSTEM										FINAL CLARIFIERS					
		INF	RAS	RECYCLE	WAS	SCUM	TANKS I/S	AIR FLOW	SWING ZONES	AIR APPLICATION	CONTROL	RAS RATIO	RECYCLE RATIO	TOT DET	ANOX DET	AER DET	ORG LOAD	AER EFF	NOX METER	TANKS I/S	DET TIME	SOR	
		mgd	mgd	mgd	mgd	mgd	#	kscfm		ft ³ /gal	mg/L	%	%	hr	hr	hr	lb/d/ft ³	mg/L	mg/L	#	hr	gpd/ft ²	li
1	THU	37.7	38.0	113.2	0.77	2.0	9	33.4	OFF	1.27	864	3.5	101	300	3.3	1.0	2.1	43	7.8	4.9	21	1.8	587
2	FRI	38.2	38.8	114.6	0.60	2.4	9	33.8	OFF	1.27	830	3.6	102	300	3.2	1.0	2.1	45	7.8	5.6	21	1.8	597
3	SAT	37.9	40.5	113.7	0.58	2.2	9	34.0	OFF	1.29	87	3.5	107	300	3.2	1.0	2.0	42	7.3	5.3	21	1.7	592
4	SUN	37.4	41.4	112.3	0.58	2.3	9	33.7	OFF	1.30	967	3.6	111	300	3.2	0.9	2.0	39	7.4	5.6	21	1.7	585
5	MON	38.3	40.2	114.9	0.54	2.2	9	33.9	OFF	1.27	776	3.5	105	300	3.2	0.9	2.0	47	7.4	5.8	21	1.7	599
6	TUE	38.9	41.0	116.7	0.54	2.3	9	34.8	OFF	1.29	966	3.5	106	300	3.1	0.9	2.0	39	6.9	5.7	21	1.7	609
7	WED	37.6	39.8	112.7	0.58	2.4	9	37.6	OFF	1.44	1160	3.2	106	300	3.2	1.0	2.1	36	7.0	4.4	21	1.8	587
8	THU	38.6	41.9	116.0	0.58	2.3	9	38.3	OFF	1.43	984	3.5	109	300	3.1	0.9	2.0	43	6.9	5.4	21	1.7	604
9	FRI	39.0	41.7	117.1	0.46	2.4	9	38.1	OFF	1.41	1028	3.5	107	300	3.1	0.9	2.0	41	6.8	0.4	21	1.7	612
10	SAT	37.8	38.0	113.4	0.39	2.2	9	36.7	OFF	1.40	1189	3.5	100	300	3.3	1.0	2.1	34	7.1	5.3	21	1.8	594
11	SUN	37.0	38.0	111.1	0.37	2.4	9	37.0	OFF	1.44	894	3.5	103	300	3.3	1.0	2.1	46	7.3	5.5	21	1.8	582
12	MON	33.6	38.5	100.9	0.58	2.5	9	33.8	OFF	1.45	963	3.5	115	300	3.4	1.0	2.2	33	7.3	5.8	21	1.9	525
13	TUE	31.3	37.8	93.9	0.85	2.8	9	29.9	OFF	1.37	993	3.5	121	300	3.6	1.1	2.3	39	7.5	5.8	21	2.0	483
14	WED	36.5	36.9	108.4	1.01	2.6	9	32.0	OFF	1.39	833	3.4	107	300	3.5	1.0	2.2	42	7.5	3.1	21	1.9	531
15	THU	35.1	35.4	105.7	0.73	2.3	9	33.6	OFF	1.34	971	3.2	98	300	3.5	1.0	2.2	38	7.1	5.8	21	1.9	561
16	FRI	35.2	32.4	105.7	0.52	2.4	9	33.0	OFF	1.35	957	3.4	92	300	3.7	1.1	2.4	38	7.3	5.8	21	2.0	551
17	SAT	34.4	29.9	103.1	0.61	2.5	9	33.4	OFF	1.40	958	3.5	87	300	3.9	1.2	2.5	37	7.2	5.4	21	2.1	536
18	SUN	34.3	28.1	102.9	0.62	2.6	9	33.4	OFF	1.40	990	3.5	82	300	4.0	1.2	2.6	37	7.7	5.7	21	2.2	534
19	MON	34.7	27.8	104.1	0.58	2.8	9	34.3	OFF	1.43	1005	3.5	80	300	4.0	1.2	2.6	37	7.8	5.4	21	2.2	541
20	TUE	34.9	28.1	104.7	0.53	2.3	9	32.4	OFF	1.33	894	3.4	80	300	3.9	1.2	2.5	40	7.4	5.3	21	2.2	546
21	WED	34.4	27.6	103.2	0.31	2.0	9	32.4	OFF	1.36	1106	3.2	80	300	4.0	1.2	2.6	33	7.3	5.7	21	2.2	541
22	THU	34.4	27.7	103.2	0.08	0.6	8	33.2	OFF	1.39	986	3.2	80	300	3.6	1.1	2.3	41	7.4	5.8	21	2.2	545
23	FRI	34.9	28.3	104.7	0.45	1.3	8	32.8	OFF	1.35	949	3.5	81	300	3.5	1.0	2.2	43	7.5	6.2	21	2.2	546
24	SAT	34.3	27.6	102.9	0.68	1.5	8	31.1	OFF	1.31	1024	3.5	80	300	3.6	1.1	2.3	39	7.4	5.7	21	2.2	534
25	SUN	34.2	27.5	102.8	0.65	1.4	8	31.9	OFF	1.34	1010	3.5	80	300	3.6	1.1	2.3	39	7.7	5.9	21	2.2	533
26	MON	35.5	28.5	106.4	0.63	1.2	8	33.0	OFF	1.34	992	3.7	80	300	3.5	1.0	2.2	42	7.9	6.0	21	2.1	553
27	TUE	35.4	28.5	106.3	0.65	1.4	8	31.3	OFF	1.27	793	3.7	80	300	3.5	1.0	2.2	48	7.8	4.8	21	2.1	552
28	WED	35.6	28.6	106.8	0.81	1.6	8	31.4	OFF	1.27	945	3.4	80	300	3.4	1.0	2.2	41	7.5	6.0	21	2.1	552
29	THU	35.6	28.7	106.8	0.81	1.7	8	30.9	OFF	1.25	943	3.3	80	300	3.4	1.0	2.2	41	7.5	6.0	21	2.1	553
30	FRI	36.5	29.4	109.4	0.82	1.7	8	31.7	OFF	1.25	843	3.3	80	300	3.4	1.0	2.1	46	7.2	6.0	21	2.1	566
31	SAT	35.3	28.4	105.8	0.72	1.6	8	32.9	OFF	1.34	953	3.3	80	300	3.5	1.0	2.2	42	6.8	5.2	21	2.1	549
MAXIMUM		39.0	41.9	117.1	1.0	2.8	9	38.3		1.45	1189	3.7	121	300	4.0	1.2	2.6	48	7.9	6.2	21	2.2	612
MINIMUM		31.3	27.5	93.9	0.1	0.6	8	29.9		1.25	775	3.2	80	300	3.1	0.9	2.0	33	6.8	0.4	21	1.7	483
AVERAGE		35.9	33.7	107.8	0.6	2.1	9	33.5		1.35	956	3.5	94	300	3.5	1.0	2.2	40	7.4	5.3	21	2.0	561

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**DONALD C. TILLMAN WATER RECLAMATION PLANT
SUMMARY OF SECONDARY TREATMENT
PHASE ONE**

January 2009

DATE	DAY	PROCESS CONTROL										SUSPENDED SOLIDS										BOD ₅			NITROGEN COMPOSITES			
		SETTLING 5 MIN mfl	SETTLING 30 MIN mfl	SVI	AVG BLKT ft	BLKT VOL MG	TOTAL MCRT days	F/M BOD lb/lb	AER MASS Kib	CLAR MASS Kib	TOT MASS Kib	% MASS AER	SEC EFF TURB ntu	MLSS mg/L	RASS mg/L	INF mg/L	EFF mg/L	REM EFF %	VSS %	INF mg/L	EFF mg/L	REM EFF %	AER INF mg/L	SEC EFF mg/L	NI ₃ -N mg/L	RED %	NO ₂ -N mg/L	SEC EFF %
1	THU	880	460	136	7.2	3.4	7.1	0.25	291	274	565	52	1.6	3370	9660	72	3.5	95	187	10	95	30.4	0.5	98	0.19			
2	FRI	870	430	120	6.0	2.8	11.7	0.25	308	185	494	62	1.7	3570	7860	92	4.0	96	194	10	95	31.7	0.5	98	0.17			
3	SAT	850	450	131	6.3	3.0	10.9	0.24	296	209	506	59	1.8	3430	8420	64	3.7	94	186	8	96	29.2	0.3	99	0.16			
4	SUN	830	440	128	6.0	2.8	10.4	0.22	296	208	505	59	1.8	3430	8840	66	3.5	95	172	11	94	29.8	0.2	99	0.12			
5	MON	870	460	135	5.8	2.7	11.8	0.27	295	191	486	61	1.8	3420	8360	78	4.1	95	205	8	96	31.1	0.3	99	0.13			
6	TUE	800	400	123	6.9	3.3	11.4	0.24	281	220	500	56	1.9	3250	8100	56	4.4	92	168	8	95	28.0	0.4	99	0.09			
7	WED	820	440	116	6.4	3.0	11.9	0.18	327	216	543	60	2.0	3790	8620	68	4.1	94	157	8	95	30.3	0.3	99	0.08			
8	THU	840	420	119	6.6	3.1	11.5	0.24	304	212	515	59	2.2	3620	8180	76	4.5	94	185	11	94	30.3	0.4	99	0.07			
9	FRI	860	430	125	6.3	2.9	13.9	0.23	297	203	500	59	2.5	3440	8240	74	4.8	94	173	9	95	29.8	<0.1	>99.7	0.08			
10	SAT	890	480	141	7.6	3.6	16.0	0.20	293	249	542	54	2.5	3400	8360	74	4.5	94	151	10	93	31.5	<0.1	>99.7	0.06			
11	SUN	800	440	128	7.5	3.5	17.2	0.26	297	236	533	56	4.2	3440	8040	64	6.9	89	205	12	94	35.5	<0.1	>99.7	<0.05			
12	MON	890	530	148	7.4	3.5	12.7	0.21	310	216	528	59	3.8	3590	7440	64	7.1	88	191	11	94	29.1	<0.1	>99.7	<0.05			
13	TUE	870	500	145	6.6	3.1	7.6	0.19	298	217	515	58	2.6	3450	8320	80	6.2	92	176	10	94	30.9	<0.1	>99.7	<0.05			
14	WED	940	530	152	5.9	2.8	7.0	0.23	301	180	481	63	2.9	3490	7780	74	4.5	94	201	9	96	29.0	<0.1	>99.7	<0.05			
15	THU	840	450	136	5.0	2.4	8.9	0.23	285	153	438	66	3.4	3300	7800	78	6.2	92	176	10	94	31.3	0.4	99	0.15			
16	FRI	900	450	134	4.8	2.2	12.5	0.22	289	149	438	66	3.3	3350	7980	70	4.8	93	178	9	95	31.0	<0.1	>99.7	0.05			
17	SAT	840	430	134	4.4	2.1	10.1	0.23	277	141	419	66	2.6	3210	8200	62	4.4	93	161	6	97	25.4	<0.1	>99.6	<0.05			
18	SUN	850	420	129	4.0	1.9	9.3	0.22	281	137	418	67	2.4	3250	8720	52	4.7	91	177	7	96	29.6	<0.1	>99.7	<0.05			
19	MON	810	430	126	3.4	1.6	10.3	0.21	294	121	415	71	2.7	3410	8960	76	4.5	94	188	8	96	28.5	<0.1	>99.6	<0.05			
20	TUE	870	410	124	4.0	1.9	11.0	0.23	286	136	422	68	2.8	3310	8760	78	5.0	94	188	9	95	32.9	<0.1	>99.7	<0.05			
21	WED	720	380	112	4.7	2.2	19.2	0.19	293	158	450	65	2.9	3380	8540	72	4.8	93	157	10	94	30.7	<0.1	>99.7	<0.05			
22	THU	750	410	114	5.6	2.6	56.4	0.22	276	205	482	57	3.3	3600	9320	76	5.1	93	177	8	95	28.2	<0.1	>99.6	<0.05			
23	FRI	870	500	137	7.5	3.5	12.4	0.23	290	276	556	50	3.3	3650	9340	70	4.9	93	180	9	95	28.5	<0.1	>99.6	<0.05			
24	SAT	800	450	123	6.9	3.3	8.4	0.21	281	251	532	53	3.1	3660	9260	70	5.3	92	167	14	92	27.0	<0.1	>99.6	<0.05			
25	SUN	900	500	137	6.5	3.1	8.9	0.21	279	233	513	54	2.9	3640	9160	56	4.1	93	168	9	95	23.0	<0.1	>99.6	<0.05			
26	MON	900	510	139	6.4	3.0	8.8	0.22	281	243	524	54	3.0	3660	9660	66	4.5	93	174	12	93	27.2	<0.1	>99.6	0.05			
27	TUE	920	520	143	6.8	3.2	8.9	0.26	279	242	521	54	3.3	3640	9080	78	5.0	94	201	10	95	25.8	<0.1	>99.6	<0.05			
28	WED	850	470	132	6.7	3.1	7.1	0.23	272	236	508	54	3.2	3550	8980	76	5.0	93	169	8	95	27.7	<0.1	>99.6	0.05			
29	THU	740	400	116	6.4	3.0	7.2	0.23	265	218	483	55	2.9	3460	8640	68	4.4	94	169	10	94	32.6	<0.1	>99.7	<0.05			
30	FRI	720	380	109	5.8	2.7	6.9	0.26	289	203	471	57	2.7	3500	8980	74	4.8	94	187	9	95	28.1	<0.1	>99.6	0.06			
31	SAT	720	380	107	4.9	2.3	7.8	0.23	272	174	447	61	2.2	3550	9100	70	5.3	92	174	5	97	29.0	<0.1	>99.7	<0.07			
MAXIMUM		940	530	152	7.6	3.6	56.4	0.27	327	276	565	71	4.2	3790	9660	92	7.1	96	205	14	97	35.5	0.5	>99.7	0.19			
MINIMUM		720	380	107	3.4	1.6	6.9	0.18	265	121	415	50	1.6	3210	7440	52	3.5	89	151	5	92	23.0	<0.1	98	<0.05			
AVERAGE		839	448	129	6.0	2.8	12.1	0.23	289	203	492	59	2.7	3475	8603	71	4.8	93	179	9	95	29.5	<0.2	>99.4	<0.07			

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WISARD - DCTWRP Operations - DCT MPR

AE - Analyst Error

IF - Instrument Failure

NC - Not Calculable

NS - Not Sampled

NR - Not Representative

FU - Future

**DONALD C. TILLMAN WATER RECLAMATION PLANT
PHASE ONE Nden SUMMARY - AERATOR #3**

January 2009

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AERATION TANK #3 ANOXIC ZONES											AERATION TANK #3 AERATED ZONES														
		ZONE 2 (BEG)					ZONE 4 (END)					ZONE 6B (MID)					ZONE 6C (END)								
DATE	DAY	RECYCL RATIO %	AVG ORP mV	MAX ORP mV	MIN ORP mV	NO ₂ -N mg/L	NO ₃ -N mg/L	NO ₂ -N mg/L	NO ₃ -N mg/L	NO _x mg/l	MAX MTR NO _x mg/l	MIN MTR NO _x mg/l	AVG D.O. mg/L	NH ₃ -N mg/L	NO ₂ -N mg/L	NO ₃ -N mg/L	NH ₃ -N mg/L	NO ₂ -N mg/L	NO ₃ -N mg/L	ALK mg/L	pH	AVG ORP mg/l	MAX ORP mg/l	MI OF ml	
1	THU		-150	-128	-178	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	120	139	9
2	FRI		-136	-110	-173	NS	NS	NS	NS				3.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	137	166	10
3	SAT		-142	-119	-181	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	147	168	11
4	SUN		-139	-115	-183	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	163	186	12
5	MON		-133	-48	-188	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	146	204	9
6	TUE		-140	-122	-168	NS	NS	NS	NS				3.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	145	174	9
7	WED		-158	-130	-199	NS	NS	NS	NS				2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	129	191	10
8	THU		-141	-124	-168	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	170	197	12
9	FRI		-139	-112	-178	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	198	213	10
10	SAT		-137	-115	-157	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	209	213	10
11	SUN		-136	-106	-166	NS	NS	NS	NS				3.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	213	213	20
12	MON		-141	-43	-169	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	148	213	10
13	TUE		-133	-106	-159	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	119	123	10
14	WED		-137	-121	-154	NS	NS	NS	NS				3.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	110	124	8
15	THU		-145	-125	-159	NS	NS	NS	NS				3.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	98	118	6
16	FRI		-140	-111	-169	NS	NS	NS	NS				3.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	113	123	7
17	SAT		-140	-114	-171	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	117	130	7
18	SUN		-131	-102	-168	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	126	141	8
19	MON		-131	-103	-165	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	133	153	8
20	TUE		-135	-44	-169	NS	NS	NS	NS				3.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	130	155	7
21	WED		-141	-120	-161	NS	NS	NS	NS				3.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	150	179	9
22	THU		-145	-129	-165	NS	NS	NS	NS				3.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	174	213	9
23	FRI		-135	-123	-149	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	199	213	10
24	SAT		-135	-116	-150	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	200	213	10
25	SUN		-133	-115	-161	NS	NS	NS	NS				3.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	206	213	10
26	MON		-126	-105	-165	NS	NS	NS	NS				3.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	206	213	10
27	TUE		-87	131	-139	NS	NS	NS	NS				3.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	213	213	20
28	WED		-99	-80	-114	NS	NS	NS	NS				3.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	213	213	20
29	THU		-96	-82	-108	NS	NS	NS	NS				3.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	213	213	20
30	FRI		-98	-81	-111	NS	NS	NS	NS				3.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	209	213	10
31	SAT		-106	-74	-130	NS	NS	NS	NS				3.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	206	213	10
	MAXIMUM		-87	131	-106	NS	NS	NS	NS				3.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	213	213	20
	MINIMUM		-158	-130	-199	NS	NS	NS	NS				2.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	98	118	10
	AVERAGE		-132	-97	-160	NS	NS	NS	NS				3.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	163	182	10

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 WISARD - DCTWRP Operations - DCT MPR
 AE - Analyst Error
 IF - Instrument Failure
 NC - Not Calculable
 FU - Future
 NS - Not Sampled

**DONALD C. TILLMAN WATER RECLAMATION PLANT
PHASE ONE Nden SUMMARY - AERATOR #8**

January 2009

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DATE	DAY	AERATION TANK #8 ANOXIC ZONES															AERATION TANK #8 AERATED ZONES														
		ZONE 2 (BEG)					ZONE 4 (END)					ZONE 6B (MID)					ZONE 6C (END)														
		RECYCLE RATIO %	AVG ORP mV	MAX ORP mV	MIN ORP mV	NO ₃ -N mg/L	NO ₂ -N mg/L	NO ₃ -N mg/L	NO ₂ -N mg/L	NO ₃ -N mg/L	NO ₂ -N mg/L	AVG D.O. mg/L	MAX ORP mV	MIN ORP mV	NH ₃ -N mg/L	NO ₂ -N mg/L	NO ₃ -N mg/L	NH ₃ -N mg/L	NO ₂ -N mg/L	NO ₃ -N mg/L	ALK mg/L	pH									
1	THU		-96	-86	-107	NS	NS	NS	NS	NS	NS	3.5				NS	NS	NS	NS	NS	NS	NS									
2	FRI		-86	-72	-108	0.20	2.0	0.08	0.6	0.6	3.5				0.2	0.12	5.4	<0.1	0.09	5.3	186	6.7									
3	SAT		-87	-73	-101	NS	NS	NS	NS	NS	3.5				NS	NS	NS	NS	NS	NS	NS	NS									
4	SUN		-85	-70	-102	NS	NS	NS	NS	NS	3.5				NS	NS	NS	NS	NS	NS	NS	NS									
5	MON		-81	-9	-99	0.10	1.6	0.08	0.7	3.5				0.6	0.17	4.9	0.4	0.12	4.1	158	6.6										
6	TUE		-88	-59	-114	0.06	0.7	<0.05	0.2	3.5				0.2	0.06	5.5	0.4	0.13	5.0	171	6.5										
7	WED		-85	-60	-133	0.05	1.2	<0.05	0.3	3.5				<0.1	<0.05	3.4	<0.1	<0.05	3.4	172	6.7										
8	THU		-83	-54	-102	<0.05	0.6	<0.05	0.4	3.5				0.3	<0.05	3.6	0.1	<0.05	3.4	173	6.7										
9	FRI		-86	-57	-116	<0.05	0.2	<0.05	<0.1	3.5				0.2	<0.05	3.7	0.6	<0.05	2.7	178	6.6										
10	SAT		-86	-65	-103	NS	NS	NS	NS	NS	3.5			NS	NS	NS	NS	NS	NS	NS	NS	NS									
11	SUN		-88	-64	-109	NS	NS	NS	NS	NS	3.5			NS	NS	NS	NS	NS	NS	NS	NS	NS									
12	MON		-97	-31	-111	0.12	1.4	<0.05	0.4	3.5				0.4	<0.05	5.3	0.3	<0.05	5.8	176	6.8										
13	TUE		-88	-54	-115	0.05	0.9	<0.05	0.3	3.5				0.6	<0.05	5.8	0.4	<0.05	5.2	174	6.8										
14	WED		-91	-74	-106	<0.05	1.1	<0.05	0.4	3.4				<0.1	<0.05	5.7	<0.1	<0.05	5.4	122	6.6										
15	THU		-87	-80	-110	<0.05	0.3	0.08	0.6	3.2				<0.1	<0.05	3.5	<0.1	<0.05	3.3	152	6.6										
16	FRI		-88	-59	-110	0.12	1.0	<0.05	0.3	3.4				<0.1	<0.05	6.4	<0.1	<0.05	5.9	124	6.6										
17	SAT		-80	-41	-111	NS	NS	NS	NS	NS	3.5			NS	NS	NS	NS	NS	NS	NS	NS	NS									
18	SUN		-70	-32	-94	NS	NS	NS	NS	NS	3.5			NS	NS	NS	NS	NS	NS	NS	NS	NS									
19	MON		-72	-36	-103	NS	NS	NS	NS	NS	3.5			NS	NS	NS	NS	NS	NS	NS	NS	NS									
20	TUE		-72	-15	-104	<0.05	0.6	<0.05	0.6	3.4				<0.1	<0.05	6.4	<0.1	<0.05	6.0	140	6.6										
21	WED		-77	-50	-109	0.06	1.3	<0.05	0.6	3.2				<0.1	<0.05	5.2	0.4	<0.05	5.0	166	6.8										
22	THU		-83	-59	-104	<0.05	0.9	<0.05	0.5	3.2				0.4	<0.05	5.6	0.2	<0.05	5.2	168	6.8										
23	FRI		-73	-53	-94	<0.05	0.4	<0.05	0.6	3.5				1.2	<0.05	2.6	<0.1	<0.05	3.4	188	6.7										
24	SAT		-74	-44	-92	NS	NS	NS	NS	NS	3.5			NS	NS	NS	NS	NS	NS	NS	NS	NS									
25	SUN		-72	-44	-105	NS	NS	NS	NS	NS	3.5			NS	NS	NS	NS	NS	NS	NS	NS	NS									
26	MON		-64	-30	-111	0.05	1.9	0.07	1.3	3.7				<0.1	<0.05	6.8	<0.1	<0.05	6.5	170	6.8										
27	TUE		-22	155	-95	<0.05	0.4	<0.05	0.4	3.7				<0.1	<0.05	4.2	<0.1	<0.05	3.8	150	6.6										
28	WED		-46	-18	-74	0.06	1.3	<0.05	0.7	3.4				<0.1	<0.05	5.9	<0.1	<0.05	5.6	156	6.8										
29	THU		-52	-22	-73	<0.05	0.3	<0.05	0.3	3.3				<0.1	<0.05	4.2	<0.1	<0.05	3.9	164	6.6										
30	FRI		-52	-25	-70	<0.05	0.6	<0.05	0.3	3.3				<0.1	<0.05	5.0	<0.1	<0.05	4.5	171	6.6										
31	SAT		-59	-40	-80	NS	NS	NS	NS	NS	3.3			NS	NS	NS	NS	NS	NS	NS	NS	NS									
	MAXIMUM		-22	155	-70	0.20	2.0	0.08	1.3	3.7				1.2	0.17	6.8	0.6	0.13	6.5	188	6.8										
	MINIMUM		-97	-86	-133	<0.05	0.2	<0.05	<0.1	3.2				<0.1	<0.05	2.6	<0.1	<0.05	2.7	122	6.5										
	AVERAGE		-77	-43	-102	<0.07	0.9	<0.06	<0.5	3.5				<0.3	<0.06	5.0	<0.2	<0.06	4.7	163	6.7										

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WISARD - DCTWRP Operations - DCT MPR

AE - Analyst Error IF - Instrument Failure NC - Not Calculable NR - Not Representative FU - Future NS - Not Sampled

DONALD C. TILLMAN WATER RECLAMATION PLANT
SUMMARY OF SECONDARY TREATMENT
PHASE TWO

January 2009

DATE	DAY	PHASE TWO FLOWS				AERATION SYSTEM										FINAL CLARIFIERS					
		INF mgd	RAS mgd	RECYCLE mgd	WAS mgd	SCUM mgd	TANKS I/S #	AIR FLOW kscfm	SWING ZONES	AIR APPLICATION ft ² /gal	CONTROL AVG D.O. mg/L	RAS RATIO %	RECYCLE RATIO %	TOT DET TIME hr	ANOX DET TIME hr	AER DET TIME hr	ORG LOAD lb/d/ft ³	TANKS I/S #	DET TIME hr	SOR	S
1	THU	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
2	FRI	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
3	SAT	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
4	SUN	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
5	MON	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
6	TUE	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
7	WED	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
8	THU	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
9	FRI	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
10	SAT	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
11	SUN	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
12	MON	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
13	TUE	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
14	WED	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
15	THU	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
16	FRI	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
17	SAT	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
18	SUN	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
19	MON	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
20	TUE	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
21	WED	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
22	THU	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
23	FRI	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
24	SAT	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
25	SUN	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
26	MON	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
27	TUE	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
28	WED	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
29	THU	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
30	FRI	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
31	SAT	0.0	0.0	0.0	0.0	0.0	0	0.0	ON	NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
MAXIMUM		0.0	0.0	0.0	0.0	0.0	0	0.0		NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
MINIMUM		0.0	0.0	0.0	0.0	0.0	0	0.0		NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑
AVERAGE		0.0	0.0	0.0	0.0	0.0	0	0.0		NC	NS	NC	NC	NC	NC	NC	0	0	NC	NC	↑

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WISARD - DCTWRP Operations - DCT MPR

**DONALD C. TILLMAN WATER RECLAMATION PLANT
SUMMARY OF SECONDARY TREATMENT
PHASE TWO**

January 2009

DATE	DAY	PROCESS CONTROL						SUSPENDED SOLIDS						BOD ₅					NITROGEN					
		SETTLING		SVI	AVG BLKT ft	TOTAL MCRT days	F/M BOD lb/lb	SEC EFF TURB ntu	MLSS mg/L	RASS mg/L	INF mg/L	EFF mg/L	REM EFF %	VSS %	INF mg/L	EFF mg/L	REM EFF %	NH ₃		NITROGEN				
		5 MIN m/l	30 MIN m/l															AER INF mg/L	SEC EFF mg/L	RED %	NO ₂ mg/L	NO ₃ mg/L		
1	THU	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
2	FRI	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
3	SAT	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
4	SUN	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
5	MON	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
6	TUE	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
7	WED	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
8	THU	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
9	FRI	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
10	SAT	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
11	SUN	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
12	MON	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
13	TUE	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
14	WED	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
15	THU	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
16	FRI	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
17	SAT	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
18	SUN	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
19	MON	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
20	TUE	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
21	WED	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
22	THU	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
23	FRI	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
24	SAT	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
25	SUN	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
26	MON	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
27	TUE	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
28	WED	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
29	THU	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
30	FRI	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
31	SAT	NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
MAXIMUM		NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
MINIMUM		NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			
AVERAGE		NS	NS	NC	NS	NC	NS	NS	NS	NS	NS	NC		NS	NS	NC	NS	NS	NS	NC	NS			

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WISARD - DCTWRP Operations - DCT MPR

AE - Analyst Error IF - Instrument Failure NC - Not Calculable NS - Not Sampled NR - Not Representative FU - Future

**DONALD C. TILLMAN WATER RECLAMATION PLANT
SUMMARY OF TERTIARY TREATMENT**

January 2009

DATE	DAY	PHASE ONE FILTRATION										PHASE TWO FILTRATION										
		SAND FILTERS					CLOTH FILTERS					SAND FILTERS					CLOTH FILTERS					
		FILTER #	INF FLOW mgd	FLOW RATE gpm/ft ²	FILTER I/S #	AVG EFF TURBID ntu	BKWSH FLOW mgd	SS mg/L	BOD ₅ mg/L	TURBIDITY ntu	REMEFF %	FILTER #	INF FLOW mgd	FLOW RATE gpm/ft ²	FILTER I/S #	EFF TURBID ntu	BKWSH FLOW mgd	SS mg/L	BOD ₅ mg/L	TURBIDITY ntu	EFF RE	
1	THU	6	17.5	1.2	5	17.4	3.8	0.9	0.5	3.5	10	1.6	0.8	50	0	0.0	NC	0	NC	NS	NS	NS
2	FRI	6	17.7	1.2	5	17.4	3.8	0.9	0.5	4.0	10	1.7	0.8	51	0	0.0	NC	0	NC	NS	NS	NS
3	SAT	6	17.6	1.2	5	17.5	3.8	0.9	0.6	3.7	8	1.8	0.8	53	0	0.0	NC	0	NC	NS	NS	NS
4	SUN	6	17.1	1.1	5	17.4	3.7	0.8	0.6	3.5	11	1.8	0.8	57	0	0.0	NC	0	NC	NS	NS	NS
5	MON	6	18.1	1.2	5	17.4	3.8	0.8	0.6	4.1	8	1.8	0.7	58	0	0.0	NC	0	NC	NS	NS	NS
6	TUE	6	18.6	1.2	5	17.4	3.7	0.9	0.7	4.4	8	1.9	0.8	59	0	0.0	NC	0	NC	NS	NS	NS
7	WED	6	17.2	1.1	5	17.4	3.8	1.0	0.8	4.1	8	2.0	0.9	55	0	0.0	NC	0	NC	NS	NS	NS
8	THU	6	18.3	1.2	5	17.4	3.8	1.0	0.7	4.5	11	2.2	1.1	50	0	0.0	NC	0	NC	NS	NS	NS
9	FRI	6	18.6	1.2	5	17.5	3.8	1.1	0.5	4.8	9	2.5	1.4	44	0	0.0	NC	0	NC	NS	NS	NS
10	SAT	6	17.7	1.2	5	17.5	3.8	1.2	0.4	4.5	10	2.5	1.5	40	0	0.0	NC	0	NC	NS	NS	NS
11	SUN	6	16.7	1.1	5	17.5	3.8	1.4	0.8	6.9	12	4.2	1.6	62	0	0.0	NC	0	NC	NS	NS	NS
12	MON	6	15.3	1.0	5	15.3	3.3	1.5	0.6	7.1	11	3.8	1.7	55	0	0.0	NC	0	NC	NS	NS	NS
13	TUE	6	15.2	1.0	5	12.5	2.7	1.6	0.3	6.2	10	2.6	1.6	38	0	0.0	NC	0	NC	NS	NS	NS
14	WED	6	16.5	1.1	5	14.4	3.1	1.6	0.4	4.5	9	2.9	1.7	40	0	0.0	NC	0	NC	NS	NS	NS
15	THU	6	16.4	1.1	5	16.6	3.6	1.6	0.4	6.2	10	3.4	2.0	40	0	0.0	NC	0	NC	NS	NS	NS
16	FRI	6	14.0	0.9	5	18.2	3.9	1.5	0.4	4.8	9	3.3	1.9	43	0	0.0	NC	0	NC	NS	NS	NS
17	SAT	6	15.3	1.0	5	16.0	3.8	1.5	0.3	4.4	6	2.6	1.4	45	0	0.0	NC	0	NC	NS	NS	NS
18	SUN	6	15.2	1.0	4	15.8	4.3	1.3	0.3	4.7	7	2.4	1.1	53	0	0.0	NC	0	NC	NS	NS	NS
19	MON	6	15.4	1.0	4	15.9	4.3	1.3	0.4	4.5	8	2.7	1.3	50	0	0.0	NC	0	NC	NS	NS	NS
20	TUE	6	15.4	1.0	4	16.7	4.0	1.2	0.3	5.0	9	2.8	1.6	44	0	0.0	NC	0	NC	NS	NS	NS
21	WED	6	14.3	0.9	5	17.7	4.1	1.3	0.4	4.8	10	2.9	1.7	41	0	0.0	NC	0	NC	NS	NS	NS
22	THU	6	15.4	1.0	5	18.4	4.3	1.4	0.3	5.1	8	3.3	2.2	35	0	0.0	NC	0	NC	NS	NS	NS
23	FRI	6	13.2	0.9	5	19.9	4.3	1.6	0.4	4.9	9	3.3	2.3	30	0	0.0	NC	0	NC	NS	NS	NS
24	SAT	6	12.2	0.8	5	19.9	4.3	1.7	0.5	5.3	14	3.1	2.2	31	0	0.0	NC	0	NC	NS	NS	NS
25	SUN	6	12.2	0.8	5	19.9	4.3	1.7	0.3	4.1	9	2.9	1.9	33	0	0.0	NC	0	NC	NS	NS	NS
26	MON	6	13.7	0.9	5	20.0	4.3	1.7	0.4	4.5	12	3.0	1.9	38	0	0.0	NC	0	NC	NS	NS	NS
27	TUE	6	14.7	1.0	5	18.6	4.0	1.8	0.4	5.0	10	3.3	1.9	43	0	0.0	NC	0	NC	NS	NS	NS
28	WED	6	15.5	1.0	5	17.6	3.8	1.8	0.4	5.0	8	3.2	1.9	41	0	0.0	NC	0	NC	NS	NS	NS
29	THU	6	15.5	1.0	5	17.6	3.8	1.7	0.3	4.4	10	2.9	1.6	43	0	0.0	NC	0	NC	NS	NS	NS
30	FRI	6	16.4	1.1	5	17.6	3.8	1.5	0.4	4.8	9	2.7	1.4	46	0	0.0	NC	0	NC	NS	NS	NS
31	SAT	6	15.4	1.0	5	17.6	3.8	1.4	0.3	5.3	5	2.2	1.1	49	0	0.0	NC	0	NC	NS	NS	NS
MAXIMUM		6	18.6	1.2	5	20.0	4.3	1.8	0.8	7.1	14	4.2	2.3	62	0.0	0.0	NC	0.0	NC	NS	NS	NS
MINIMUM		6	12.2	0.8	4	12.5	2.7	0.8	0.3	3.5	5	1.6	0.7	30	0.0	0.0	NC	0.0	NC	NS	NS	NS
AVERAGE		6	15.9	1.0	5	17.4	3.8	1.3	0.5	4.8	9	2.7	1.5	46	0.0	0.0	NC	0.0	NC	NS	NS	NS

**DONALD C. TILLMAN WATER RECLAMATION PLANT
SUMMARY OF CHLORINATION PROCESS**

January 2009

DATE	DAY	PHASE ONE											PHASE TWO															
		CCT FLOW mgd	TANKS I/S #	DET TIME hr	PRE FILTER gpd	POST FILTER gpd	RAS gpd	TOTAL PH-ONE gpd	AVG DOSE mg/L	DEMAND mg/L	CCT INF mg/L	CCT EFF mg/l	CONC TIME (T) MIN Minutes	CONC CONTACT DAY-MIN Mg-Min/L	CCT FLOW mgd	TANKS I/S #	DET TIME hr	PRE FILTER gpd	POST FILTER gpd	RAS gpd	TOTAL PH-TWO gpd	AVG DOSE mg/L	DEMAND mg/L	CCT INF mg/L	CCT EFF mg/l	CONC TIME (T) MIN Minutes	CONC CONTACT DAY-MIN Mg-Min/L	
1	THU	34.4	2	2.6	991	2251	0	3242	11.8	5.5	6.9	6.3	101	622	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
2	FRI	34.6	2	2.6	997	2259	0	3256	11.8	5.7	6.8	6.0	100	603	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
3	SAT	34.5	2	2.6	991	2269	0	3259	11.8	5.8	6.8	6.0	101	613	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
4	SUN	33.9	2	2.6	981	2247	0	3228	11.9	5.9	6.8	6.0	103	595	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
5	MON	34.9	2	2.6	1013	2225	0	3237	11.6	5.6	6.7	6.0	101	552	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
6	TUE	35.3	2	2.5	1019	2210	0	3229	11.4	5.5	6.7	6.0	101	488	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
7	WED	33.8	2	2.7	969	2183	0	3153	11.7	5.6	6.8	6.0	103	487	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
8	THU	35.1	2	2.6	1022	2336	0	3358	12.0	6.2	6.8	5.8	100	591	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
9	FRI	35.7	2	2.5	1013	2583	0	3596	12.6	6.8	6.9	5.8	99	551	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
10	SAT	34.8	2	2.6	998	2460	0	3457	12.4	6.6	6.9	5.9	101	611	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
11	SUN	33.5	2	2.7	969	2369	0	3338	12.5	6.9	6.7	5.5	102	509	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
12	MON	30.0	2	3.0	864	2072	0	2936	12.2	6.9	6.8	5.4	101	593	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
13	TUE	27.4	2	3.3	781	1877	0	2659	12.2	6.9	6.7	5.2	126	608	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
14	WED	30.5	2	2.9	872	2093	0	2985	12.2	6.9	6.8	5.2	118	519	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
15	THU	32.6	2	2.7	936	2045	0	2981	11.4	6.0	6.8	5.4	100	565	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
16	FRI	31.9	2	2.8	924	2256	0	3180	12.5	6.6	7.4	5.8	112	574	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
17	SAT	30.9	2	2.9	890	2154	0	3044	12.3	6.2	7.5	6.1	115	711	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
18	SUN	30.7	2	2.9	876	2095	0	2971	12.1	6.2	7.3	5.9	116	708	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
19	MON	30.9	2	2.9	887	2221	0	3109	12.6	6.6	7.3	6.0	113	715	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
20	TUE	31.7	2	2.8	902	2192	0	3094	12.2	6.2	7.2	6.0	115	677	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
21	WED	31.7	2	2.8	901	2299	0	3201	12.6	6.6	7.3	6.1	109	670	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
22	THU	33.4	2	2.7	953	2455	0	3408	12.7	6.5	7.5	6.3	105	854	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
23	FRI	32.8	2	2.7	938	2288	0	3226	12.3	6.0	7.5	6.4	108	728	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
24	SAT	31.7	2	2.8	900	2255	0	3155	12.5	6.1	7.5	6.4	113	723	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
25	SUN	31.8	2	2.8	916	2270	0	3186	12.5	6.2	7.5	6.3	112	718	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
26	MON	33.3	2	2.7	953	2358	0	3311	12.4	6.2	7.5	6.2	107	674	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
27	TUE	33.0	2	2.7	946	2296	0	3241	12.3	6.4	7.3	5.9	108	581	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
28	WED	32.8	2	2.7	927	2183	0	3110	11.9	5.4	7.5	6.4	110	632	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
29	THU	32.8	2	2.7	927	2247	0	3174	12.1	5.8	7.4	6.3	110	657	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
30	FRI	33.6	2	2.7	987	2361	0	3328	12.4	6.2	7.5	6.2	105	723	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
31	SAT	32.6	2	2.7	837	2350	0	3187	12.2	6.1	7.4	6.1	107	649	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
MAXIMUM		35.7	2	3.3	1022	2583	0	3596	12.7	6.9	7.5	6.4	126	728	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
MINIMUM		27.4	2	2.5	781	1877	0	2659	11.4	5.4	6.7	5.2	99	487	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		
AVERAGE		32.8	2	2.7	937	2250	0	3188	12.2	6.2	7.1	6.0	107	621	0.0	0	NC	0	0	0	0	0	NC	NC	NS	NS		

AE - Analyst Error

IF - Instrument Failure

NC - Not Calculable

NS - Not Sampled

NR - Not Representative

FU - Future

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**DONALD C. TILLMAN WATER RECLAMATION PLANT
SUMMARY OF Nden PROCESS AND PHOSPHORUS REMOVAL**

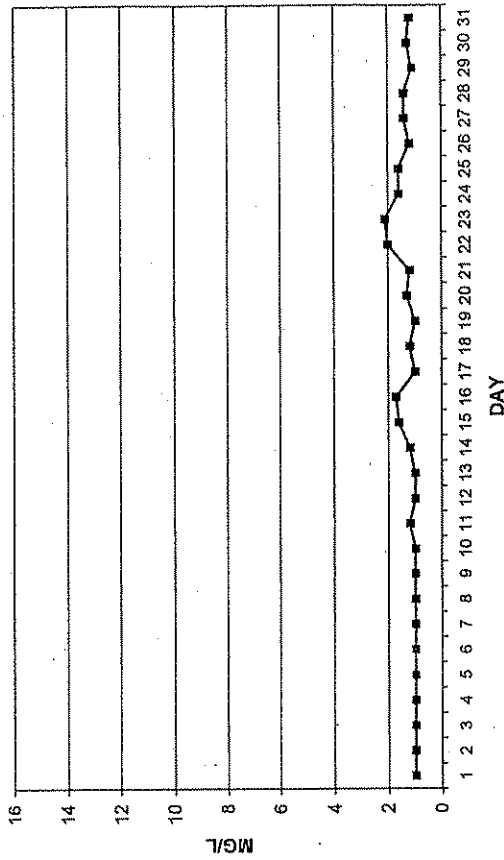
January 2009

DATE	DAY	NITROGEN PROFILES (COMPOSITE PROCESS CONTROL SAMPLES)														PHOSPHORUS PROFILES									
		PH-1 SEC		PH-1 SEC		PH-2 SEC		PH-2 SEC		PH-2 SEC		PH-2 SEC		PH-1 SEC		PH-1 SEC		PH-2 SEC		PH-2 SEC					
		PRI EFF NH ₃ -N mg/L	EFF NH ₃ -N mg/L	PH-1 SEC EFF NO ₂ -N mg/L	PH-1 SEC EFF NO ₃ -N mg/L	PH-2 SEC EFF NH ₃ -N mg/L	PH-2 SEC EFF NO ₂ -N mg/L	PH-2 SEC EFF NO ₃ -N mg/L	PH-2 SEC EFF NO ₂ -N mg/L	PH-2 SEC EFF NO ₃ -N mg/L	PLANT EFF NH ₃ -N mg/L	PLANT EFF NO ₂ -N mg/L	PLANT EFF NO ₃ -N mg/L	PRI EFF TOT P mg/L	PRI EFF DSLVD P mg/L	PH-1 SEC TOT P mg/L	PH-1 SEC DSLVD P mg/L	PH-2 SEC TOT P mg/L	PH-2 SEC DSLVD P mg/L	PLANT EFF TOT P mg/L	PLANT EFF DSLVD P mg/L				
1	THU	30.4	0.5	0.19	5.7	FU	FU	FU	FU	1.6	0.07	5.9													
2	FRI	31.7	0.5	0.17	6.3	FU	FU	FU	FU	1.4	0.09	6.6													
3	SAT	29.2	0.3	0.16	5.4	FU	FU	FU	FU	1.2	0.06	5.9													
4	SUN	29.8	0.2	0.12	5.4	FU	FU	FU	FU	1.0	<0.05	5.8													
5	MON	31.1	0.3	0.13	5.5	FU	FU	FU	FU	1.0	<0.05	5.9													
6	TUE	28.0	0.4	0.09	5.2	FU	FU	FU	FU	1.1	0.05	5.5													
7	WED	30.3	0.3	0.08	5.2	FU	FU	FU	FU	1.1	<0.05	5.4	4.8	3.1	<0.1	0.16	<0.1			0.15	<				
8	THU	30.3	0.4	0.07	5.1	FU	FU	FU	FU	1.0	<0.05	5.5													
9	FRI	29.8	<0.1	0.06	5.0	FU	FU	FU	FU	1.0	<0.05	5.0													
10	SAT	31.5	<0.1	0.06	5.3	FU	FU	FU	FU	1.1	<0.05	5.6													
11	SUN	35.5	<0.1	0.05	4.9	FU	FU	FU	FU	1.0	<0.05	5.2													
12	MON	29.1	<0.1	<0.05	4.5	FU	FU	FU	FU	1.0	<0.05	4.7													
13	TUE	30.9	<0.1	<0.05	5.8	FU	FU	FU	FU	0.9	<0.05	5.6													
14	WED	29.0	<0.1	<0.05	5.8	FU	FU	FU	FU	0.8	<0.05	6.1	7.8	3.4	0.22	<0.1				0.20	<				
15	THU	31.3	0.4	0.15	5.5	FU	FU	FU	FU	1.3	0.05	5.8													
16	FRI	31.0	<0.1	0.05	5.8	FU	FU	FU	FU	0.8	<0.05	5.9													
17	SAT	25.4	<0.1	<0.05	5.4	FU	FU	FU	FU	1.1	<0.05	5.8													
18	SUN	29.6	<0.1	<0.05	5.8	FU	FU	FU	FU	1.1	<0.05	6.2													
19	MON	28.5	<0.1	<0.05	6.2	FU	FU	FU	FU	1.2	<0.05	6.6													
20	TUE	32.9	<0.1	<0.05	5.5	FU	FU	FU	FU	1.1	<0.05	5.9													
21	WED	30.7	<0.1	<0.05	5.6	FU	FU	FU	FU	1.1	<0.05	6.1	5.4	3.4	0.27	<0.1				0.18	<				
22	THU	28.2	<0.1	<0.05	5.4	FU	FU	FU	FU	1.2	<0.05	5.6													
23	FRI	28.5	<0.1	<0.05	5.6	FU	FU	FU	FU	1.0	<0.05	5.9													
24	SAT	27.0	<0.1	<0.05	5.6	FU	FU	FU	FU	1.1	<0.05	6.0													
25	SUN	23.0	<0.1	<0.05	6.0	FU	FU	FU	FU	1.1	<0.05	6.1													
26	MON	27.2	<0.1	0.05	6.0	FU	FU	FU	FU	1.2	<0.05	6.2													
27	TUE	25.8	<0.1	<0.05	6.4	FU	FU	FU	FU	0.9	<0.05	6.1													
28	WED	27.7	<0.1	0.05	6.0	FU	FU	FU	FU	1.3	<0.05	6.2	5.3	3.4	0.23	<0.1				0.21	<				
29	THU	32.6	<0.1	<0.05	6.1	FU	FU	FU	FU	1.1	<0.05	6.2													
30	FRI	28.1	<0.1	0.06	6.0	FU	FU	FU	FU	1.1	<0.05	6.1													
31	SAT	29.0	<0.1	0.07	5.4	FU	FU	FU	FU	1.0	<0.05	6.1													
MAXIMUM		35.5	0.5	0.19	6.4	FU	FU	FU	FU	1.6	0.09	6.6	7.8	3.4	0.27	<0.1				0.21	<				
MINIMUM		23.0	<0.1	<0.05	4.5	FU	FU	FU	FU	0.8	<0.05	4.7	4.8	3.1	0.16	<0.1				0.15	<				
AVERAGE		29.5	<0.2	<0.07	5.6	FU	FU	FU	FU	1.1	<0.05	5.9	5.8	3.3	0.22	<0.1				0.19	<				

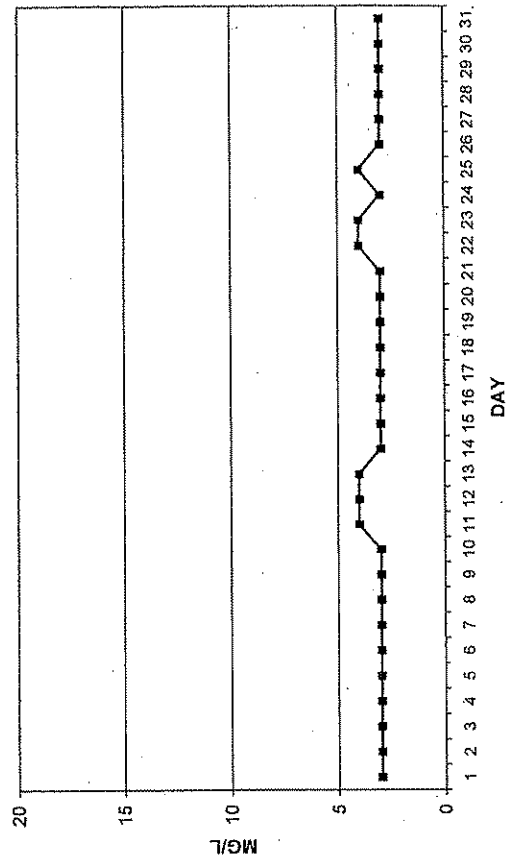
Generated by WMB at 02/09/2009 12:40:30 PM using the Production Database and WISARD V2.0
WISARD - DCTWRP Operations - DCT MPR

AE - Analyst Error NS - Not Sampled NR - Not Representative FU - Future

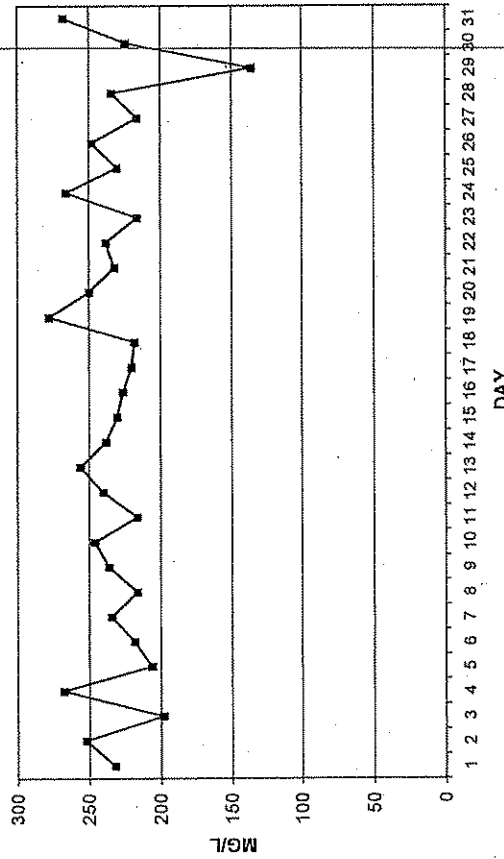
DONALD C. TILLMAN WATER RECLAMATION PLANT
EFFLUENT SUSPENDED SOLIDS
January 2009



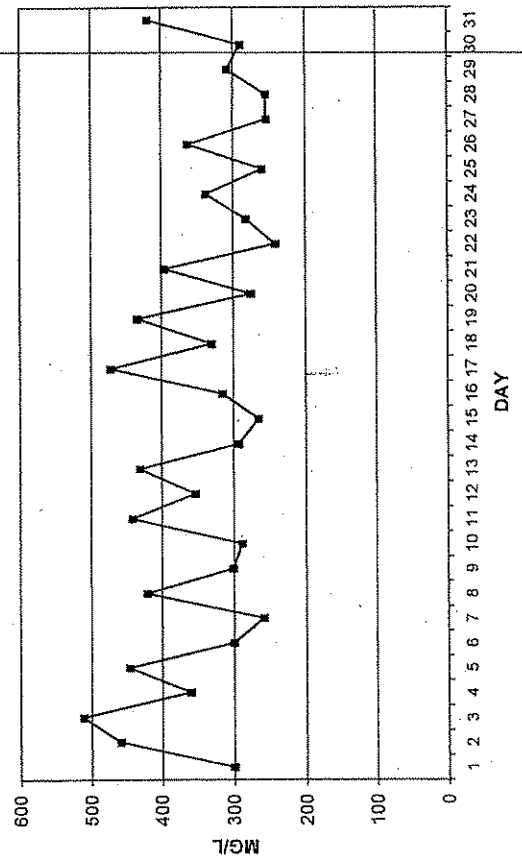
DONALD C. TILLMAN WATER RECLAMATION PLANT
EFFLUENT BOD₅
January 2009



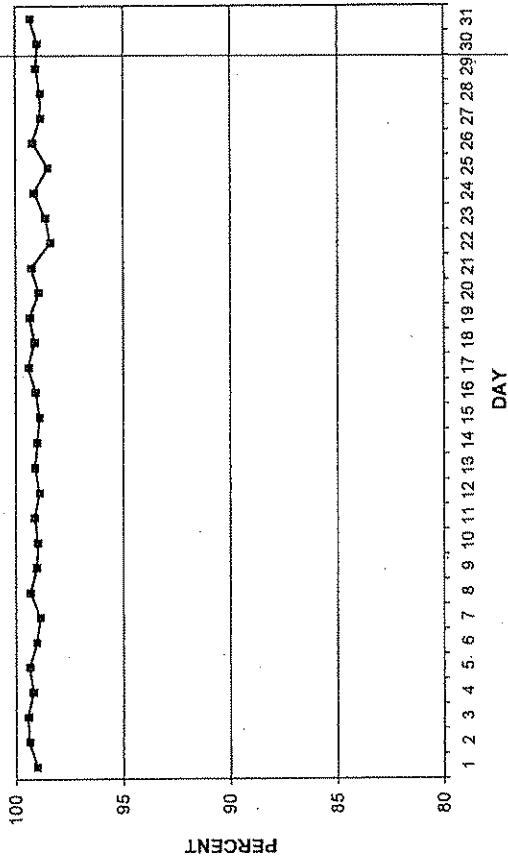
DONALD C. TILLMAN WATER RECLAMATION PLANT
INFLUENT SUSPENDED SOLIDS
January 2009



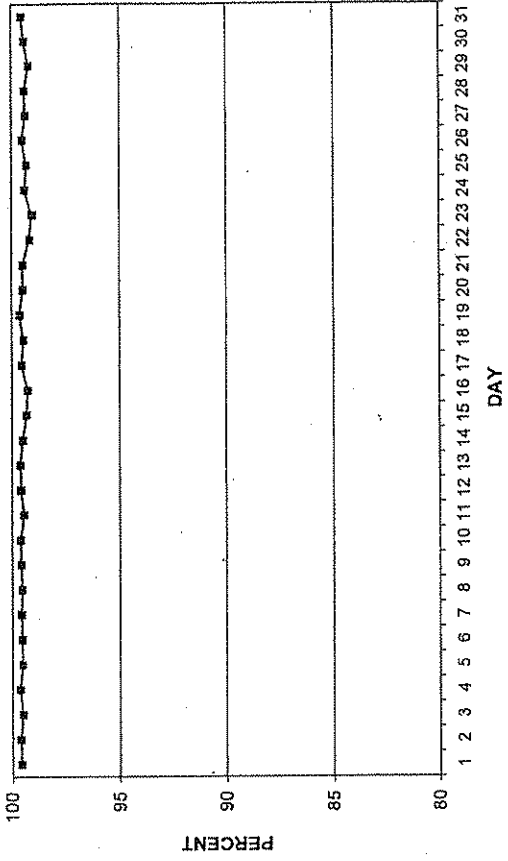
DONALD C. TILLMAN WATER RECLAMATION PLANT
INFLUENT BOD₅
January 2009



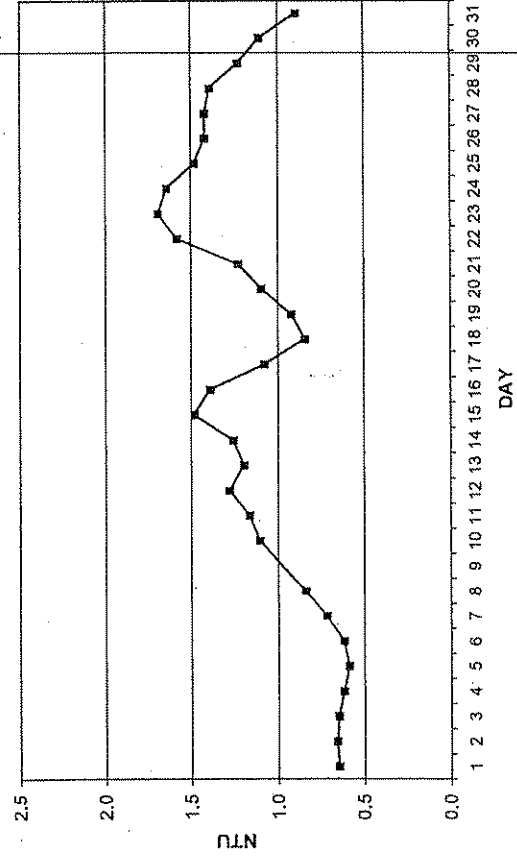
DONALD C. TILLMAN WATER RECLAMATION PLANT
 BOD₅ REMOVAL EFFICIENCY
 January 2009



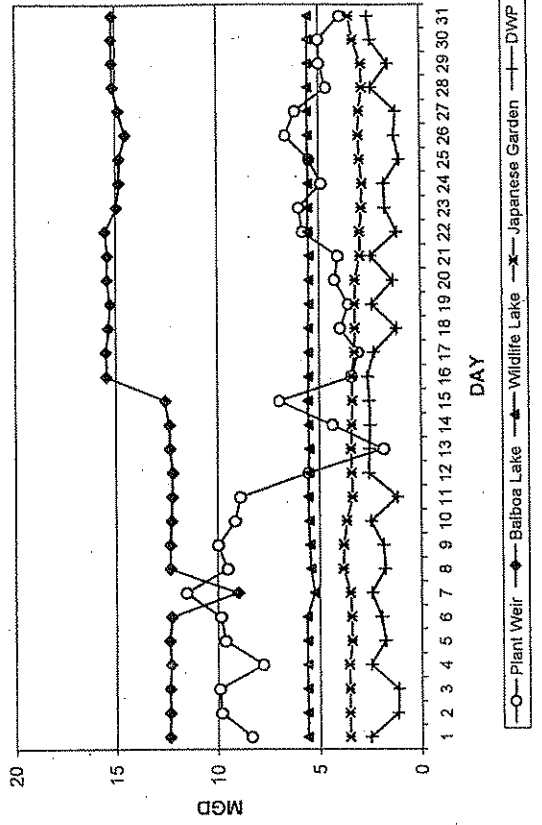
DONALD C. TILLMAN WATER RECLAMATION PLANT
 SUSPENDED SOLIDS REMOVAL EFFICIENCY
 January 2009



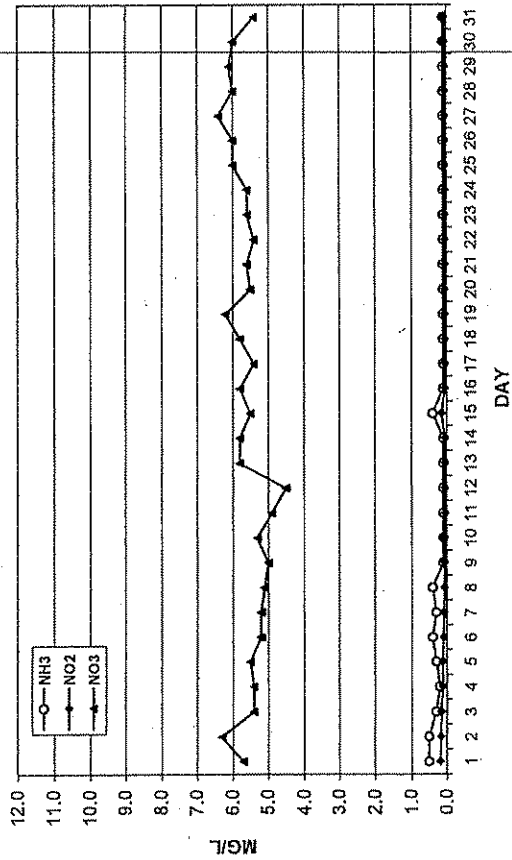
DONALD C. TILLMAN WATER RECLAMATION PLANT
 EFFLUENT TURBIDITY
 January 2009



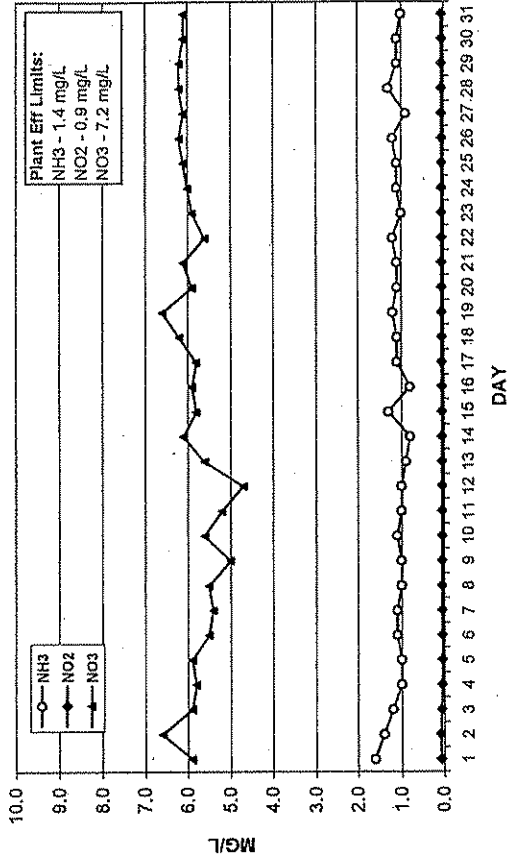
DONALD C. TILLMAN WATER RECLAMATION PLANT
 EFFLUENT FLOWS
 January 2009



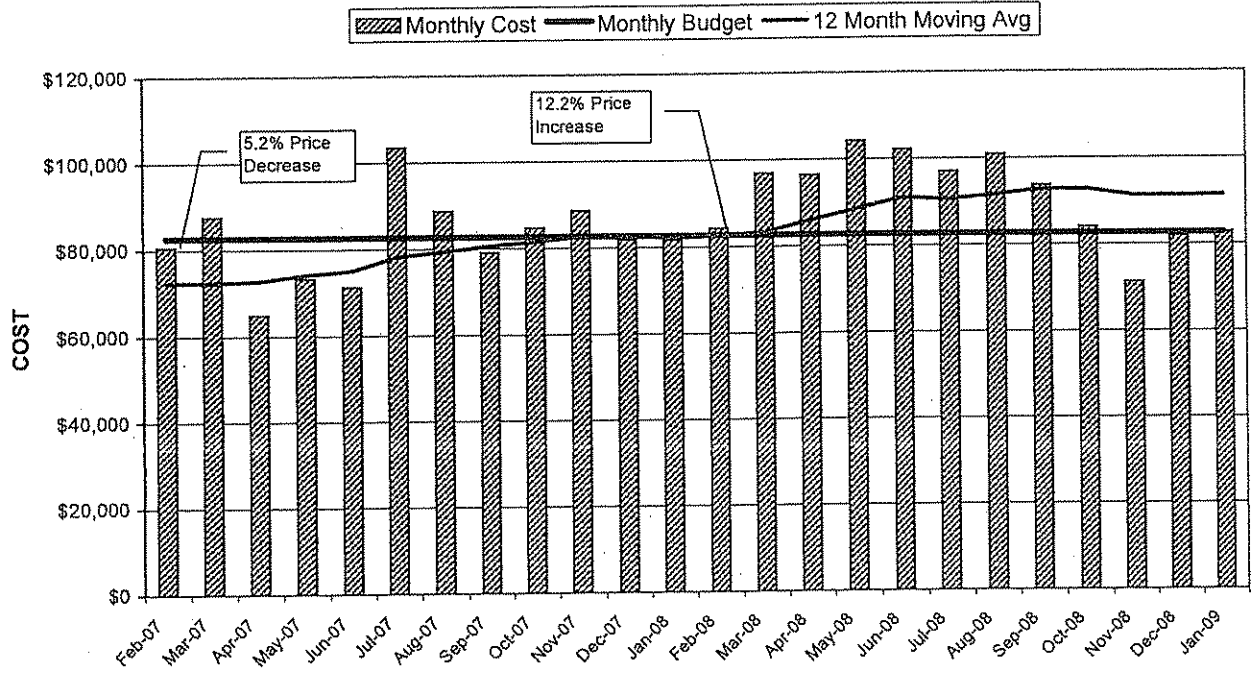
DONALD C. TILLMAN WATER RECLAMATION PLANT
 SECONDARY EFFLUENT COMPOSITE SAMPLES
 January 2009



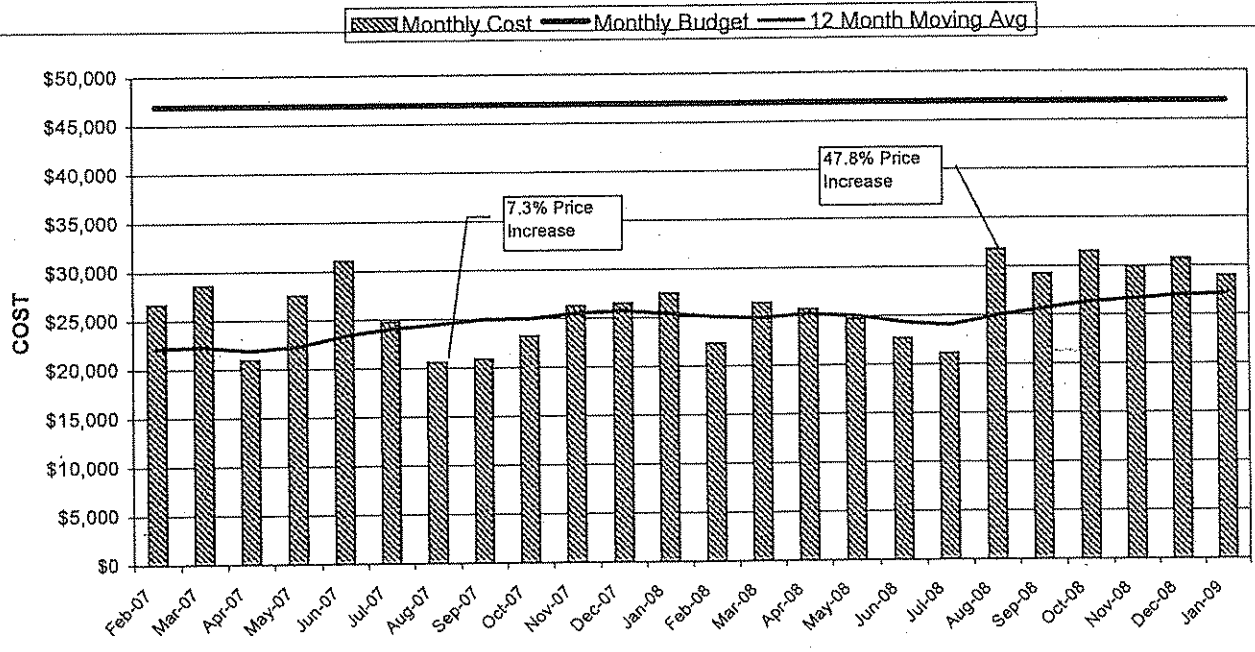
DONALD C. TILLMAN WATER RECLAMATION PLANT
 PLANT EFFLUENT COMPOSITE SAMPLES (NON-LEGAL)
 January 2009



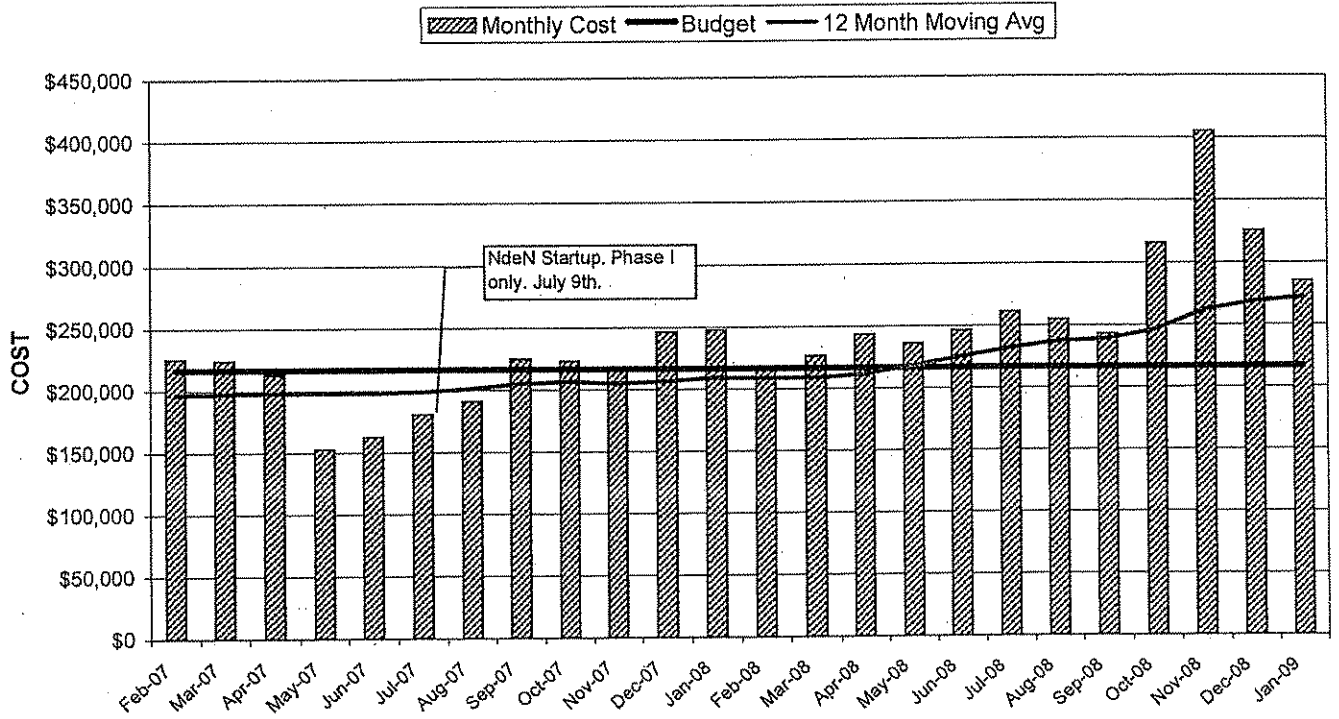
DCTWRP SODIUM HYPOCHLORITE COSTS (02/07- 01/09)



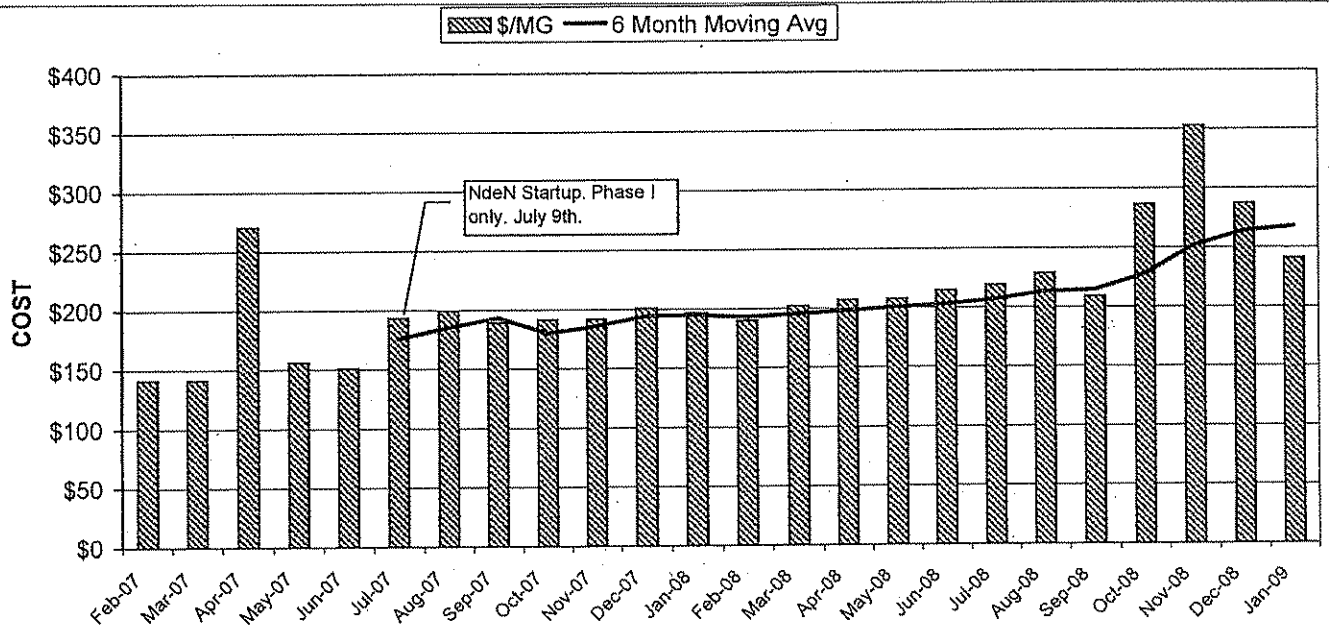
DCTWRP SODIUM BISULFITE COSTS (02/07 - 01/09)



DCT POWER COSTS (02/07 - 01/09)



DCT POWER COSTS (02/07 - 01/09) DOLLARS PER MG OF INFLUENT*



* Monthly reporting period for power cost varies from 28 to 34 days

LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
MONTHLY REPORT – JANUARY 2009

OPERATIONS

INFLUENT – The average daily influent flow was 20.4 MGD. Influent BOD₅ averaged 873 mg/L, and influent TSS averaged 764 mg/L.

PRIMARY TREATMENT - An average of 6 primary sedimentation tanks were in service. Removal efficiencies averaged 74% BOD₅ and 85% TSS. Primary effluent BOD₅ and TSS averaged 213 mg/L and 102 mg/L, respectively.

SECONDARY TREATMENT – An average of 6 aeration tanks and 10 final sedimentation tanks were in service this month. Secondary effluent TSS averaged 7 mg/L. Treatment was maintained with an average MCRT of 9.9 days and FM ratio of 0.29 lb BOD₅/day/lb MLSS, air to sewage ratio of 1.37 cubic feet of air per gallon of primary effluent, and a SVI of 102 ml/g.

COAGULATION AND FILTRATION – Alum was injected prior to the filters at the rate of 0.21 mg/L. An average of 9 EIMCO filters and 5 Tetra filters are in service with a total filtration rate of 2.1 gpm/ft².

DISINFECTION –The total amount of sodium hypochlorite (NaOCl) used this month was 42,498 gallons. The total amount of ammonia used to aid disinfection was 7,421 gallons. The chlorine residual entering and leaving the contact tanks averaged 6.8 mg/L and 5.8 mg/L, respectively.

DECHLORINATION - The total amount of sodium bisulfite (NaHSO₃) used this month was 19,009 gallons.

OTHER CHEMICAL USE - The total amount of neat polymer used for foam control in aeration that month was 28,513 gallons.

EFFLUENT – The plant effluent averaged <3 mg/L BOD₅ and 1 mg/L TSS. Effluent turbidity averaged 0.9 NTU. The plant achieved >99.9% removal efficiency for suspended solids, >99.8% for settleable solids, and >99.9% for BOD. The 7-day median value for total coliform averaged <1 CFU/100 ml, with a maximum daily value of 4 CFU/100 ml.

RECYCLED WATER USE – Recycled water produced by LAGWRP for the month of November was 580.8 MG. Recycled water usage for the month of December is reported below:

LOCATION	AMOUNT (MG)	USE
Griffith Park (LA)	6.8	Irrigation
LA-Glendale WRP (LA)	30.6	Irrigation / Process
Forest Lawn - Hollywood Hills (LA)	7.8	Irrigation
Mount Sinai Memorial Park (LA)	1.7	Irrigation
Universal City (LA)	4.6	Irrigation
Lakeside Country Club (LA)	0.0	Irrigation
Forest Lawn Project (Glendale)	5.4	Irrigation
Power Plant Project (Glendale)	18.7	Irrigation / Cooling
Verdugo Scholl Project (Glendale)	12.7	Irrigation
Brand Park Project (Glendale)	1.9	Irrigation
Total Recycled Water Used	90.1	

**LOS ANGELES - GLENDALE WATER RECLAMATION PLANT
SUMMARY OF OVERALL TREATMENT
PLANT EFFLUENT QUALITY**

January 2009

DATE	DAY	SUSPENDED SOLIDS			BOD ₅			SETTLABLE SOLIDS			O & G mg/L	TURBIDITY NTU		Cl ₂ Res		pH	TEMP Deg F	Cl ⁻ mg/L	SO ₄ mg/L	TDS mg/L	ORG-N mg/L	NH ₃ -N mg/L	NO ₂ -N mg/L	NO ₃ -N mg/L	NO ₂ -N + NO ₃ -N mg/L	COLIFORM E-COLI	FECAL
		PLANT INF	PLANT EFF	REM EFF %	PLANT INF	PLANT EFF	REM EFF %	PLANT INF	PLANT EFF	REM EFF %		AVG	MAX	Max	Grab												
1	THU	780	1	100	1210	<3	100	<3	100	<0.1	>99.8	0.8	1.0	0.0	0.0	7.4	71										<1
2	FRI	600	1	100	891	<3	100	<3	100	<0.1	>99.8	0.8	1.0	0.0	<0.1	7.0	71	149	153	684	1.6	1.2	<0.02	6.2	<6.24		<1
3	SAT	630	1	100	731	<3	100	<3	100	<0.1	>99.7	0.9	1.0	0.0	0.0	7.0	72										<1
4	SUN	870	1	100	849	<3	100	<3	100	<0.1	>99.7	0.9	1.0	0.0	0.0	7.0	69										<1
5	MON	950	2	100	1180	<3	100	<3	100	<0.1	>99.8	1.0	1.1	0.0	<0.1	7.2	70	138								<1	<1
6	TUE	2290	1	100	2210	3	100	<3	100	<0.1	>99.9	1.0	1.1	0.0	<0.1	7.5	70										<1
7	WED	1140	1	100	920	<3	100	<3	100	<0.1	>99.8	1.0	1.1	0.0	<0.1	7.0	71										<1
8	THU	790	1	100	885	<3	100	<3	100	<0.1	>99.7	0.9	1.1	0.0	<0.1	7.0	70										<1
9	FRI	580	1	100	1110	3	100	<3	100	<0.1	>99.7	0.9	1.0	0.0	<0.1	7.1	72										<1
10	SAT	490	1	100	684	<3	100	<3	100	<0.1	>99.7	0.9	1.0	0.0	0.0	7.1	71										<1
11	SUN	580	<1	100	623	<3	100	<3	100	<0.1	>99.7	0.9	1.0	0.0	0.0	7.1	71										<1
12	MON	710	1	100	671	<3	100	<3	100	<0.1	>99.7	0.9	1.1	0.0	<0.1	7.3	72										<1
13	TUE	690	2	100	774	<3	100	<3	100	<0.1	>99.7	1.0	1.1	0.0	<0.1	7.0	71										<1
14	WED	570	1	100	761	<3	100	<3	100	<0.1	>99.7	1.0	1.1	0.0	<0.1	7.2	72										<1
15	THU	440	1	100	690	<3	100	<3	100	<0.1	>99.7	0.9	1.1	0.0	<0.1	7.2	73										<1
16	FRI	420	2	100	608	<3	100	<3	100	<0.1	>99.7	1.0	1.1	0.0	<0.1	7.1	72										<1
17	SAT	560	2	100	591	<3	>99	<3	>99	<0.1	>99.7	1.0	1.3	0.0	0.0	7.2	73										<1
18	SUN	600	1	100	759	<3	100	<3	100	<0.1	>99.7	0.9	1.1	0.0	0.0	7.1	70										<1
19	MON	680	1	100	770	<3	100	<3	100	<0.1	>99.7	0.9	1.0	0.0	0.0	7.0	71								1		<1
20	TUE	870	1	100	927	<3	100	<3	100	<0.1	>99.8	0.9	1.0	0.0	<0.1	7.3	73										<1
21	WED	740	1	100	1010	<3	100	<3	100	<0.1	>99.8	0.8	1.0	0.0	<0.1	7.2	73										<1
22	THU	810	1	100	836	<3	100	<3	100	<0.1	>99.8	0.8	0.8	0.0	<0.1	7.0	73										<1
23	FRI	560	1	100	638	<3	100	<3	100	<0.1	>99.7	0.7	0.8	0.0	<0.1	7.0	71										<1
24	SAT	820	<1	100	1140	<3	100	<3	100	<0.1	>99.8	0.7	0.8	0.0	<0.1	7.0	73										<1
25	SUN	800	1	100	665	<3	100	<3	100	<0.1	>99.8	0.8	0.9	0.0	0.0	7.1	72										<1
26	MON	770	<1	100	816	<3	100	<3	100	<0.1	>99.8	0.8	0.9	0.0	<0.1	7.0	70										<1
27	TUE	800	1	100	902	<3	100	<3	100	<0.1	>99.8	0.8	0.9	0.0	<0.1	7.1	70										<1
28	WED	780	1	100	882	<3	100	<3	100	<0.1	>99.8	0.8	0.9	0.0	<0.1	7.1	71										<1
29	THU	870	1	100	864	<3	100	<3	100	<0.1	>99.8	0.8	0.9	0.0	<0.1	7.1	72										<1
30	FRI	710	1	100	771	<3	100	<3	100	<0.1	>99.8	0.8	0.9	0.0	<0.1	7.1	72										<1
31	SAT	790	<1	100	707	<3	100	<3	100	<0.1	>99.8	0.9	1.0	0.0	0.0	7.0	72										<1
MAXIMUM		2290	2	100	2210	3	100	3	100	<0.1	>99.9	1.0	1.3	0.0	<0.1	7.5	73	149	153	684	1.6	1.2	<0	6.2	<6	1	<1
MINIMUM		420	<1	100	591	<3	>99	<3	>99	<0.1	>99.7	0.7	0.8	0.0	<0.1	7.0	69	138	153	684	1.5	1.2	<0	6.2	<6	<1	<1
AVERAGE		764	1	100	873	<3	>100	<3	>100	<0.1	>99.8	0.9	1.0	0.0	<0.1	7.1	71	144	153	684	1.6	1.2	<0.02	6.2	<6.24		

Generated by MMB at 02/09/2009 10:12:07 AM using the Production Database and WISARD V2.0
WISARD - LAGWRP Operations - LAG MPR

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NR - Not Representative

FU - Future

LOS ANGELES - GLENDALE WATER RECLAMATION PLANT
SUMMARY OF FLOWS

January 2009

DATE	PLANT INFLUENT			AERATION			SIDESTREAM FLOWS (BACK TO NOS)						CTI		PLANT EFFLUENT		
	AVG Q	MAX Q	MIN Q	AVG Q	MUD VALVE	PRI SLUDGE	WAS Q	EIMCO FILT BW	TETRA FILT BW	TOTAL SIDESTREAM	CONT TANK INF Q	CONT TANK RIVER Q	FINAL EFF RIVER Q	RECYCLED WATER	TOTAL EFF FLOW	PLANT HPE	
	mgd	mgd	mgd	mgd	mgd	mgd	mgd	mgd	mgd	mgd	mgd	mgd	mgd	mgd	mgd	mgd	
1 THU	20.4	22.1	11.6	19.9	0.09	0.37	0.41	1.0	0.0	1.9	17.4	17.4	1.5	18.9	0.8		
2 FRI	20.0	22.1	10.9	19.6	0.08	0.37	0.43	1.2	0.0	2.1	16.8	16.8	1.4	18.4	0.8		
3 SAT	20.2	22.2	10.4	19.7	0.10	0.37	0.43	0.8	0.0	1.8	17.4	17.4	1.4	18.7	0.9		
4 SUN	20.1	22.2	10.8	19.6	0.09	0.37	0.43	0.7	0.0	1.6	17.3	17.3	1.3	18.7	0.9		
5 MON	20.5	22.1	10.1	20.0	0.09	0.37	0.43	1.0	0.0	1.9	17.2	17.2	1.6	18.8	0.9		
6 TUE	20.3	22.1	11.8	19.8	0.09	0.41	0.43	1.0	0.0	1.9	17.2	17.3	1.4	18.7	0.9		
7 WED	20.5	22.2	12.7	20.0	0.09	0.37	0.43	0.8	0.0	1.7	17.6	17.1	1.7	18.8	0.9		
8 THU	20.7	22.2	11.6	20.2	0.09	0.37	0.43	1.0	0.0	1.9	17.8	17.1	2.2	19.3	0.9		
9 FRI	20.7	22.1	10.3	20.2	0.07	0.36	0.43	0.8	0.0	1.6	18.2	17.5	1.8	19.3	0.8		
10 SAT	20.3	22.2	10.6	19.8	0.11	0.37	0.43	0.6	0.0	1.5	17.7	17.7	1.2	18.9	0.8		
11 SUN	20.0	22.1	10.3	19.5	0.10	0.37	0.43	1.0	0.0	1.9	17.6	16.7	1.7	18.4	0.9		
12 MON	20.6	22.1	12.2	20.2	0.10	0.37	0.35	0.9	0.0	1.7	18.7	16.9	2.1	19.0	1.0		
13 TUE	20.9	22.1	13.0	20.5	0.09	0.37	0.32	1.0	0.0	1.8	18.9	16.9	2.6	19.5	1.0		
14 WED	20.9	22.1	12.8	20.4	0.08	0.37	0.32	0.7	0.0	1.5	18.9	17.2	2.2	19.4	1.0		
15 THU	20.8	22.1	12.5	20.4	0.09	0.37	0.32	1.2	0.0	1.9	18.4	16.3	2.8	19.1	1.0		
16 FRI	20.7	22.1	2.4	20.3	0.08	0.37	0.34	1.2	0.2	2.1	18.0	16.0	2.7	18.7	1.0		
17 SAT	20.5	22.1	11.2	20.0	0.08	0.37	0.37	1.0	0.0	1.8	18.0	16.0	2.5	18.5	1.0		
18 SUN	20.1	22.1	11.0	19.6	0.09	0.37	0.39	0.8	0.0	1.7	17.7	16.3	2.0	18.3	0.9		
19 MON	20.3	22.2	11.4	19.8	0.09	0.37	0.44	0.9	0.0	1.8	17.9	16.3	2.2	18.5	0.9		
20 TUE	20.5	22.1	11.8	20.1	0.08	0.37	0.45	1.2	0.0	2.1	18.1	16.0	2.5	18.5	0.9		
21 WED	19.9	21.1	12.0	19.5	0.09	0.37	0.43	0.9	0.1	1.9	17.6	16.0	2.0	18.0	0.9		
22 THU	20.5	21.1	15.1	20.0	0.09	0.37	0.43	1.2	0.2	2.2	17.7	16.6	2.0	18.6	0.9		
23 FRI	20.4	21.1	4.9	20.1	0.00	0.36	0.45	1.2	0.0	2.0	17.7	16.9	1.9	18.8	0.9		
24 SAT	20.2	21.1	14.1	19.8	0.09	0.37	0.46	0.9	0.0	1.9	17.5	17.2	1.3	18.5	0.9		
25 SUN	20.1	21.1	13.2	19.7	0.09	0.37	0.45	0.8	0.0	1.7	17.4	17.1	1.4	18.4	0.9		
26 MON	20.4	21.1	15.0	19.9	0.08	0.37	0.45	0.9	0.0	1.8	17.3	17.3	1.3	18.6	0.9		
27 TUE	20.3	21.1	14.7	19.9	0.11	0.37	0.42	0.9	0.0	1.8	17.3	17.5	1.2	18.7	0.9		
28 WED	20.4	21.1	14.9	19.9	0.09	0.37	0.33	1.0	0.0	1.8	17.3	16.9	1.7	18.5	0.9		
29 THU	20.4	21.1	15.6	20.0	0.08	0.37	0.20	1.2	0.0	1.8	17.8	16.8	1.9	18.8	0.8		
30 FRI	20.3	21.1	14.3	19.9	0.10	0.37	0.18	1.3	0.0	2.0	17.7	16.7	1.8	18.5	0.9		
31 SAT	20.4	21.1	14.6	19.9	0.09	0.37	0.19	1.0	0.0	1.6	18.0	16.7	2.0	18.7	0.9		
MAXIMUM	20.9	22.2	15.6	20.5	0.11	0.41	0.46	1.3	0.2	2.2	18.9	17.7	2.8	19.5	1.0		
MINIMUM	19.9	21.1	2.4	19.5	0.00	0.36	0.18	0.6	0.0	1.5	16.8	16.0	1.2	18.0	0.8		
TOTAL	632.3											523.4	57.4		28.1		
AVERAGE	20.4	21.8	11.9	19.9	0.09	0.37	0.39	1.0	0.0	1.8	17.7	16.9	1.9	18.7	0.9		

LOS ANGELES - GLENDALE WATER RECLAMATION PLANT SUMMARY OF CHEMICAL USE & PLANT INFLUENT

January 2009

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DATE	DAY	AMMONIUM ASN		POLYMER		SODIUM HYPOCHLORITE			SODIUM BISULFITE			ALUM		PLANT INFLUENT									
		FLTR EFF DOSE ppm	TOTAL USE gpd	AER DIL Q gpd	TOT NEAT gpd	CCT TOTAL gpd	RAS/FLTR TOTAL gpd	NaOCL TOTAL gpd	MAIN gpd	TRIM gpd	NaHSO ₄ TOTAL gpd	COAG DOSE ppm	COAG TOT gpd	AVG Q mgd	MUD VLV Q mgd	SUSP SOL mg/L	SETT SOL ml/l	BOD ₅ mg/L	AVG pH	PH METER MAX pH	PH METER MIN pH	TEMP Deg F	
1	THU	0.9	241	7963	1118	1349	0	1349	524	120	644	0.11	3	20.4	0.09	780	60	1210	7.7	8.2	7.4	67	
2	FRI	0.9	230	8079	839	1285	0	1285	550	120	670	0.23	6	20.0	0.08	600	40	891	7.8	8.1	7.0	67	
3	SAT	0.9	230	8425	1118	1279	0	1279	499	116	615	0.15	4	20.2	0.10	630	37	731	7.8	8.2	7.5	67	
4	SUN	0.9	230	8537	1118	1277	0	1277	508	117	625	0.00	0	20.1	0.09	870	38	849	7.8	8.2	7.4	68	
5	MON	0.9	238	8272	838	1334	0	1334	538	121	659	0.04	1	20.5	0.09	950	61	1180	7.8	8.1	6.9	69	
6	TUE	0.9	217	8158	992	1207	0	1207	473	119	593	0.00	0	20.3	0.09	2290	90	2210	7.8	8.1	7.4	67	
7	WED	0.8	212	8169	963	1180	0	1180	452	116	568	0.00	0	20.5	0.09	1140	60	920	7.8	8.1	7.3	66	
8	THU	0.8	213	8162	838	1186	0	1186	439	117	556	0.11	3	20.7	0.09	790	37	885	7.8	8.0	7.2	71	
9	FRI	0.9	239	7939	1056	1327	0	1327	459	115	583	0.21	6	20.7	0.07	580	35	1110	7.8	8.2	7.1	70	
10	SAT	1.0	246	7707	746	1372	0	1372	518	116	634	0.15	4	20.3	0.11	490	30	684	7.8	8.2	7.3	68	
11	SUN	0.9	242	7777	994	1346	0	1346	494	113	607	0.40	11	20.0	0.10	580	32	623	7.8	8.1	7.5	71	
12	MON	0.9	257	7814	994	1429	0	1429	517	108	625	0.31	9	20.6	0.10	710	35	571	7.9	8.2	7.5	71	
13	TUE	0.8	234	7984	746	1382	0	1382	434	121	615	0.20	6	20.9	0.09	690	33	774	7.8	8.0	7.5	73	
14	WED	0.8	214	7925	994	1337	0	1337	507	122	629	0.17	5	20.9	0.08	570	31	761	7.8	8.1	7.5	73	
15	THU	0.8	214	7688	757	1338	0	1338	410	116	526	0.21	6	20.8	0.09	440	34	690	7.9	8.1	7.5	72	
16	FRI	0.8	209	7687	981	1305	0	1305	438	110	547	0.29	8	20.7	0.08	420	33	608	7.8	8.1	7.1	73	
17	SAT	0.8	206	7629	994	1287	0	1287	456	108	564	0.21	6	20.5	0.08	560	33	591	7.9	8.3	7.5	68	
18	SUN	0.8	204	7650	745	1279	0	1279	455	107	572	0.36	10	20.1	0.09	600	32	759	7.8	8.0	7.5	69	
19	MON	0.8	221	7803	994	1385	0	1385	471	107	577	0.32	9	20.3	0.09	680	33	770	7.9	8.5	7.5	71	
20	TUE	1.0	257	7931	746	1610	0	1610	501	103	605	0.36	10	20.5	0.08	870	44	927	7.7	8.2	7.0	72	
21	WED	1.1	292	8029	994	1687	0	1687	566	102	668	0.15	4	19.9	0.09	740	50	1010	7.3	7.6	6.6	72	
22	THU	1.1	276	8027	994	1536	0	1536	505	122	627	0.22	6	20.5	0.09	810	45	836	7.5	7.9	7.0	71	
23	FRI	1.0	254	8063	746	1414	0	1414	509	109	617	0.22	6	20.4	0.00	560	39	638	7.4	7.8	6.4	70	
24	SAT	1.0	253	7917	994	1409	0	1409	537	111	648	0.29	8	20.2	0.09	820	54	1140	7.4	7.8	7.1	68	
25	SUN	1.0	250	8010	745	1390	0	1390	593	111	644	0.26	7	20.1	0.09	800	50	865	7.4	7.8	7.0	71	
26	MON	1.0	250	7979	994	1391	0	1391	544	117	661	0.15	4	20.4	0.08	770	48	816	7.4	7.7	7.0	68	
27	TUE	1.0	249	8049	994	1384	0	1384	566	118	664	0.30	8	20.3	0.11	800	48	902	7.4	7.8	7.0	71	
28	WED	1.0	252	8089	746	1400	0	1400	533	115	648	0.30	8	20.4	0.09	780	45	882	7.5	7.9	6.9	70	
29	THU	1.0	259	8057	994	1442	0	1442	494	110	554	0.36	10	20.4	0.08	870	50	864	7.7	8.0	7.2	72	
30	FRI	1.0	262	8032	746	1459	0	1459	506	111	618	0.18	5	20.3	0.10	710	45	771	7.6	7.9	6.9	73	
31	SAT	1.0	268	8055	994	1492	0	1492	529	117	646	0.21	6	20.4	0.09	790	50	707	7.6	7.9	7.2	70	
MAXIMUM		1.1	292	8537	1118	1687	0	1687	566	122	670	0.40	11	20.9	0.11	2290	90	2210	7.9	8.5	7.5	73	
MINIMUM		0.8	204	7629	745	1180	0	1180	410	102	526	0.00	0	19.9	0.00	420	30	591	7.3	7.6	6.4	66	
TOTAL			7,421	28,513	28,513	42,498	0	42,498	15,472	3,537	19,009		179										
AVERAGE		0.9	239	7987	920	1371	0	1371	499	114	613	0.21	6	20.4	0.09	764	44	873	7.7	8.0	7.2	70	

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AE - Analyst Error

NC - Not Calculable

NR - Not Representative

FU - Future

**LOS ANGELES - GLENDALE WATER RECLAMATION PLANT
SUMMARY OF PRIMARY TREATMENT**

January 2009

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DATE	DAY	PRIMARY TREATMENT																		
		INF Q		SLDG Q	TANKS I/S	DET TIME	SOR	PEAK SOR	SETTL SOL		SUSPEND SOL		BOD ₅		COD EFF	NH ₃ -N		PRI EFF NH ₃ -N METER		EFF ALK
		mgd	Q						EFF	REM %	EFF	REM %	EFF	REM %		mg/L	mg/L	mg/L	mg/L	
1	THU	20.3	0.37	6	1.6	1209	1316	0.7	99	102	87	206	83	331	32.7	10.5	13.1	8.2		
2	FRI	19.9	0.37	6	1.6	1187	1318	1.0	98	110	82	230	74		25.1	9.8	12.6	7.3	284	
3	SAT	20.1	0.37	6	1.6	1195	1323	0.5	99	98	84	183	75		31.5	8.9	11.5	7.2		
4	SUN	20.0	0.37	6	1.6	1191	1319	0.5	99	112	87	182	79	375	27.2	8.7	11.3	6.9		
5	MON	20.4	0.37	6	1.6	1214	1317	0.7	99	100	89	252	79	360	25.4	8.7	11.2	6.9	270	
6	TUE	20.2	0.41	6	1.6	1204	1317	0.6	99	104	95	221	90	360	29.3	20.0	59.6	7.3	278	
7	WED	20.4	0.37	5	1.3	1458	1584	0.7	99	114	90	201	78	374	25.6	23.5	29.4	18.7	286	
8	THU	20.6	0.36	5	1.3	1468	1582	0.9	98	125	84	227	74	402	37.5	22.3	28.8	18.3	284	
9	FRI	20.6	0.37	5	1.3	1472	1580	0.7	98	124	79	139	87		35.1	21.1	26.3	17.7	282	
10	SAT	20.2	0.37	5	1.3	1440	1584	0.9	97	106	78	241	65		38.3	20.4	25.1	16.7		
11	SUN	19.9	0.37	5	1.3	1421	1577	1.1	97	128	78	187	70	403	39.4	19.4	24.5	15.9		
12	MON	20.5	0.37	5	1.3	1466	1578	0.9	97	130	82	204	70	416	39.1	19.5	23.9	16.4	274	
13	TUE	20.8	0.37	5	1.3	1488	1576	1.0	97	102	85	239	69	372	46.3	27.7	46.5	17.5	290	
14	WED	20.8	0.37	5	1.3	1484	1577	0.7	98	110	81	222	71	395	29.5	24.6	30.9	17.9	274	
15	THU	20.7	0.37	6	1.5	1234	1314	0.8	98	82	81	225	67	357	24.7	21.8	28.8	18.2	280	
16	FRI	20.6	0.37	6	1.5	1229	1314	0.6	98	94	78	208	66		34.9	23.6	32.0	19.3	276	
17	SAT	20.4	0.37	6	1.6	1214	1314	0.4	99	98	83	221	63		27.2	23.2	28.9	19.1		
18	SUN	20.0	0.37	6	1.6	1190	1316	0.5	98	86	86	224	70		31.8	23.7	30.3	19.2		
19	MON	20.2	0.37	6	1.6	1203	1320	0.3	99	106	84	212	72	371	29.7	23.6	31.3	18.7		
20	TUE	20.4	0.37	6	1.6	1216	1316	0.6	99	88	90	231	75	357	25.3	25.2	33.1	19.4	286	
21	WED	19.8	0.37	6	1.6	1181	1256	0.7	99	98	87	201	80	358	25.1	24.5	34.6	20.0	268	
22	THU	20.4	0.37	6	1.6	1214	1257	0.5	99	108	87	192	77	370	27.0	28.1	39.5	21.0	262	
23	FRI	20.4	0.36	6	1.6	1216	1257	0.4	99	116	79	207	68		28.1	28.0	38.1	22.3	272	
24	SAT	20.1	0.37	6	1.6	1198	1255	0.5	99	90	89	237	79		25.9	28.4	42.3	19.6		
25	SUN	20.1	0.37	6	1.6	1194	1255	0.4	99	100	88	206	69	369	25.7	26.4	39.2	17.7		
26	MON	20.3	0.37	6	1.6	1209	1255	0.2	100	92	88	215	74	362	28.7	20.5	43.0	12.2	270	
27	TUE	20.2	0.37	6	1.6	1205	1254	0.6	99	80	90	216	76	324	28.8	16.8	22.8	13.3	266	
28	WED	20.3	0.37	6	1.6	1208	1256	0.3	99	96	88	197	78	347	27.5	19.5	25.7	15.2	266	
29	THU	20.3	0.37	6	1.6	1210	1255	1.0	98	84	90	243	72	347	27.6	26.2	38.7	19.6	264	
30	FRI	20.2	0.37	6	1.6	1204	1257	0.7	98	94	87	211	73		25.3	27.2	41.2	20.0	268	
31	SAT	20.3	0.37	6	1.6	1207	1256	0.5	99	94	88	228	68		26.7	24.0	36.2	16.7		
	MAXIMUM	20.8	0.41	6	1.6	1488	1584	1.1	100	130	95	252	90	416	46.3	28.4	59.6	22.3	290	
	MINIMUM	19.8	0.36	5	1.3	1181	1254	0.2	97	80	78	139	63	324	24.7	8.7	11.2	6.9	262	
	AVERAGE	20.3	0.37	6	1.5	1272	1363	0.6	98	102	85	213	74	368	30.1	21.1	30.3	15.9	275	

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WISARD - LAGWRP Operations - LAG MPR

AE - Analyst Error NS - Not Sampled NR - Not Representative FU - Future

LOS ANGELES - GLENDALE WATER RECLAMATION PLANT SUMMARY OF SECONDARY TREATMENT

DATE	DAY	SECONDARY										AERATION SYSTEM										FINAL CLARIFIERS										NITRITE + NITR																
		INF		RAS		RECYCLE		WAS		TANKS		AIR FLOW		TOT AIR Q		SWING ZONES		AIR APPLICATION		ZONE 6		RAS		RECYCLE		TOT DET		ANOX DET		AER DET		ORG LOAD		TANKS		DET		SOR		SLR		CLAR		BLKT		METER		
		mgd	mgd	mgd	mgd	mgd	mgd	mgd	mgd	#	I/S	kscfm	mcfd	Status	ft ³ /gal	ft ³ /lb bod	mg/L	%	%	%	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	hr	#	I/S	TIME	TIME	TIME	TIME	TIME	TIME	MG	MG	MG	MG	Avg	MAX		
1	THU	19.9	22.5	60.0	0.41	6	17.6	25.3	OFF	1.27	750	3.2	113	301	3.1	0.9	2.0	2.0	46	10	1.4	574	34.2	2.1	0.54	6.7	10.8																					
2	FRI	19.6	22.5	58.9	0.43	6	17.4	25.1	OFF	1.28	679	3.0	115	301	3.1	0.9	2.0	2.0	51	10	1.4	563	34.7	2.3	0.59	7.2	10.9																					
3	SAT	19.7	22.5	59.3	0.43	6	18.0	26.0	OFF	1.32	876	3.1	114	301	3.1	0.9	2.0	2.0	41	10	1.4	567	34.0	2.8	0.71	6.8	10.8																					
4	SUN	19.6	22.5	59.1	0.43	6	18.3	26.3	OFF	1.34	919	3.1	115	301	3.1	0.9	2.0	2.0	40	10	1.4	565	34.1	2.2	0.55	7.1	11.2																					
5	MON	20.0	22.5	60.3	0.43	6	18.5	26.6	OFF	1.33	648	3.1	112	301	3.1	0.9	2.0	2.0	57	10	1.4	576	32.8	2.1	0.52	6.9	10.3																					
6	TUE	19.8	21.2	59.8	0.43	6	17.2	24.8	OFF	1.25	695	3.1	107	302	3.2	1.0	2.1	2.1	50	9	1.3	694	34.4	2.4	0.54	6.9	10.5																					
7	WED	20.0	21.6	60.2	0.43	6	17.7	25.4	OFF	1.27	773	3.0	108	301	3.2	1.0	2.1	2.1	46	10	1.4	577	33.5	2.1	0.54	7.2	10.9																					
8	THU	20.2	22.5	60.7	0.43	6	18.3	26.4	OFF	1.31	712	3.0	111	301	3.1	0.9	2.0	2.0	52	10	1.4	581	32.8	1.8	0.45	7.1	11.0																					
9	FRI	20.2	22.5	61.1	0.43	6	18.6	26.8	OFF	1.33	1186	3.0	111	302	3.1	0.9	2.0	2.0	32	10	1.4	583	33.0	2.3	0.59	6.5	10.0																					
10	SAT	19.8	22.5	59.5	0.43	6	18.8	27.0	OFF	1.37	697	3.0	114	301	3.1	0.9	2.0	2.0	54	10	1.4	570	33.1	2.2	0.55	6.9	10.6																					
11	SUN	19.5	22.5	58.7	0.43	6	19.3	27.8	OFF	1.43	945	3.1	115	301	3.2	0.9	2.0	2.0	41	10	1.4	562	32.0	2.0	0.51	6.4	10.4																					
12	MON	20.2	22.6	60.7	0.35	6	20.5	29.5	OFF	1.46	881	3.1	112	301	3.1	0.9	2.0	2.0	47	10	1.4	582	32.3	1.9	0.48	6.5	10.2																					
13	TUE	20.5	22.6	61.6	0.32	6	18.9	27.2	OFF	1.33	-675	3.0	111	301	3.1	0.9	2.0	2.0	55	10	1.4	592	35.4	2.1	0.54	6.1	9.5																					
14	WED	20.4	22.6	61.4	0.32	6	19.1	27.5	OFF	1.35	755	3.0	111	301	3.1	0.9	2.0	2.0	51	10	1.4	591	34.5	1.9	0.49	6.2	9.5																					
15	THU	20.4	22.6	61.3	0.32	6	19.3	27.8	OFF	1.37	755	3.0	111	301	3.1	0.9	2.0	2.0	52	10	1.4	590	35.3	1.9	0.48	6.5	10.3																					
16	FRI	20.3	22.6	61.1	0.34	6	19.5	28.1	OFF	1.38	818	3.0	112	301	3.1	0.9	2.0	2.0	48	10	1.4	586	36.7	2.1	0.54	6.0	9.4																					
17	SAT	20.0	22.6	60.2	0.37	6	19.8	28.5	OFF	1.42	794	3.0	113	301	3.1	0.9	2.0	2.0	50	10	1.4	578	37.8	2.6	0.66	5.9	9.8																					
18	SUN	19.6	22.5	59.0	0.39	6	19.6	28.2	OFF	1.44	797	3.1	115	301	3.1	0.9	2.0	2.0	50	10	1.4	566	37.3	2.3	0.57	6.0	10.2																					
19	MON	19.8	22.2	59.7	0.44	6	20.2	29.1	OFF	1.47	867	3.1	112	301	3.1	0.9	2.0	2.0	48	10	1.4	570	36.3	2.3	0.58	5.7	9.7																					
20	TUE	20.1	22.5	60.4	0.45	6	20.1	28.9	OFF	1.44	778	3.0	112	301	3.1	0.9	2.0	2.0	52	10	1.4	577	35.1	2.9	0.75	6.1	9.9																					
21	WED	19.5	22.5	58.7	0.43	6	19.4	27.9	OFF	1.43	881	3.0	115	301	3.2	0.9	2.0	2.0	44	10	1.4	560	34.6	2.3	0.60	6.4	10.2																					
22	THU	20.0	22.5	60.4	0.43	6	19.6	28.2	OFF	1.41	923	3.0	112	301	3.1	0.9	2.0	2.0	44	10	1.4	576	35.2	2.0	0.52	6.7	10.1																					
23	FRI	20.1	22.4	60.5	0.45	6	19.5	28.1	OFF	1.40	832	3.0	112	302	3.1	0.9	2.0	2.0	47	10	1.4	577	35.5	2.0	0.51	6.6	9.5																					
24	SAT	19.8	22.4	59.5	0.46	6	19.2	27.7	OFF	1.40	733	3.0	113	301	3.1	0.9	2.0	2.0	53	10	1.4	568	34.1	2.1	0.54	7.6	11.3																					
25	SUN	19.7	22.4	59.3	0.45	6	20.3	29.2	OFF	1.48	880	3.1	114	301	3.1	0.9	2.0	2.0	46	10	1.4	586	31.9	2.1	0.53	7.6	11.4																					
26	MON	19.9	22.4	60.0	0.45	6	20.5	29.5	OFF	1.48	858	3.0	112	301	3.1	0.9	2.0	2.0	48	10	1.4	573	31.6	2.0	0.50	7.5	11.1																					
27	TUE	19.9	22.5	60.3	0.42	6	18.9	27.2	OFF	1.37	788	3.1	113	304	3.1	0.9	2.0	2.0	49	10	1.4	572	30.4	2.0	0.51	7.8	10.6																					
28	WED	19.9	21.7	60.0	0.33	6	17.9	25.8	OFF	1.29	826	3.0	109	301	3.2	1.0	2.1	2.1	44	10	1.4	577	27.4	2.3	0.58	7.9	10.6																					
29	THU	20.0	22.7	60.8	0.20	6	18.2	26.2	OFF	1.31	664	3.0	114	305	3.1	0.9	2.0	2.0	55	10	1.4	581	28.6	1.9	0.48	7.5	10.2																					
30	FRI	19.9	22.7	59.8	0.18	6	18.9	27.3	OFF	1.37	796	3.0	114	301	3.1	0.9	2.0	2.0	47	10	1.4	579	32.0	2.2	0.57	6.8	9.7																					
31	SAT	19.9	22.7	59.9	0.19	6	19.5	28.0	OFF	1.41	761	3.0	114	301	3.1	0.9	2.0	2.0	51	10	1.4	580	34.6	2.2	0.56	6.6	10.4																					
		MAXIMUM	20.5	22.7	61.6	0.46	6	20.5		1.48	1186	3.2	115	305	3.2	1.0	2.1	2.1	57	10	1.4	694	37.8	2.9	0.75	7.9	11.4																					
		MINIMUM	19.5	21.2	58.7	0.18	6	17.2		1.25	648	3.0	107	301	3.1	0.9	2.0	2.0	32	9	1.3	560	27.4	1.8	0.45	5.7	9.4																					
		TOTAL	618.2					847.5																																								
		AVERAGE	19.9	22.4	60.1	0.39	6	19.0		1.37	<805	3.1	112	301	3.1	0.9	2.0	2.0	48	10	1.4	577	33.7	2.2	0.55	6.8	10.4																					

January 2009

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LOS ANGELES - GLENDALE WATER RECLAMATION PLANT

SUMMARY OF SECONDARY TREATMENT

DATE	METER	PROCESS CONTROL																				SUSPND SOLIDS					BOD ₅					NITROGEN COMPOSITE					
		AVG MLSS mg/L	AER 1 MLSS mg/L	AER 2 MLSS mg/L	AER 3 MLSS mg/L	AER 4 MLSS mg/L	AER 5 MLSS mg/L	AER 6 MLSS mg/L	MLVSS %	RASS mg/L	SETTLING 5 MIN 30 MIN ml/L	SVI	AVG TOTAL BLKLT ft	FIM BOD lb/lb	SEC EFF TURB ntu	AER MASS Kib	CLAR MASS Kib	TOTAL MASS Kib	INF mg/L	EFF mg/L	REM EFF %	INF mg/L	EFF mg/L	REM EFF %	REM EFF %	AER	INF	SEC EFF	NH ₃ -N								
																													mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
1	THU	3314	3280	3260	3430	3290	3240	3200	3200	6660	768	400	122	2.1	9.1	0.27	2.5	150.8	30.2	181.1	102	6	95	206	3	99	32.7	<0.1	>99.7	0.1							
2	FRI	3306	3367	3310	3460	3390	3340	3320	3320	6520	750	393	117	2.3	9.2	0.29	2.6	154.8	32.1	186.9	110	6	95	230	4	98	25.1	<0.1	>99.6	0.1							
3	SAT	3317	3282	3200	3290	3300	3300	3410	3190	6600	733	370	113	2.8	9.0	0.24	2.6	150.9	39.3	190.2	98	2	98	183	3	98	31.5	0.1	99.7	0.1							
4	SUN	3279	3297	3340	3380	3230	3230	3390	3210	6080	667	342	104	2.2	9.6	0.24	2.6	151.6	28.1	179.7	112	5	95	182	7	96	27.2	<0.1	>99.6	0.1							
5	MON	3270	3142	3160	3300	3100	3070	3160	3060	6220	778	370	118	2.1	8.9	0.35	2.8	144.5	27.0	171.5	100	7	93	252	6	98	25.4	<0.1	>99.6	0.1							
6	TUE	3204	3075	3100	3180	3070	3060	3100	2940	6720	742	357	116	2.4	7.8	0.31	2.9	141.4	30.3	171.7	104	8	93	221	5	98	29.3	<0.1	>99.7	0.1							
7	WED	3203	3283	3240	3370	3270	3330	3310	3180	6380	595	316	97	2.1	9.1	0.27	2.8	151.0	28.6	179.5	114	6	95	201	4	98	25.6	<0.1	>99.6	0.1							
8	THU	3213	3132	3140	3240	3110	3050	3140	3110	6080	777	348	111	1.8	9.1	0.32	2.9	144.0	23.0	167.0	126	6	95	227	7	97	37.5	<0.1	>99.7	0.1							
9	FRI	3239	3145	3120	3260	3140	3070	3200	3080	6260	647	335	107	2.3	8.9	0.20	2.9	144.6	30.8	175.4	124	6	95	139	5	96	35.1	<0.1	>99.7	0.1							
10	SAT	3253	3193	3170	3300	3200	3110	3260	3120	5980	662	357	112	2.2	9.5	0.33	3.0	146.9	27.7	174.5	106	6	94	241	6	98	38.3	<0.1	>99.7	0.1							
11	SUN	3251	3103	3150	3210	3060	3040	3130	3030	6140	817	335	108	2.0	9.1	0.26	3.0	142.7	26.2	168.9	128	5	96	187	6	97	39.4	<0.1	>99.7	0.1							
12	MON	3295	3083	3130	3170	3030	3050	3110	3010	7140	658	330	107	1.9	9.5	0.29	3.2	141.8	28.5	170.3	130	3	98	204	5	98	39.1	0.2	99.5	0.1							
13	TUE	3372	3352	3350	3440	3330	3270	3450	3270	6000	572	308	92	2.1	12.9	0.32	3.3	154.1	26.9	181.0	102	6	94	239	<3	>99	46.3	<0.1	>99.8	0.1							
14	WED	3461	3268	3140	3440	3230	3300	3310	3190	6380	702	333	102	1.9	11.9	0.30	3.4	150.3	26.1	176.4	110	6	94	222	8	96	29.5	<0.1	>99.7	0.1							
15	THU	3548	3343	3360	3330	3450	3240	3300	3380	7240	703	342	102	1.9	10.7	0.30	3.5	153.7	29.2	182.9	82	7	92	225	8	96	24.7	0.4	98.4	0.1							
16	FRI	3607	3485	3560	3610	3490	3400	3450	3400	7520	713	358	103	2.1	10.1	0.26	3.6	160.3	34.0	194.2	94	9	90	208	5	98	34.9	0.4	98.9	0.1							
17	SAT	3640	3617	3660	3760	3560	3590	3660	3470	7440	700	333	92	2.6	10.2	0.27	3.8	166.3	40.7	207.0	98	4	96	221	6	97	27.2	0.2	99.3	0.1							
18	SUN	3615	3607	3660	3780	3530	3540	3580	3550	7000	807	408	112	2.3	10.0	0.27	4.0	165.9	33.6	199.4	86	7	91	224	8	96	31.8	0.4	98.7	0.1							
19	MON	3570	3518	3530	3670	3470	3490	3550	3400	7000	818	382	109	2.3	8.7	0.26	4.5	161.8	34.0	195.8	106	7	93	212	9	96	29.7	0.3	99.0	0.2							
20	TUE	3507	3365	3370	3520	3290	3340	3380	3290	6700	830	427	127	2.9	8.5	0.30	4.2	154.7	41.6	198.4	88	7	92	231	9	96	25.3	<0.1	>99.6	0.1							
21	WED	3466	3365	3340	3490	3380	3350	3410	3220	7020	660	345	103	2.3	8.5	0.25	3.6	154.7	34.8	189.6	98	7	93	201	6	97	25.1	<0.1	>99.6	0.1							
22	THU	3434	3378	3260	3620	3380	3180	3530	3300	7300	572	315	93	2.0	8.1	0.25	4.3	155.4	31.6	186.9	108	7	93	192	9	95	27.0	<0.1	>99.6	0.1							
23	FRI	3380	3400	3400	3550	3410	3390	3390	3260	7100	555	305	90	2.0	8.2	0.27	4.3	156.4	30.1	186.5	116	6	94	207	5	98	28.1	0.1	99.6	0.1							
24	SAT	3289	3295	3310	3430	3180	3270	3300	3280	6720	588	333	101	2.1	8.1	0.31	3.2	151.5	30.5	182.0	90	7	92	237	8	97	25.9	<0.1	>99.6	0.1							
25	SUN	3206	3092	3170	3210	3080	3040	3070	3000	6440	762	290	94	2.1	8.2	0.29	3.0	142.2	28.5	170.7	100	5	95	206	4	98	25.7	<0.1	>99.6	0.1							
26	MON	3157	3043	3050	3170	3010	3030	3100	2900	6480	553	287	88	2.0	8.0	0.31	3.0	140.0	26.7	166.7	92	6	93	215	8	96	28.7	0.1	99.7	0.1							
27	TUE	3074	2928	2940	3090	2870	2880	2940	2850	6080	463	260	89	2.0	8.5	0.32	3.1	134.7	25.9	160.6	80	10	88	216	8	96	28.8	<0.1	>99.7	0.1							
28	WED	2817	2677	2660	2780	2640	2670	2700	2610	5980	440	249	91	2.3	10.1	0.32	3.2	123.1	28.9	152.0	96	7	93	197	9	95	27.5	0.1	99.6	0.2							
29	THU	2966	2735	2750	2810	2690	2720	2780	2660	6240	575	243	89	1.9	14.1	0.38	2.8	125.8	25.1	150.9	84	14	84	243	6	98	27.6	0.1	99.6	0.1							
30	FRI	3196	3067	3100	3130	3120	3040	3060	2950	6690	585	273	89	2.2	17.1	0.30	3.0	141.0	31.6	172.7	94	13	87	211	4	98	25.3	<0.1	>99.6	0.1							
31	SAT	3407	3313	3380	3470	3250	3270	3390	3120	7260	560	262	79	2.2	16.7	0.30	3.0	152.4	33.9	186.2	94	10	89	228	6	97	26.7	0.2	99.3	0.1							
	MAXIMUM	3640	3617	3660	3780	3560	3590	3660	3550	7520	830	427	127	2.9	17.1	0.39	4.5	166.3	41.6	207.0	130	14	98	252	9	>99	46.3	0.4	>99.8	0.2							
	MINIMUM	2817	2677	2660	2780	2640	2670	2700	2610	5980	440	249	79	1.8	7.8	0.20	2.5	123.1	23.0	150.9	80	2	84	139	<3	95	24.7	<0.1	98.4	0.1							
	AVERAGE	3318	3233	3236	3351	3211	3190	3265	3147	6624	669	331	102	2.2	9.9	0.29	3.2	148.7	30.5	179.2	102	7	93	213	<6	>97	30.1	<0.1	>99.5	0.1							

Generated by MMB at 02/05/2009 10:11:04 AM using the Production Database and WISARD V2.0
WISARD - LAGWRP Operations - LAG NPR

AE - Analyst Error

IF - Instrument Failure

NC - Not Calculable

NR - Not Representative

FU - Future

NS - Not Sampled

**LOS ANGELES - GLENDALE WATER RECLAMATION PLANT
NdeN SUMMARY - AERATOR #4**

January 2009

		AERATION TANK #4 ANOXIC ZONES										AERATION TANK #4 AERATED ZONES												
		ZONE 2 (BEG)					ZONE 4 (END)					ZONE 6B (MID)					ZONE 6C (END)							
DATE	DAY	RECYCLE RATIO %	AVG	MAX	MIN	NO ₂ -N	NO ₃ -N	NO ₂ -N	NO ₃ -N	NO ₂ -N	NO ₃ -N	AVG	MAX	MIN	NH ₃ -N	NO ₂ -N	NO ₃ -N	NH ₃ -N	NO ₂ -N	NO ₃ -N	ALK	AVG	MAX	
			ORP mV	ORP mV	ORP mV	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	D.O. mg/L	ORP mV	ORP mV	ORP mV	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	NOX mg/l
1	THU	301	-108	-71	-144						3.2	84	84	84									8.7	13.9
2	FRI	301	-105	-78	-134						3.0	84	84	84									8.7	14.0
3	SAT	301	-94	-56	-123						3.1	84	84	84									8.3	13.9
4	SUN	301	-91	-55	-125						3.2	84	84	84									8.4	14.4
5	MON	302	-96	-60	-124						3.1	84	84	84									8.2	13.6
6	TUE	302	-97	-63	-121						3.1	83	88	51									8.1	13.3
7	WED	302	-95	-70	-128						3.0	83	90	76									8.5	13.5
8	THU	301	-96	-62	-124						3.0	85	91	77									8.1	13.4
9	FRI	302	-99	-77	-121						3.0	84	91	76									7.3	11.8
10	SAT	301	-98	-62	-125						3.0	84	93	77									7.9	13.3
11	SUN	301	-104	-69	-129						3.1	84	93	74									7.5	12.8
12	MON	301	-103	-76	-134						3.1	78	95	58									7.4	11.7
13	TUE	301	-94	-62	-124						3.0	74	83	59									6.7	10.9
14	WED	301	-102	-79	-124						3.0	78	84	69									7.5	11.5
15	THU	301	-98	-70	-130						3.0	78	86	71									8.0	12.8
16	FRI	302	-105	-75	-146						3.0	78	87	67									7.4	11.6
17	SAT	301	-106	-81	-135						3.0	78	85	69									7.3	12.6
18	SUN	301	-106	-69	-140						3.1	80	88	70									7.5	13.0
19	MON	301	-107	-80	-137						3.1	81	88	71									6.9	12.1
20	TUE	301	-105	-87	-137						3.0	83	89	74									7.4	12.3
21	WED	302	-103	-84	-126						3.0	84	92	75									8.1	13.0
22	THU	302	-96	-71	-124						3.0	83	92	75									8.0	11.5
23	FRI	302	-100	-74	-125						3.0	82	90	73									7.2	10.5
24	SAT	301	-98	-74	-118						3.0	84	93	77									8.3	13.2
25	SUN	302	-101	-70	-127						3.1	84	93	76									8.3	13.4
26	MON	301	-98	-32	-125						3.1	85	104	76									8.2	12.5
27	TUE	301	-95	-75	-113						3.0	88	96	80									8.2	11.9
28	WED	301	-99	-73	-114						3.0	88	93	82									8.0	11.8
29	THU	311	-99	-71	-129						3.0	87	94	80									7.7	11.4
30	FRI	301	-105	-81	-121						3.0	87	95	79									7.4	11.0
31	SAT	301	-103	-74	-126						3.0	85	94	76									7.5	12.2
		MAXIMUM	-91	-32	-113						3.2	88	104	84									8.7	14.4
		MINIMUM	-108	-87	-146						3.0	74	83	51									6.7	10.5
		AVERAGE	-100	-70	-127						3.1	83	90	75									7.8	12.5

Generated by MMB at 02/09/2009 10:11:04 AM using the Production Database and WISARD V2.0

WISARD - LAGWRP Operations - LAG MPR

AE - Analyst Error

IF - Instrument Failure

NC - Not Calculable

NR - Not Representative

FU - Future

NS - Not Sampled

LOS ANGELES - GLENDALE WATER RECLAMATION PLANT

Nden SUMMARY - AERATOR #6

January 2009

DATE		AERATION TANK #6 ANOXIC ZONES										AERATION TANK #6 AERATED ZONES											
		ZONE 2 (BEG)					ZONE 4 (END)					ZONE 6B (MID)					ZONE 6C (END)						
		RECYCLE RATIO	AVG ORP	MAX ORP	MIN ORP	NO ₂ -N	NO ₃ -N	NO ₂ -N	NO ₃ -N	NO ₂ -N	NO ₃ -N	AVG D.O.	MAX ORP	MIN ORP	NH ₃ -N	NO ₂ -N	NO ₃ -N	NH ₃ -N	NO ₂ -N	NO ₃ -N	ALK	AVG NOX	MAX NOX
%	mV	mV	mV	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mV	mV	mV	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
1	THU	301	-199	-189	-199						3.2	41	23									4.9	6.6
2	FRI	302	-199	-199	-199						3.0	40	23									4.9	6.7
3	SAT	302	-199	-184	-199						3.1	42	24									4.9	6.8
4	SUN	301	-199	-184	-199						3.1	40	25									5.0	6.9
5	MON	301	-199	-199	-199						3.1	37	27									5.0	6.8
6	TUE	302	-199	-179	-199						3.1	32	25									5.0	6.8
7	WED	300	-199	-183	-199						3.0	35	24									6.8	12.8
8	THU	301	-199	-199	-199						3.0	37	31									7.5	9.9
9	FRI	302	-199	-199	-199						3.0	37	44									6.7	9.3
10	SAT	301	-199	-194	-199						3.0	35	42									8.8	9.8
11	SUN	301	-199	-195	-199						3.1	33	41									6.5	9.5
12	MON	301	-199	-188	-199						3.1	30	21									6.8	9.8
13	TUE	301	-199	-199	-199						3.0	47	189									6.6	9.3
14	WED	301	-199	-198	-199						3.0	36	41									6.6	9.2
15	THU	301	-199	-182	-199						3.0	36	44									6.7	9.3
16	FRI	301	-199	-199	-199						3.0	33	26									6.4	9.0
17	SAT	301	-199	-199	-199						3.0	31	25									6.2	9.0
18	SUN	301	-199	-195	-199						3.1	31	24									6.3	9.2
19	MON	301	-199	-199	-199						3.1	32	41									6.1	9.1
20	TUE	301	-199	-199	-199						3.1	35	40									6.3	9.2
21	WED	302	-199	-199	-199						3.0	29	49									6.5	9.2
22	THU	302	-199	-193	-199						3.0	39	46									6.8	9.0
23	FRI	301	-199	-199	-199						3.0	37	47									6.7	8.8
24	SAT	301	-199	-197	-199						3.0	38	44									7.5	10.0
25	SUN	301	-199	-198	-199						3.1	36	46									7.5	10.2
26	MON	300	-199	-199	-199						3.0	37	46									7.5	10.1
27	TUE	312	-199	-198	-199						3.1	42	50									7.7	10.0
28	WED	301	-199	-199	-199						3.0	43	48									7.8	10.0
29	THU	301	-199	-147	-199						3.0	42	48									7.5	9.7
30	FRI	301	-199	-199	-199						3.0	42	51									7.0	9.2
31	SAT	301	-199	-199	-199						3.0	39	47									6.8	9.4
MAXIMUM		312	-199	-147	-199						3.2	47	189									7.8	12.8
MINIMUM		300	-199	-199	-199						3.0	30	36									4.9	6.6
AVERAGE		302	-199	-193	-199						3.1	36	48									6.5	9.1

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WISARD - LAGWRP Operations - LAG MPR

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**LOS ANGELES - GLENDALE WATER RECLAMATION PLANT
SUMMARY OF TERTIARY TREATMENT & CHLORINATION**

January 2009

DATE	DAY	FILTRATION					CHLORINATION & CHLORINE CONTACT TANKS											CONTACT TIME	DAY-MIN	CONTACT MINUTES			
		EIMCO I/S #	TETRA I/S #	FLOW RATE gpm/ft ²	TURBIDITY		BKWSH FLOW mgd	CTI FLOW mgd	TANKS I/S #	DET TIME hr	RAS FILTER NaOCI gpd	CCT NaOCI gpd	TOTAL NaOCI gpd	CCT INF CL ₂ AVG mg/L	CCT EFF METER CL ₂ AVG mg/l	CCT EFF METER CL ₂ MAX mg/l	CCT EFF METER CL ₂ MIN mg/l				CCT EFF GRB TOT CL ₂ mg/l	CCT EFF GRB FREE CL ₂ mg/l	CONC TIME CT-MIN Min-mg/l
1	THU	9	5	2.1	2.5	0.9	65	1.0	17.4	2	4.0	0	1349	1349	6.5	5.6	5.9	5.3	5.5	5.5	0.1	882	157
2	FRI	9	5	2.0	2.6	0.9	66	1.2	16.8	2	4.2	0	1285	1285	6.5	5.7	6.1	5.4	5.5	5.5	0.1	918	159
3	SAT	9	5	2.1	2.6	0.9	66	0.8	17.4	2	4.0	0	1279	1279	6.5	5.6	5.9	5.3	5.3	5.3	0.2	837	156
4	SUN	9	5	2.0	2.6	0.9	65	0.7	17.3	2	4.1	0	1277	1277	6.5	5.7	6.0	5.3	5.3	5.3	0.1	898	156
5	MON	9	5	2.0	2.8	0.9	66	1.0	17.2	2	4.1	0	1334	1334	6.5	5.9	6.4	4.7	6.5	6.5	0.1	856	158
6	TUE	9	5	2.0	2.9	1.0	66	1.0	17.2	2	4.1	0	1207	1207	6.5	5.8	6.0	5.2	5.8	5.8	0.1	922	157
7	WED	9	5	2.1	2.8	1.0	65	0.8	17.6	2	4.0	0	1180	1180	6.5	5.6	6.0	5.3	5.1	5.3	0.3	869	156
8	THU	9	5	2.1	2.9	1.0	65	1.0	17.8	2	3.9	0	1186	1186	6.5	5.7	6.8	5.4	5.0	5.0	0.1	866	151
9	FRI	9	5	2.2	2.9	1.0	67	0.8	18.2	2	3.9	0	1327	1327	6.5	6.0	6.8	5.3	5.0	5.0	0.1	857	156
10	SAT	9	5	2.1	3.0	1.0	67	0.6	17.7	2	4.0	0	1372	1372	6.5	6.5	7.0	5.9	5.5	5.5	0.2	932	149
11	SUN	9	5	2.1	3.0	1.0	68	1.0	17.6	2	4.0	0	1346	1346	6.5	6.5	7.0	5.9	5.8	6.8	0.1	931	146
12	MON	9	5	2.2	3.2	1.0	68	0.9	18.7	2	3.8	0	1429	1429	6.5	6.7	7.2	6.2	6.2	6.2	0.1	987	146
13	TUE	9	5	2.2	3.3	1.1	66	1.0	18.9	2	3.7	0	1382	1382	6.5	6.3	7.1	5.4	5.8	5.8	0.1	867	149
14	WED	9	5	2.2	3.4	1.2	63	0.7	18.9	2	3.7	0	1337	1337	6.5	5.4	5.7	5.1	6.0	6.0	0.1	794	146
15	THU	9	5	2.2	3.5	1.2	66	1.2	18.4	2	3.8	0	1338	1338	6.5	5.4	5.8	5.1	5.2	5.1	0.1	802	148
16	FRI	9	5	2.1	3.6	1.2	67	1.3	18.0	2	3.9	0	1305	1305	6.5	5.3	6.5	5.0	5.8	5.0	0.1	575	148
17	SAT	9	5	2.1	3.8	1.2	69	1.0	18.0	2	3.9	0	1287	1287	6.5	5.1	5.4	4.7	5.4	5.4	0.2	730	148
18	SUN	9	5	2.1	4.0	1.1	72	0.8	17.7	2	4.0	0	1279	1279	6.5	5.0	5.3	4.5	5.0	5.0	0.1	748	150
19	MON	9	5	2.1	4.5	1.1	75	0.9	17.9	2	3.9	0	1385	1385	6.8	5.2	5.7	4.7	4.7	4.7	0.1	791	149
20	TUE	9	5	2.1	4.2	1.1	74	1.2	18.1	2	3.9	0	1610	1610	7.6	5.8	6.7	5.1	5.6	5.1	0.1	911	148
21	WED	9	5	2.1	3.6	1.1	69	1.0	17.6	2	4.0	0	1687	1687	8.2	6.6	7.5	5.8	7.0	7.0	0.2	1061	158
22	THU	9	5	2.1	4.3	1.2	73	1.4	17.7	2	4.0	0	1536	1536	7.5	6.4	7.2	5.7	6.9	6.9	0.2	971	164
23	FRI	9	5	2.1	4.3	1.1	74	1.2	17.7	2	4.0	0	1414	1414	7.0	5.8	6.0	5.5	6.2	6.2	0.1	922	164
24	SAT	9	5	2.1	3.2	1.2	64	0.9	17.5	2	4.0	0	1409	1409	7.0	5.8	6.1	5.6	5.2	5.2	0.1	950	165
25	SUN	9	5	2.1	3.0	1.2	59	0.8	17.4	2	4.0	0	1390	1390	7.0	5.8	6.2	5.6	6.6	6.6	0.1	951	163
26	MON	9	5	2.0	3.0	1.2	60	0.9	17.3	2	4.1	0	1391	1391	7.0	5.9	6.2	5.6	6.1	6.1	0.1	949	166
27	TUE	9	5	2.0	3.1	1.1	63	0.9	17.3	2	4.1	0	1384	1384	7.0	5.8	6.1	5.4	6.1	6.1	0.1	885	160
28	WED	9	5	2.0	3.2	1.1	67	1.0	17.3	2	4.1	0	1400	1400	7.0	5.6	6.0	5.3	6.1	6.1	0.1	877	161
29	THU	9	5	2.1	2.8	1.0	63	1.2	17.8	2	3.9	0	1442	1442	7.0	5.6	5.9	5.1	6.0	6.0	0.1	821	157
30	FRI	9	5	2.1	3.0	1.1	64	1.3	17.7	2	4.0	0	1459	1459	7.0	5.7	6.3	5.1	6.2	6.2	0.1	827	156
31	SAT	9	5	2.1	3.0	1.1	63	1.0	18.0	2	3.9	0	1492	1492	7.0	6.0	6.3	5.6	6.2	6.2	0.1	923	156
MAXIMUM		9	5	2.2	4.5	1.2	75	1.4	18.9	2	4.2	0	1687	1687	8.2	6.7	7.5	6.2	7.0	7.0	0.3	1061	166
MINIMUM		9	5	2.0	2.5	0.9	59	0.6	16.8	2	3.7	0	1180	1180	6.5	5.0	5.3	4.5	5.0	5.0	0.1	575	146
AVERAGE		9	5	2.1	3.2	1.1	67	1.0	17.7	2	4.0	0	1371	1371	6.8	5.8	6.3	5.3	5.8	5.8	0.1	874	155

**LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
SUMMARY OF Nden PROCESS & PHOSPHORUS REMOVAL**

January 2009

PAGE 12 C

DATE	DAY	NITROGEN PROFILES (COMPOSITE SAMPLES)										PHOSPHORUS PROFILES									
		PRI EFF NH ₃ -N mg/L	SEC EFF NH ₃ -N mg/L	FLTR EFF NH ₃ -N mg/L	FLTR EFF NO ₂ -N mg/L	FLTR EFF NO ₃ -N mg/L	FLTR EFF NH ₃ -N mg/L	PLT EFF NH ₃ -N mg/L	PLT EFF NO ₂ -N mg/L	PLT EFF NO ₃ -N mg/L	PLT INF TOT P mg/L	PLT INF DSLVD P mg/L	PRI EFF TOT P mg/L	PRI EFF DSLVD P mg/L	SEC EFF TOT P mg/L	SEC EFF DSLVD P mg/L	FLTR EFF TOT P mg/L	FLTR EFF DSLVD P mg/L	PLT EFF TOT P mg/L	PLT EFF DSLVD P mg/L	
1	THU	32.7	<0.1	0.2	<0.05	7.6	1.4	<0.05	6.3												
2	FRI	25.1	<0.1	0.2	<0.05	6.9	1.4	<0.05	7.7												
3	SAT	31.5	0.1	0.5	<0.05	7.0	1.4	<0.05	6.9												
4	SUN	27.2	<0.1	0.8	0.05	7.4	1.1	<0.05	7.4												
5	MON	25.4	<0.1	0.6	<0.1	6.8	1.1	<0.05	7.1												
6	TUE	29.3	<0.1	0.8	0.4	6.5	1.3	<0.05	6.9												
7	WED	25.6	<0.1	0.11	<0.1	7.2	1.1	<0.05	7.4												
8	THU	37.5	<0.1	0.6	<0.05	7.3	1.5	<0.05	7.3												
9	FRI	35.1	<0.1	0.6	<0.05	6.6	2.4	<0.05	6.9												
10	SAT	38.3	<0.1	0.7	<0.05	6.8	2.4	<0.05	7.0												
11	SUN	39.4	<0.1	1.0	<0.05	6.3	2.0	<0.05	6.6												
12	MON	39.1	0.2	1.0	<0.05	6.8	2.4	<0.05	6.4												
13	TUE	46.3	<0.1	0.9	0.06	6.1	1.3	<0.05	6.3												
14	WED	29.5	<0.1	0.09	0.06	5.9	1.0	<0.05	6.0												
15	THU	24.7	0.4	0.5	<0.05	6.5	1.5	<0.05	6.5												
16	FRI	34.9	0.4	0.5	<0.05	5.9	1.3	<0.05	6.3												
17	SAT	27.2	0.2	0.9	0.08	5.7	1.4	<0.05	6.0												
18	SUN	31.8	0.4	0.5	<0.05	6.2	1.4	<0.05	5.9												
19	MON	29.7	0.3	0.5	<0.05	5.6	1.2	<0.05	5.8												
20	TUE	25.3	<0.1	0.12	0.09	6.5	1.1	<0.05	6.0												
21	WED	25.1	<0.1	0.11	0.8	6.3	1.5	<0.05	6.6												
22	THU	27.0	<0.1	0.07	0.4	6.8	1.4	<0.05	6.8												
23	FRI	28.1	0.1	0.4	<0.05	6.2	1.4	<0.05	6.4												
24	SAT	25.9	<0.1	0.08	<0.05	7.4	1.3	<0.05	7.2												
25	SUN	25.7	<0.1	0.12	<0.05	7.6	1.4	<0.05	7.6												
26	MON	28.7	0.1	0.5	<0.05	7.7	1.5	<0.05	7.3												
27	TUE	28.8	<0.1	0.3	0.06	7.6	1.4	<0.05	7.6												
28	WED	27.5	0.1	0.5	<0.05	7.5	1.6	<0.05	7.5												
29	THU	27.6	0.1	0.08	<0.05	7.2	1.5	<0.05	7.2												
30	FRI	25.3	<0.1	0.08	<0.05	6.1	1.2	0.06	6.7												
31	SAT	26.7	0.2	0.5	<0.05	6.3	1.6	0.05	6.4												
	MAXIMUM	46.3	0.4	0.17	0.09	7.7	2.4	0.08	7.7												
	MINIMUM	24.7	<0.1	0.07	<0.05	5.6	1.0	<0.05	5.8												
	AVERAGE	30.1	<0.1	0.10	<0.05	6.7	1.5	<0.05	6.8												

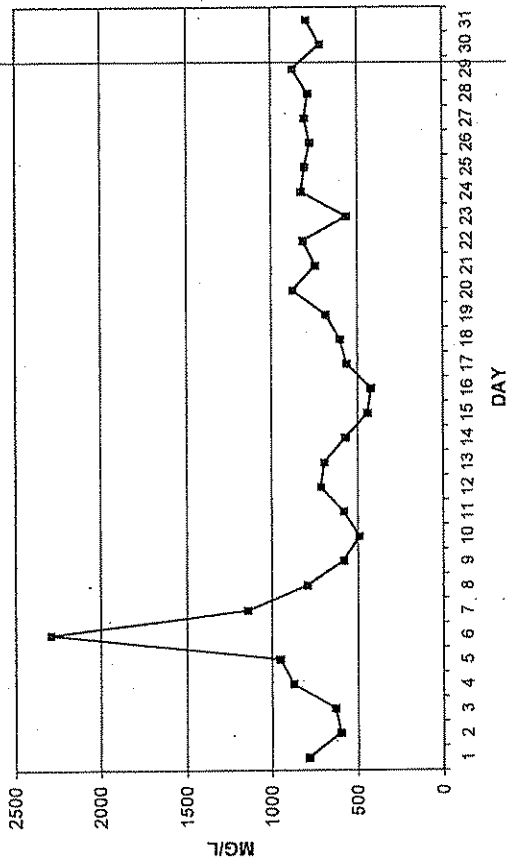
Generated by MMB at 02/09/2009 10:12:07 AM using the Production Database and WISARD V2.0
WISARD - LAGWRP Operations - LAG MPR

AE - Anal NS - Not Sampled

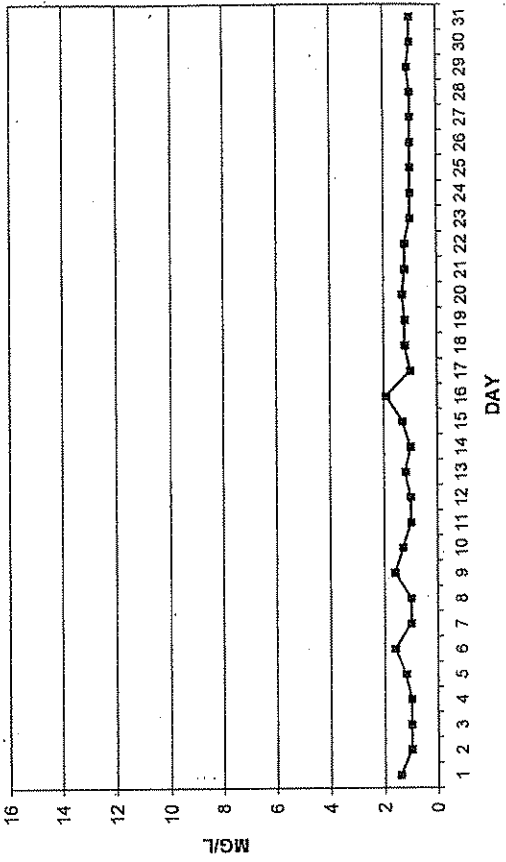
NR - Not Representative

FU - Future

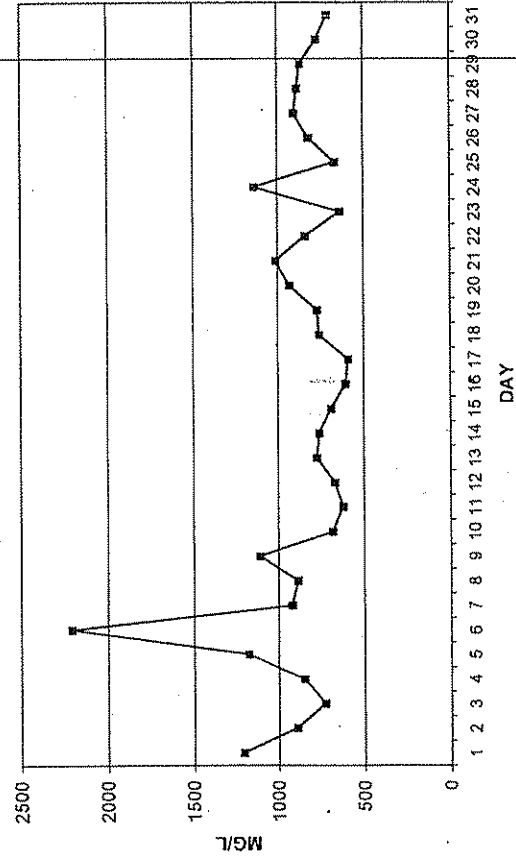
LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
INFLUENT SUSPENDED SOLIDS
January 2009



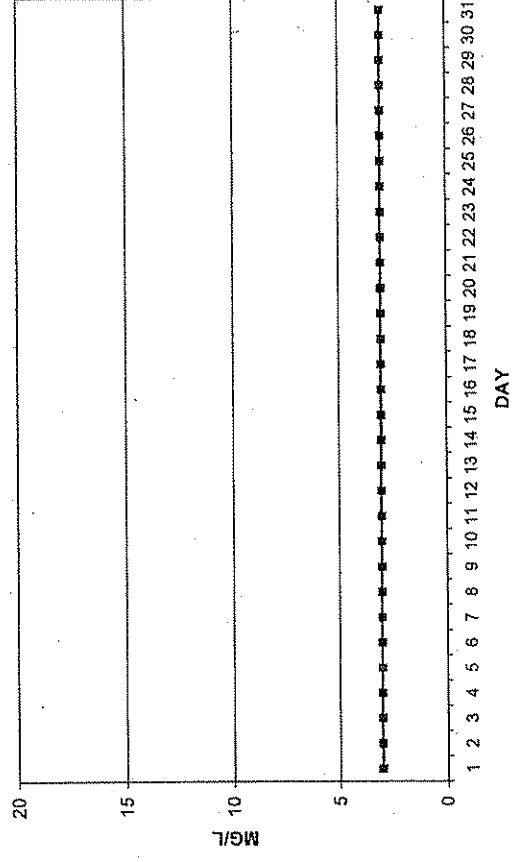
LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
EFFLUENT SUSPENDED SOLIDS
January 2009



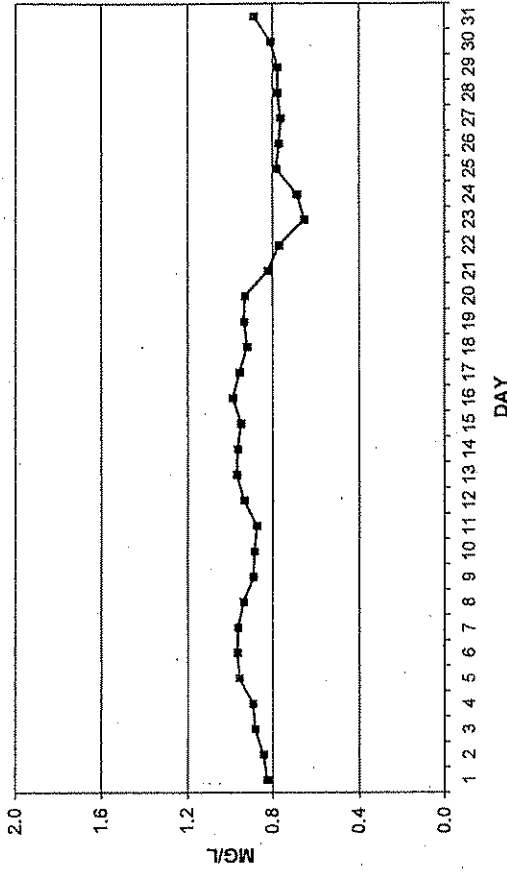
LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
INFLUENT BOD₅
January 2009



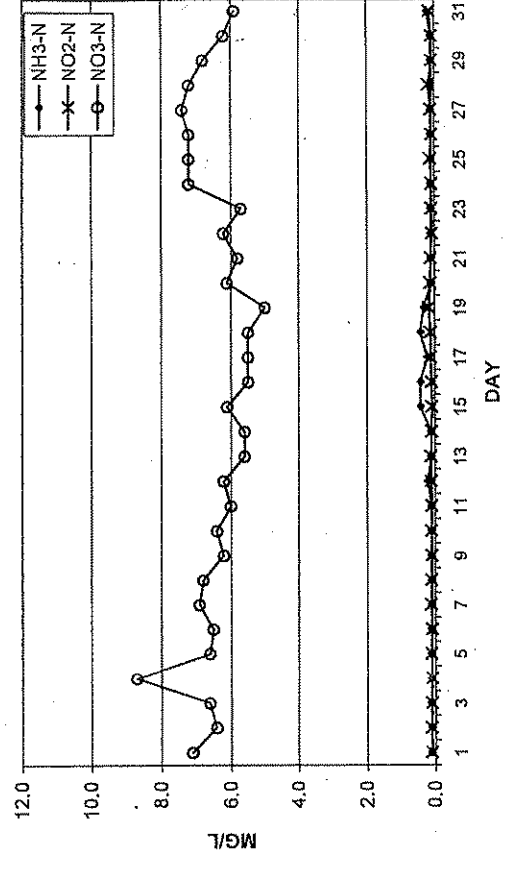
LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
EFFLUENT BOD₅
January 2009



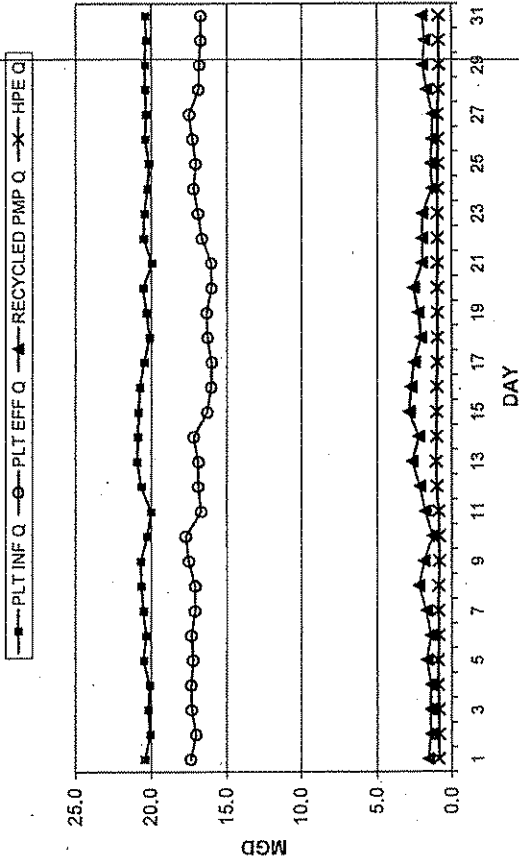
LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
PLANT EFFLUENT TURBIDITY
January 2009



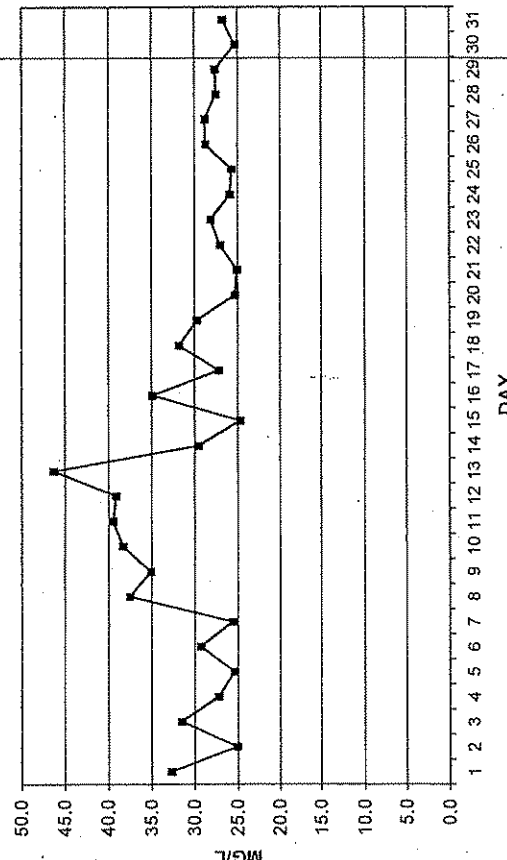
LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
SECONDARY EFFLUENT NITROGEN
January 2009



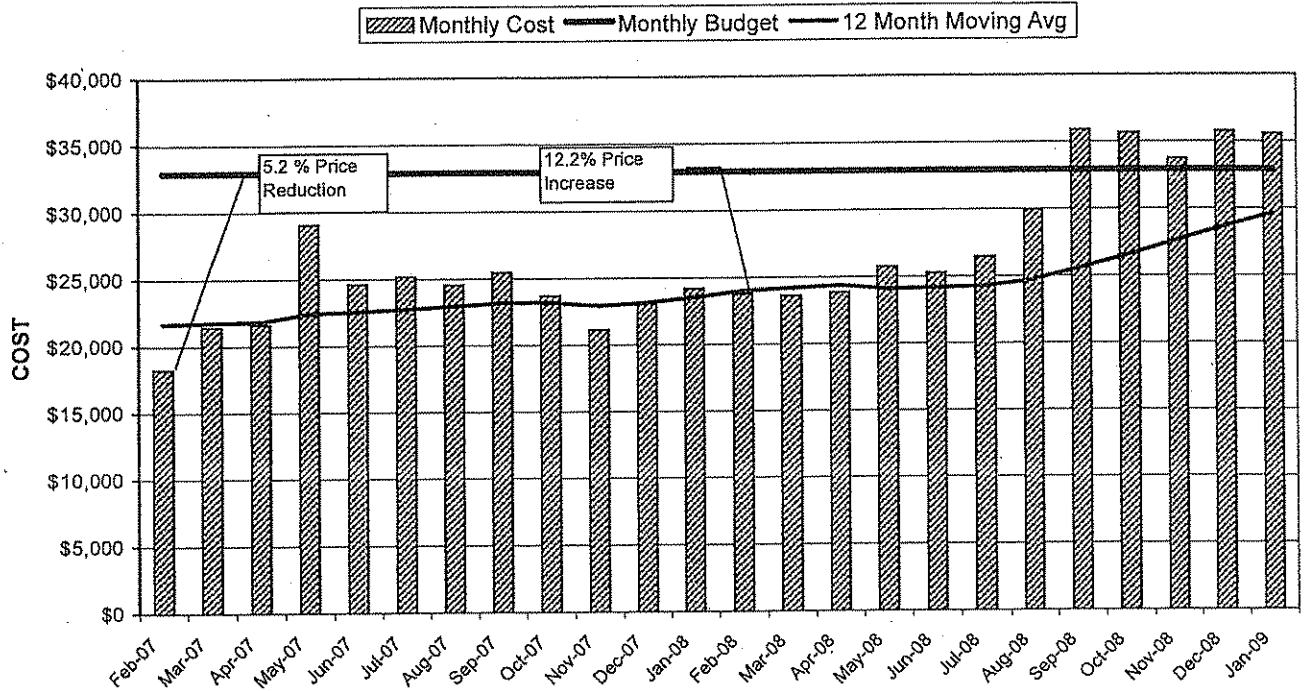
LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
FLOWS
January 2009



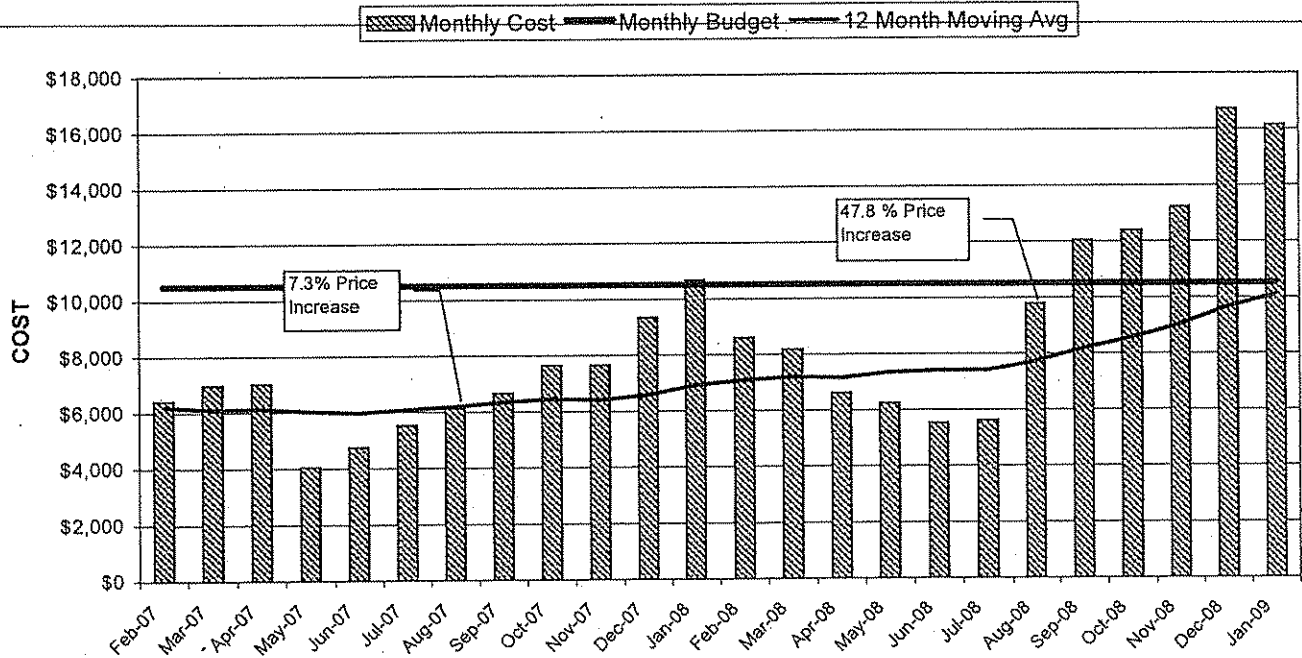
LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
PRIMARY EFFLUENT AMMONIA-N
January 2009



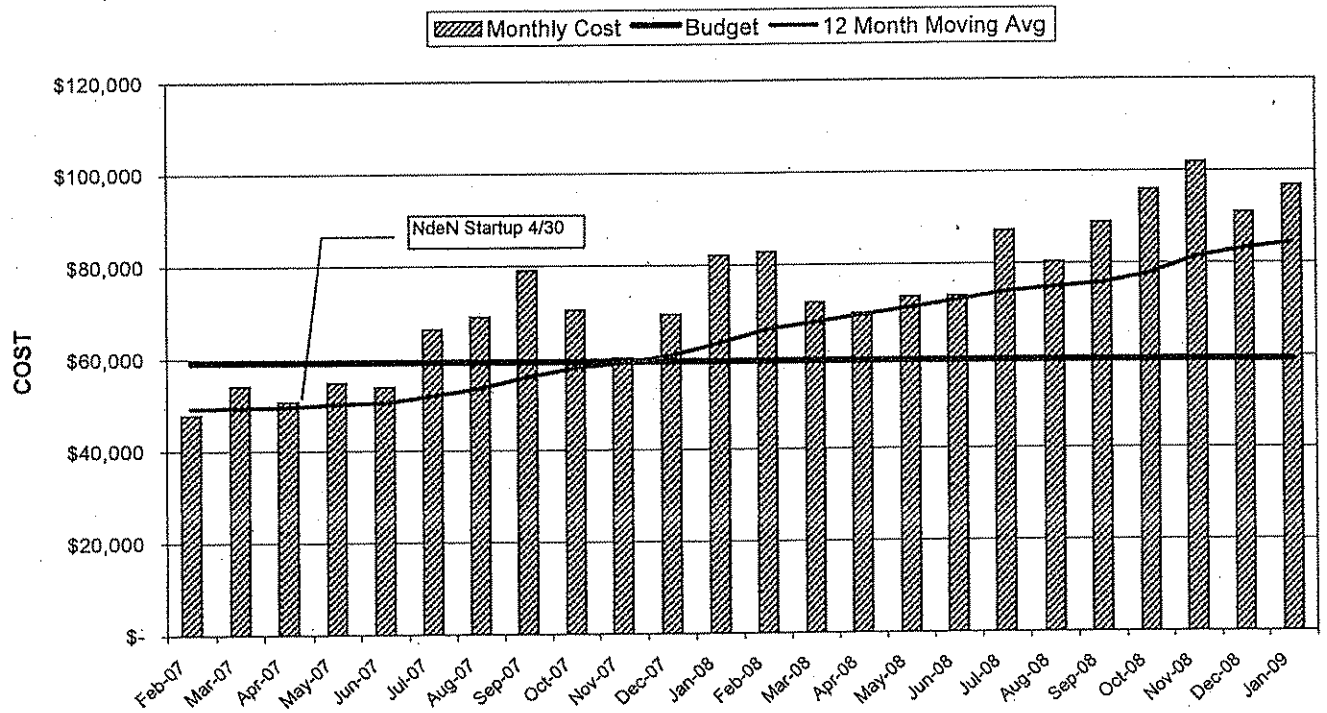
LAGWRP SODIUM HYPOCHLORITE COSTS (02/07 - 01/08)



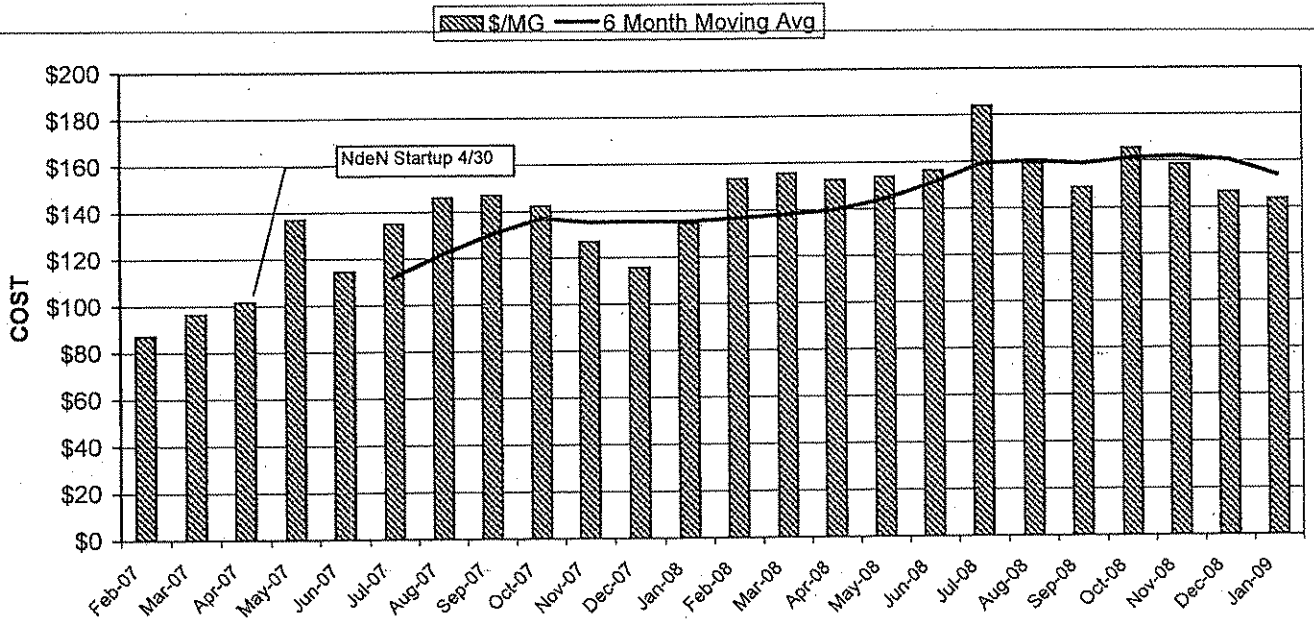
LAGWRP SODIUM BISULFITE COSTS (02/07 - 01/08)



LAG POWER COSTS (02/07 - 01/08)



LAG POWER COSTS (02/07 - 01/08) DOLLARS PER MG OF INFLUENT*



* Monthly reporting period for power cost varies from 28 to 34 days. Some data estimated due to billing problems with DWP

**WASTEWATER COLLECTION SYSTEMS DIVISION
MONTHLY REPORT JANUARY 2009**

During the month of **January 2009** the crews completed the following activities:

SEWER PREVENTIVE MAINTENANCE ACTIVITIES:

Primary System (sewers >15-inches in diameter)

- Cleaned **231** pipes using high velocity machine cleaning, which total **64,123** feet or **12** miles (YTD: **2,136** pipes, **550,940** feet, and **104** miles at a cost of **\$0.53/ft**).

Secondary Sewer System (<= 15 inches in diameter)

- Inspected **2,397** structures for a total of **600,928** feet or **114** miles at a cost of **\$0.06/ft** (YTD: **23,290** structures, **5,814,455** feet or **1,101** miles at **\$0.05/ft**).
- Cleaned **6,984** pipes using high velocity machine cleaning, which totaled **1,825,599** feet or **346** miles at a cost of **\$0.27/ft** (YTD: **50,097** pipes, **12,806,261** feet, **2,425** miles, **37.31%** of system at **\$0.30/ft**).
- Cleaned **149** pipes in easements totaling **24,946** feet or **5** miles at a cost of **\$1.62/ft** (YTD: **1140** pipes, **179,574** feet, **34** miles, at **\$2.12/ft**).
- Performed cleaning by mechanical root removal on **1,750** pipes, which totaled **381,129** feet or **72** miles at a cost of **\$0.41/ft** (YTD: **10,965** pipes, **2,464,362** feet, **467** miles at a cost of **\$0.43/ft**).

Overall Sewer System

Cleaned **9,187** pipes for a total of **2,297,636** feet or **435** miles (YTD: **64,734** pipes, **16,015,017** feet, **3,033** miles, **56.81%** of the 2008/09 productivity goals of **113,941** pipes). As part of the EPA/Bay keeper lawsuit settlement agreement, WCSSD is required to clean **60,000** pipes annually.

2006/07 Actual Production: 109,917 pipes, 4,930 miles (75.8% of system).

2007/08 Actual Production: 108,916 pipes, 4,932 miles (75.9% of system).

2008/09 Productivity Goals: 113,941 pipes, 4,531 miles (69.7% of system).

STORMWATER ACTIVITIES:

Cleaned **9,121** catch basins and removed **232** tons of material at a cost of **\$33.75/CB** (YTD: **51,891** catch basins were cleaned and **1,480** tons of debris removed at a cost of **\$35.19/CB**).

- *2006/07 Actual Production: 113,068 catch basins at a cost of \$26.20/CB.*

- *2007/08 Actual Production: 107,496 catch basins at a cost of \$25.47/CB.*

- 2008/09 Productivity Goals: 115,568 catch basins.

CUSTOMER SERVICE ACTIVITIES:

- Responded to **416** service requests, where **320** were related to the sewer and **96** were related to the storm water (YTD: **3,462** service requests).
 - 2006/07 total number of service requests: **5,940**.
 - 2007/08 total number of service requests: **6,207**.
 - 2008/09 anticipated number of service requests: **6,000**
- The odor control efforts are continuing:

A total of **forty-nine (49)** odor complaints were received for the entire city during the month of December. Among them **twenty-two (22)** were city related and **twenty-seven (27)** were non-city related.

The following table shows the chemical usage and expenditure for the fiscal year 2008-2009:

Odor Control Chemical Expenditures FY 2008-2009

		Sodium Hydroxide		Magnesium Hydroxide		
	South LA Sewers/Maze			(Thioguard)		Summary
	Volume	Tons	Monthly Expenditure	Volume (gal)	Monthly Expenditure	Total Monthly Expenditures
Month	(gal)					
July- 08	45,787	149	\$ 79,626	128,120	\$ 199,713	\$ 279,340
August	42,374	137	\$ 72,697	133,575	\$ 208,217	\$ 280,913
September	54,264	176	\$ 93,596	113,912	\$ 194,829	\$ 288,426
October	85,563	277	\$ 147,697	104,055	\$ 177,970	\$ 325,667
November	72,657	236	\$ 125,675	121,573	\$ 207,932	\$ 333,607
December	54,316	176	\$ 93,500	92,550	\$ 158,293	\$ 251,793
January	59,490	192	\$ 102,081	74,100	\$ 126,737	\$ 228,818
YTD	414,452	1,342	\$ 714,872	767,885	\$ 1,273,692	\$ 1,988,564

WCSD continues to work with the Bureau of Engineering to resolve several odor hot spot locations including:

1. Trap MH Repair/Rehabilitation, City-Wide
2. Local Sewer Construction, City-Wide
3. Interim and Permanent Air Treatment Facilities, City-Wide

CHEMICAL ROOT CONTROL:

The new contracts were executed on May 3, 2006. During the month of December, the root control contractors treated **268,371** feet or **50.83** miles of sewer in Basins PO4, P14 and P19 with metam sodium and diaquat at an approximate cost of **\$1.00/ft.** (YTD: **234.88** miles).

- 2006/07 Actual Production: **367 miles.**
- 2007/08 Actual Production: **435 miles.**
- 2008/09 Productivity Goals: **400 miles.**

CLOSED CIRCUIT TELEVISIONING (CCTV):

Total CCTV inspection by Contractor and crews: **243,660** feet or **46.15** miles (YTD: **2,695,892** feet or **510.59** miles). As part of the EPA/Baykeeper lawsuit settlement agreement, WCSSD is required to CCTV **600** miles annually.

- 2006/07 Actual Production: **883 miles.**
- 2007/08 Actual Production: **998 miles.**
- 2008/09 Productivity Goals: **800 miles.**

MAINTENANCE HOLE RAISING:

Raised to grade **79** maintenance holes by contractors (YTD: **942** MH's). The cost of maintenance hole resetting awarded to All American Asphalt was set at **\$390.0/MH**. The maintenance holes scheduled for resetting have been prioritized to provide support to the scheduled maintenance activities. The highest priority was assigned to the maintenance holes scheduled for root control and hot spot cleaning.

- 2006/07 Actual Production: **2,216 MHs.**
- 2007/08 Actual Production: **1,946 MHs.**
- 2008/09 Productivity Goals: **1,500 MHs.**

UNANTICIPATED DISCHARGE OF WASTEWATER:

During the month of December, the collection system experienced **15** overflows totaling **4,419** gallons. The majority of the blockages were caused by root intrusion. There were two Category I overflows. Of the **15** overflows, **one** reached the storm water system.

- 2005/06 All Spills: **208 spills (3.2 spills per 100 miles).**
- 2006/07 All Spills: **220 spills (3.4 spills per 100 miles).**
- 2007/08 All Spills: **200 spills (3.1 spills per 100 miles).**
- 2008/09 YTD : **89 spills**

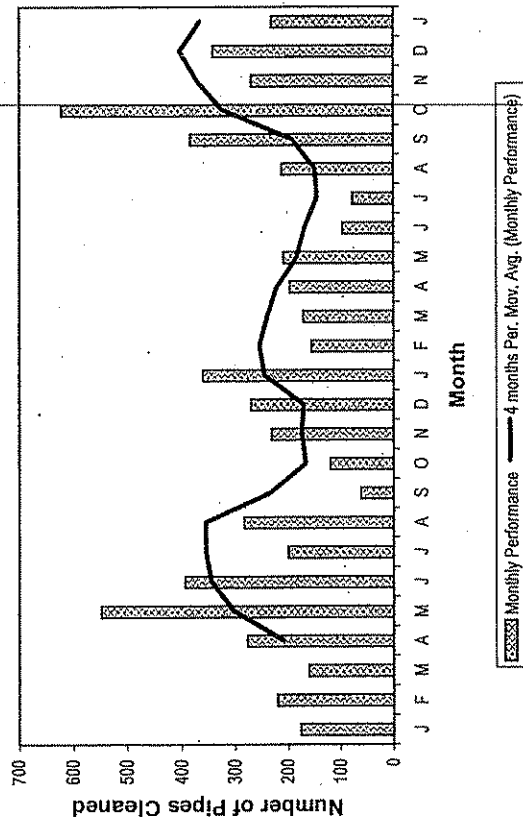
PUMPING PLANTS:

- During the month of January, the Mechanical Maintenance and Operation (MM&O) completed all of the regularly monthly preventive maintenance inspections.
- There was one power outage in our pumping plants during the month of January.

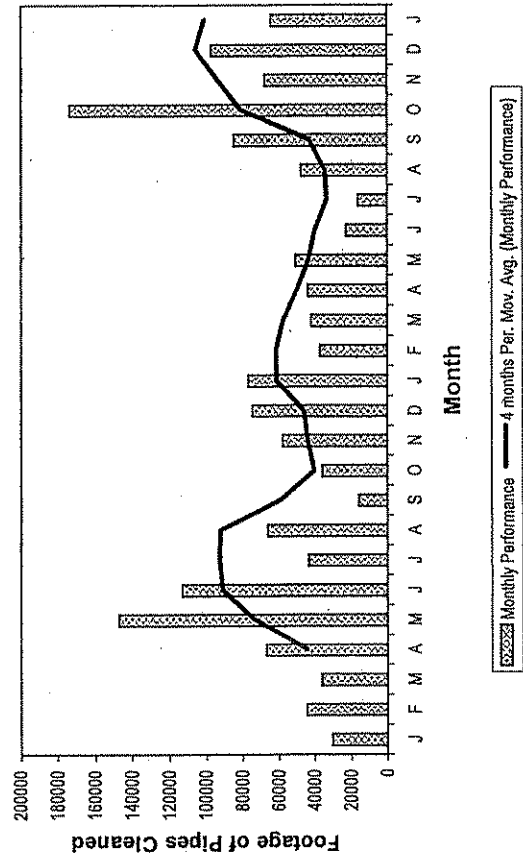
OVERTIME:

Staff used **675.5** hours of overtime; most of the overtime was used for responding to customer service requests and holiday.

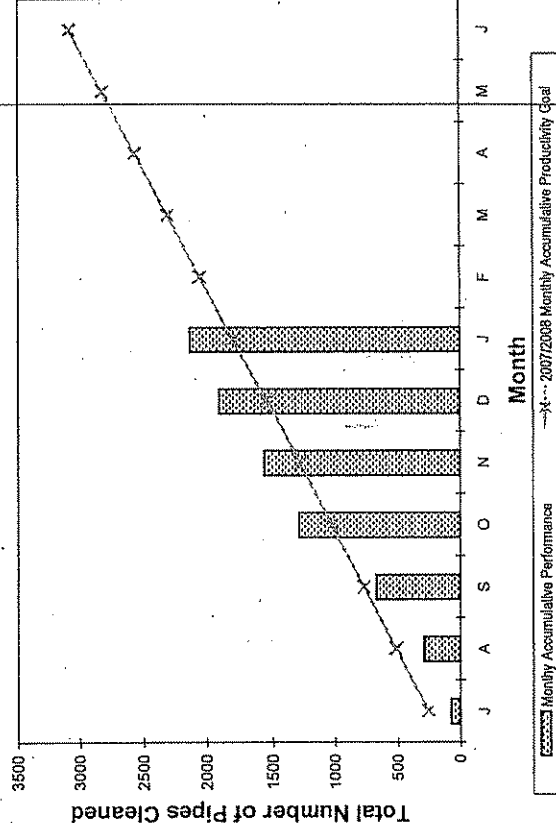
Sewer Cleaning - Sewers 15 - 30" (1/07-1/09)



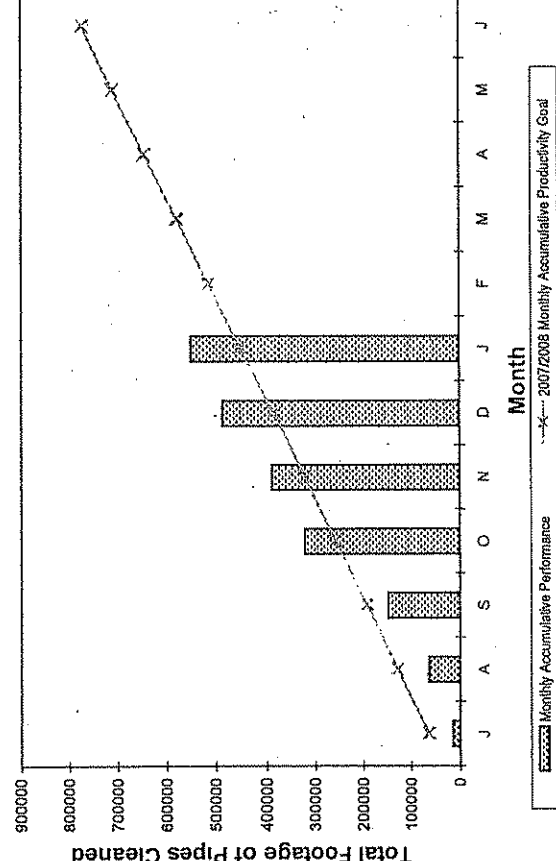
Sewer Cleaning - Sewers 15 - 30" (1/07-1/09)



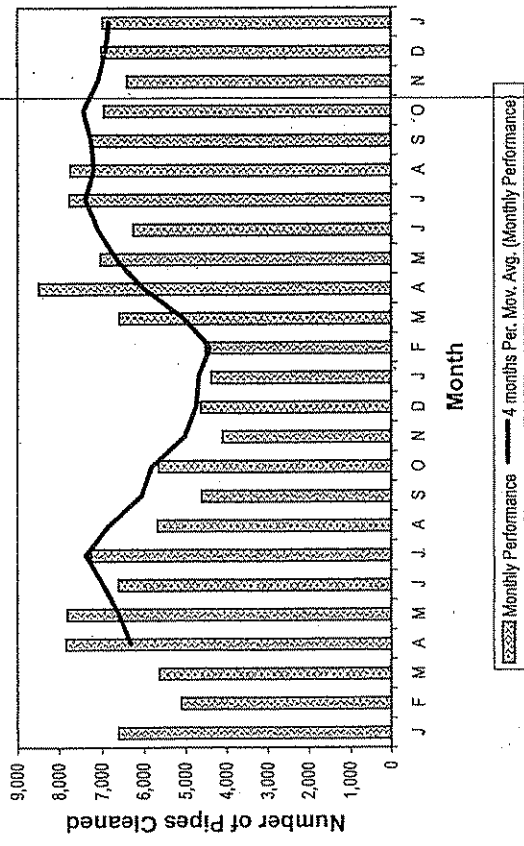
YTD Sewer Cleaning - Sewers 15 - 30"



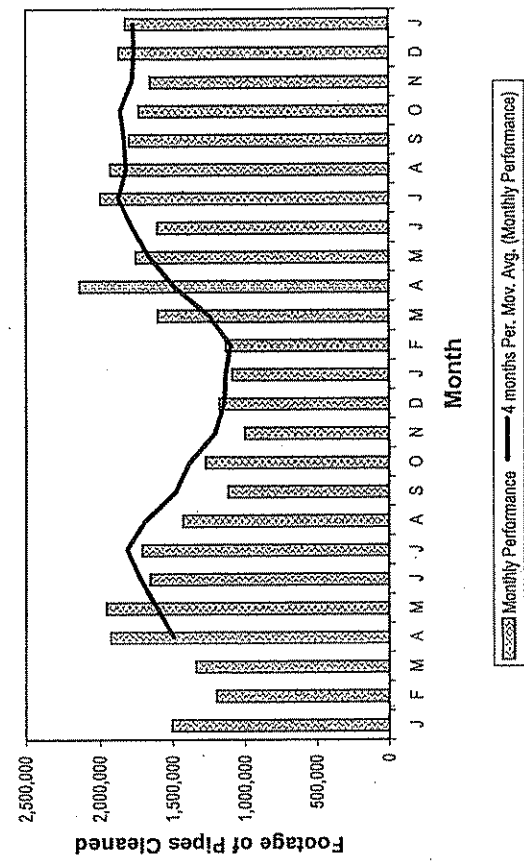
YTD Sewer Cleaning - Sewers 15 - 30"



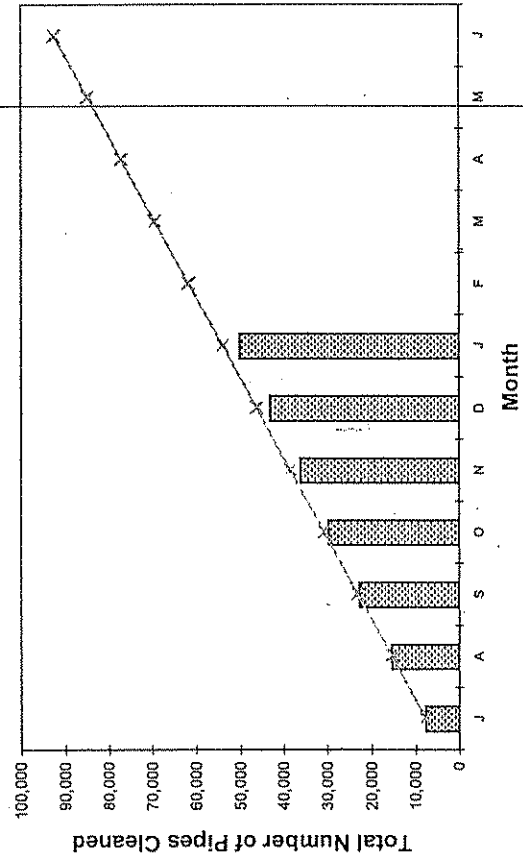
Sewer Cleaning - Sewers Under 15" (1/07-1/09)



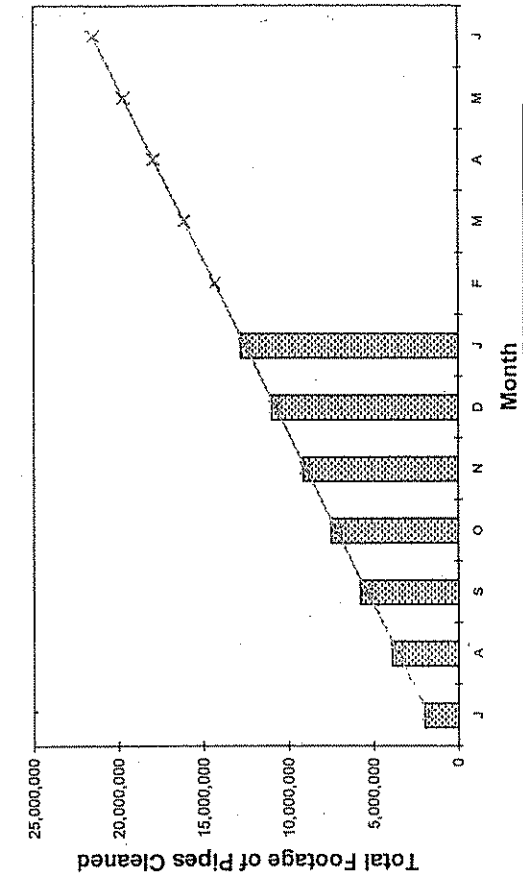
Sewer Cleaning - Sewers Under 15" (1/07-1/09)



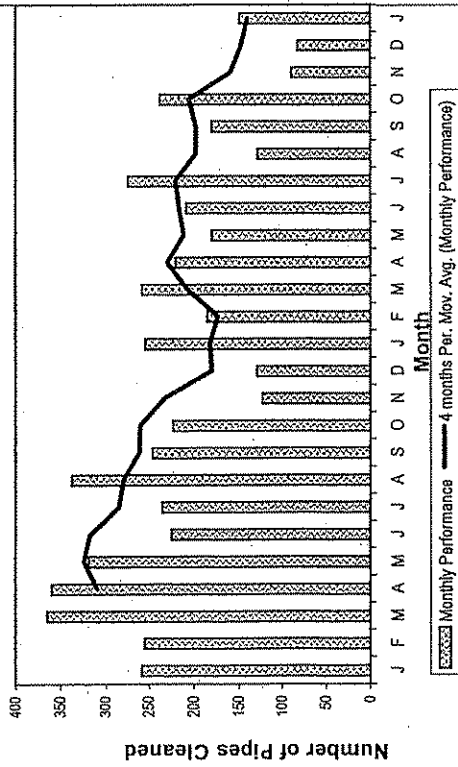
YTD Sewer Cleaning - Sewers Under 15"



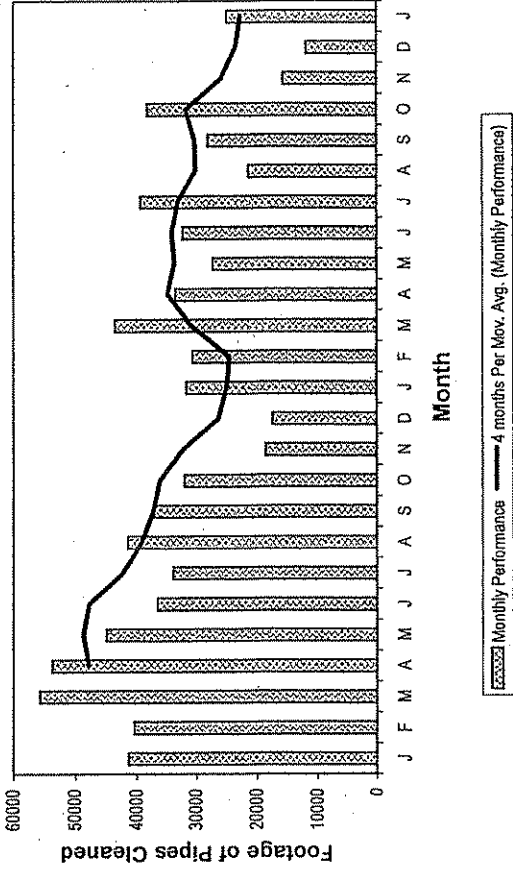
YTD Sewer Cleaning - Sewers Under 15"



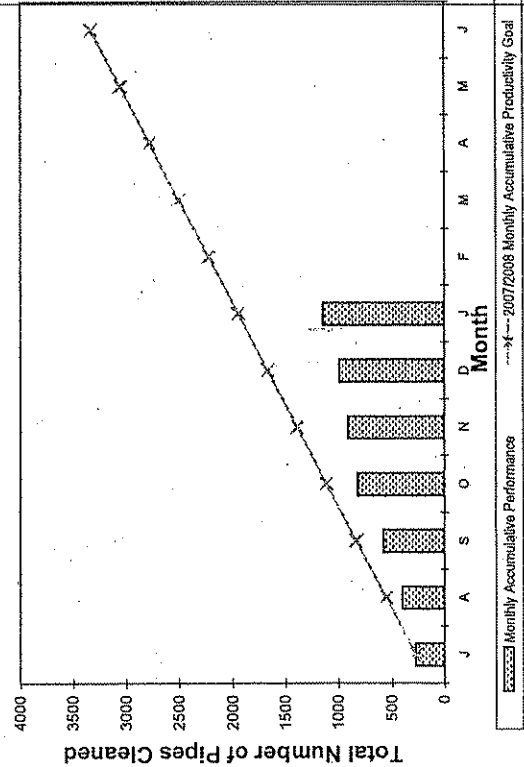
Sewer Cleaning-Easements Under 15"
(1/07-1/09)



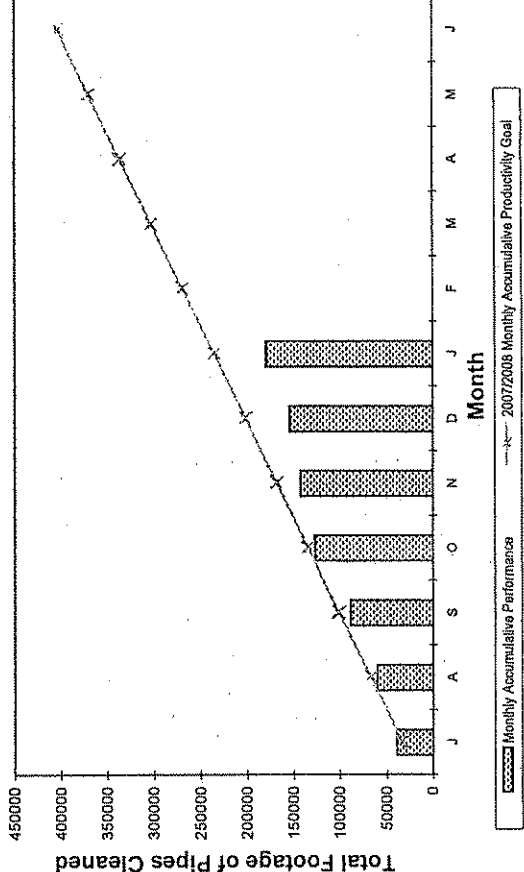
Sewer Cleaning - Easements Under 15" (1/07-1/09)



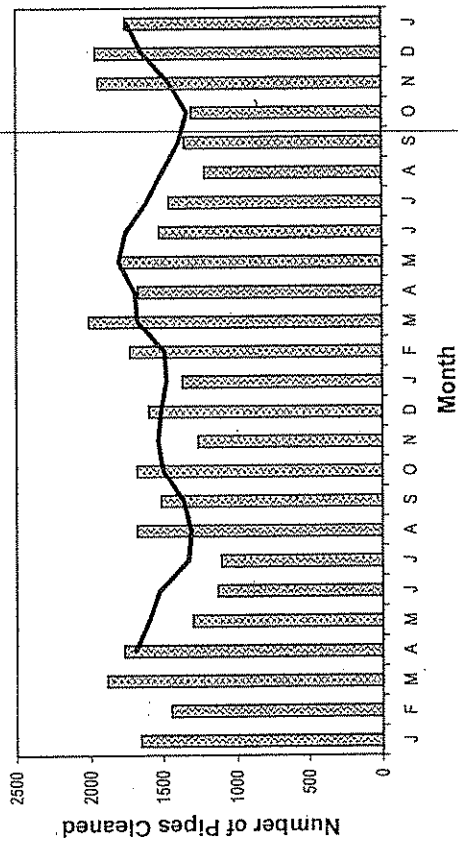
YTD Sewer Cleaning - Easements Under 15"



YTD Sewer Cleaning - Easements Under 15"

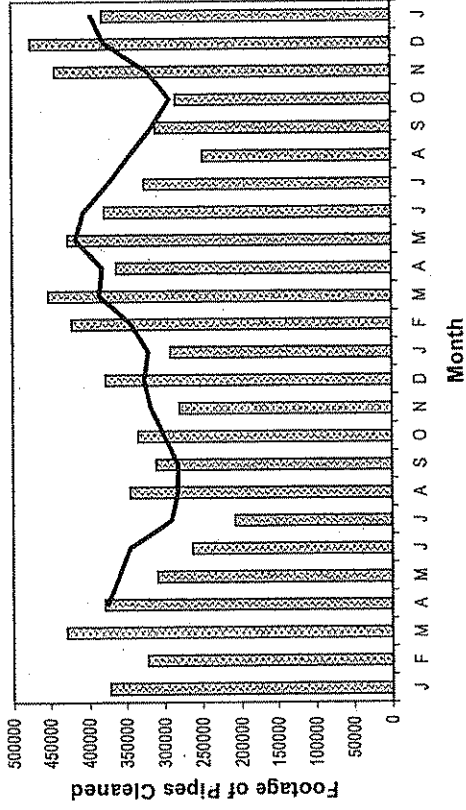


Sewer Cleaning - Root Removal (1/07-1/09)



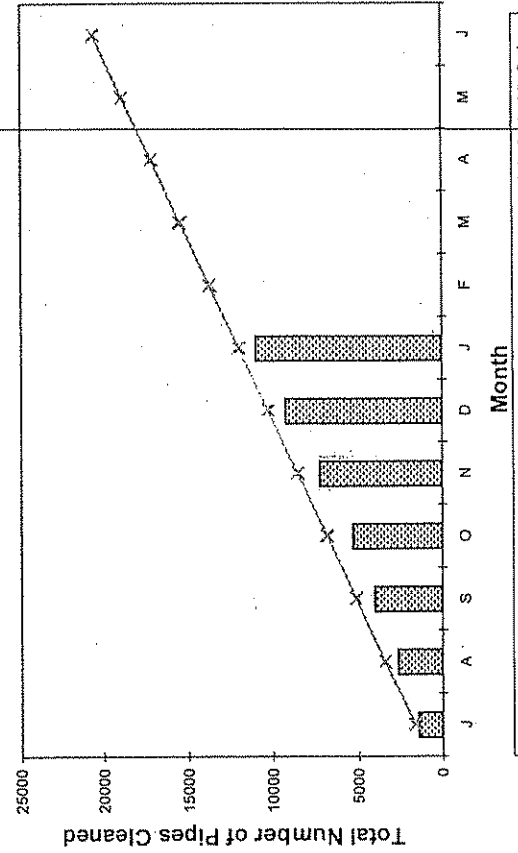
Monthly Performance 4 months Per. Mov. Avg. (Monthly Performance)

Sewer Cleaning - Root Removal (1/07-1/09)

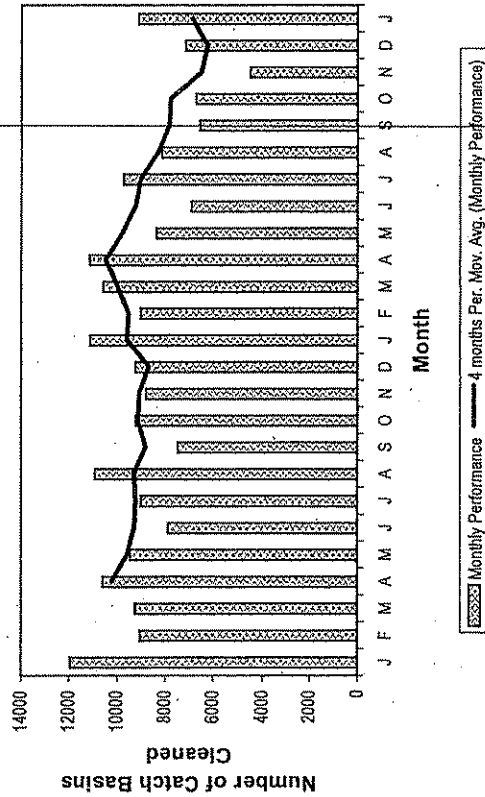


Monthly Performance 4 months Per. Mov. Avg. (Monthly Performance)

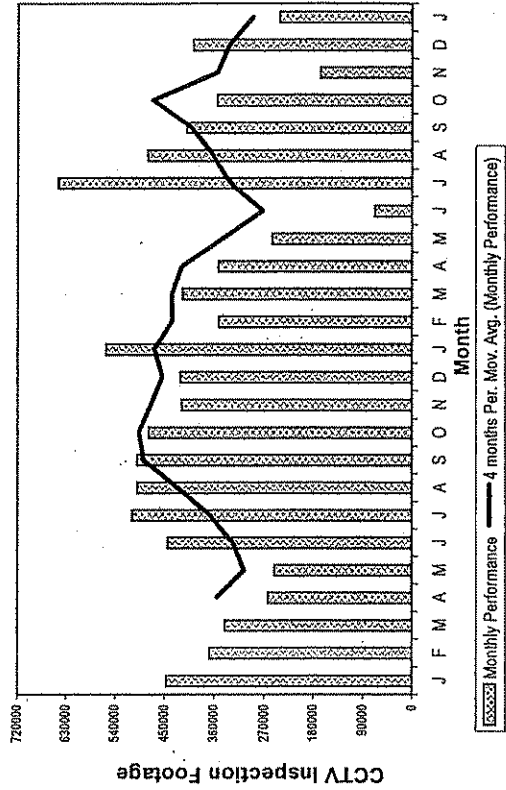
YTD Sewer Cleaning - Root Removal



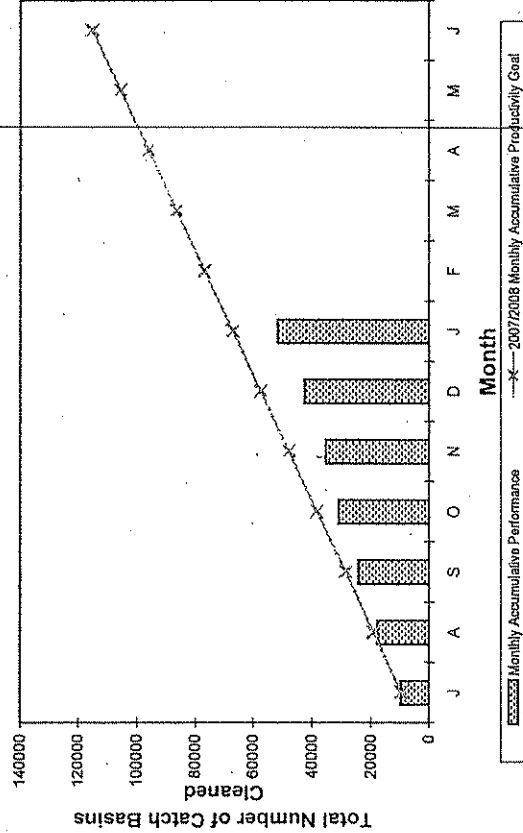
**Stormwater Structure Cleaning - Catch Basins
(1/07-1/09)**



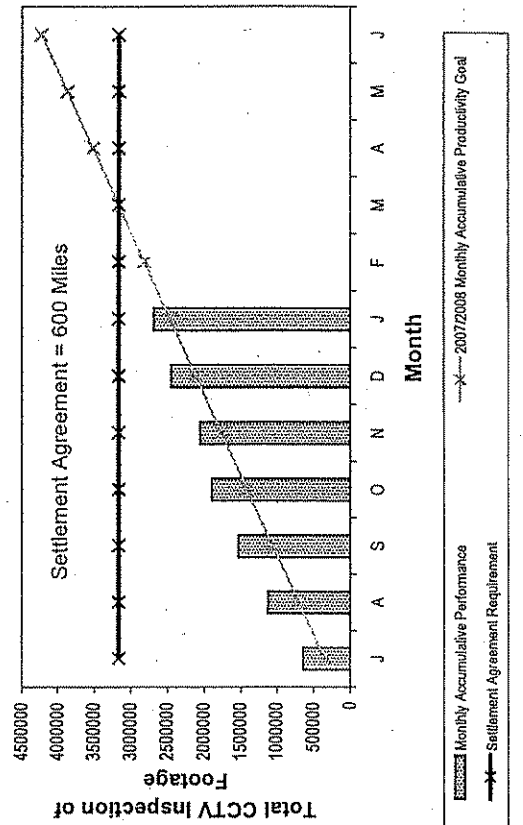
CCTV - Inspection (1/07-1/09)



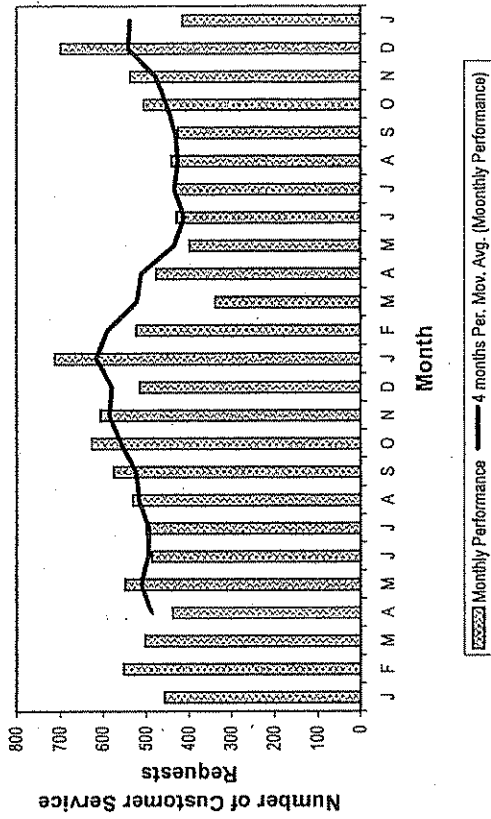
YTD Stormwater Structure Cleaning - Catch Basins



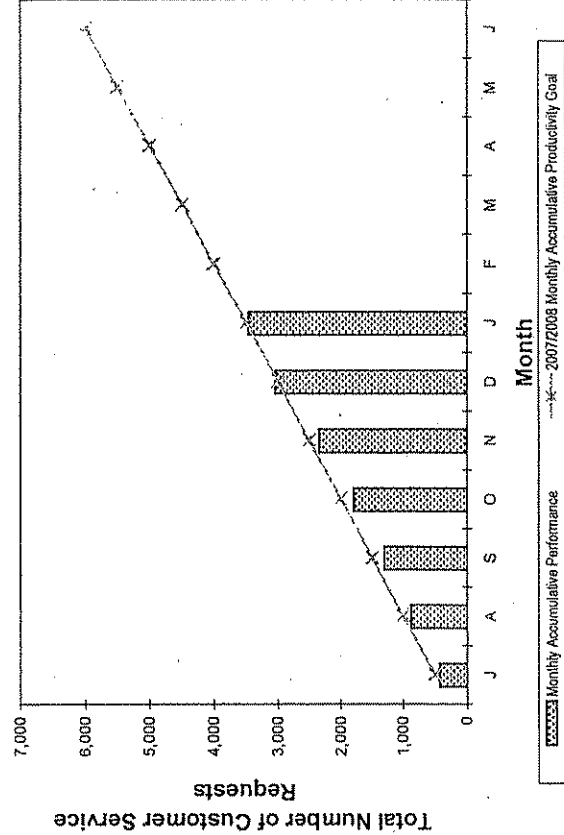
YTD CCTV - Inspection



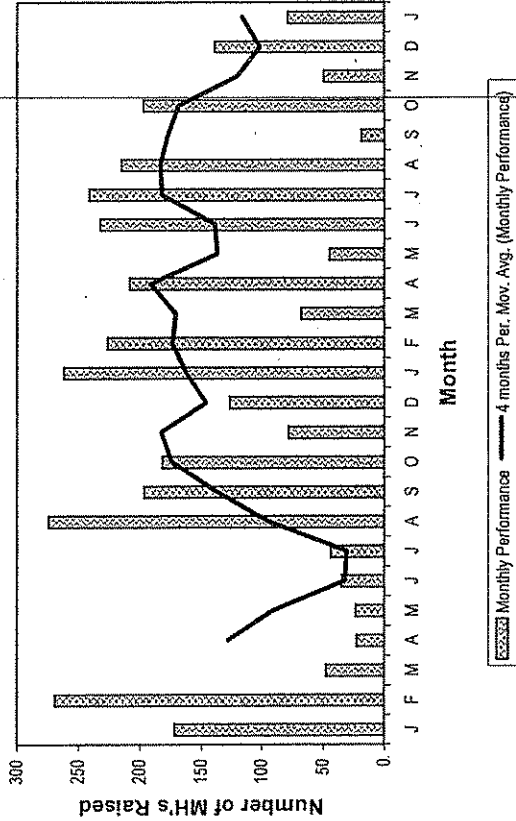
**Customer Service - Sewer + Stormwater
(1/07-1/09)**



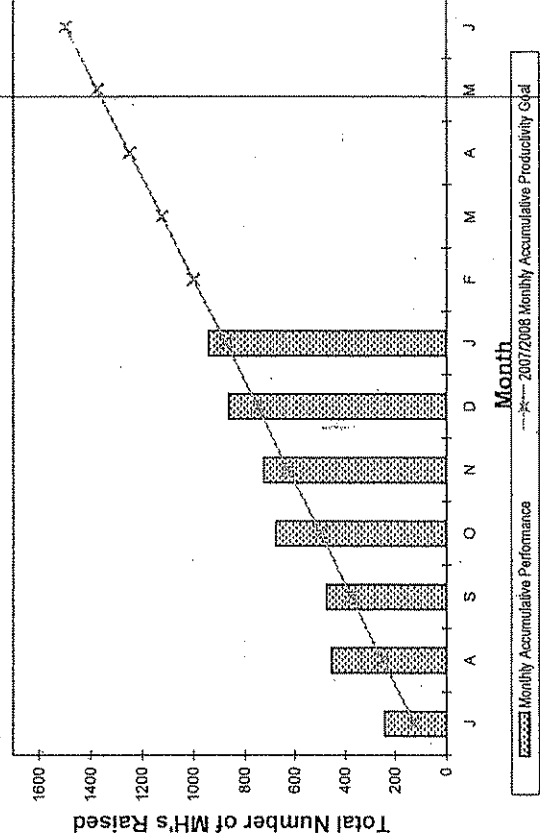
YTD Customer Service - Sewer + Stormwater



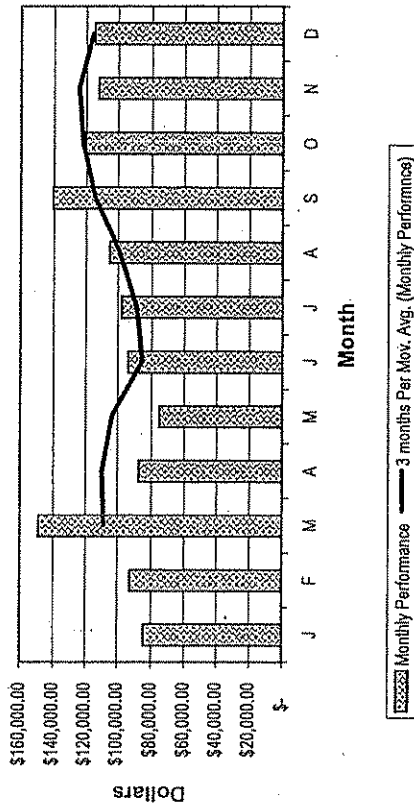
MH Raising (1/07-1/09)



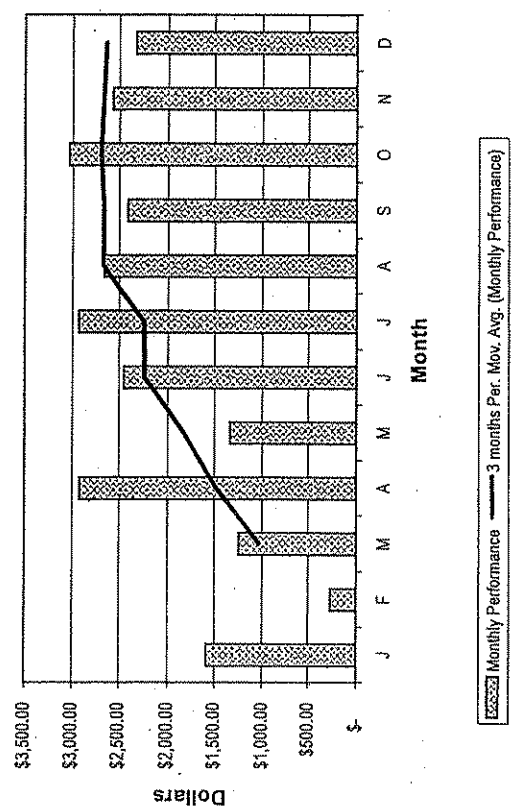
YTD MH Raising



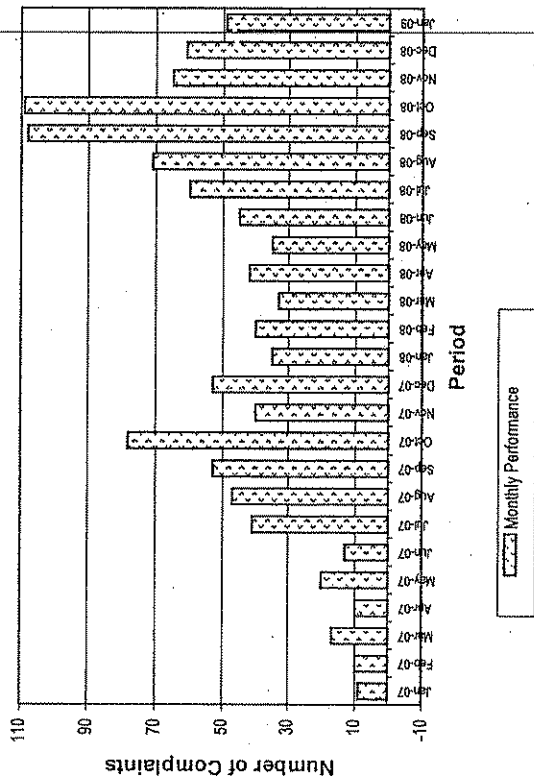
WCSD Monthly Power Cost Summary
12/07-12/08



WCSD Monthly Water Cost Summary
12/07-12/08



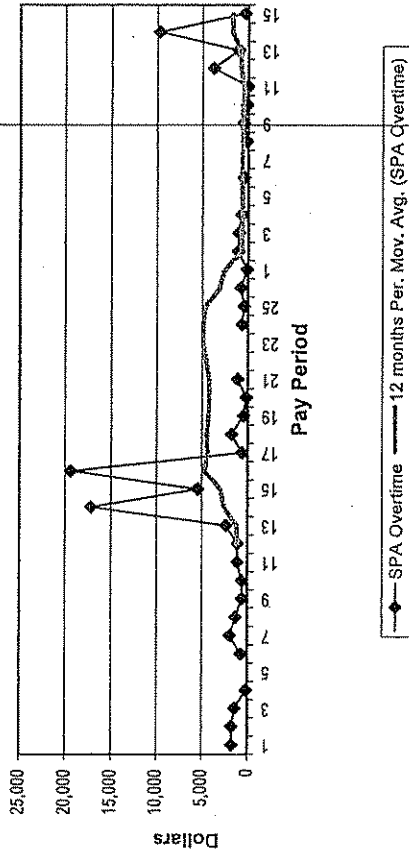
Odor Complaints (1/07-1/09)



Beginning July 2007 the data shown in the chart is for entire city
Before July 2007 the data is for only CD8, CD9 and CD10

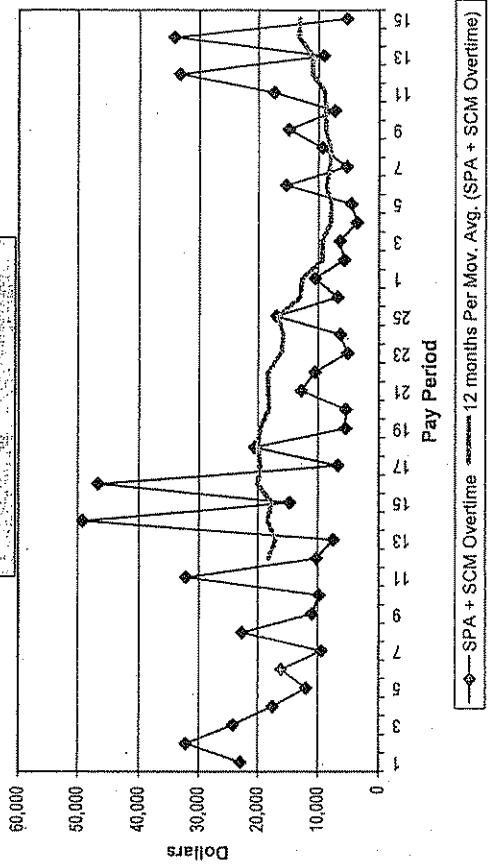
**Overtime Expenditures
Storm Pollution Abatement Fund**

FY 07/08 (Pay Period 1 to 26)
FY 08/09 (Pay Period 1 to 15)



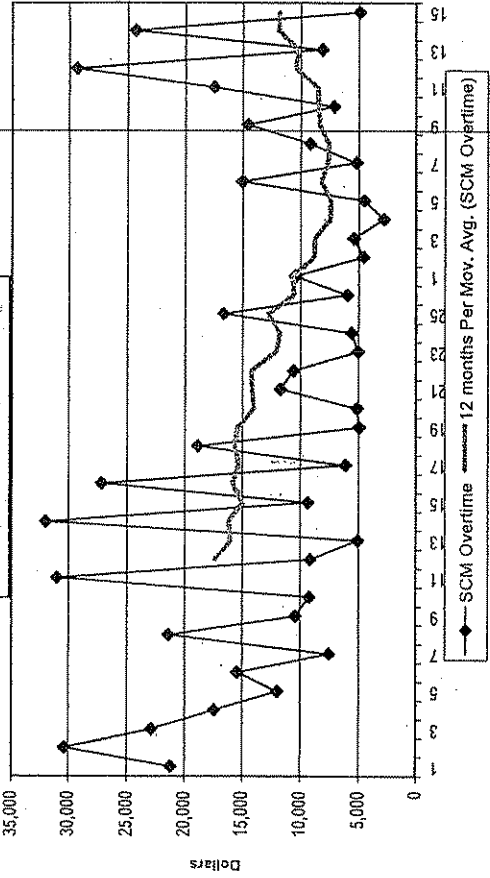
**Overtime Expenditures
Storm Pollution Abatement + Sewer Construction and
Maintenance Funds**

FY 07/08 (Pay Period 1 to 26)
FY 08/09 (Pay Period 1 to 15)

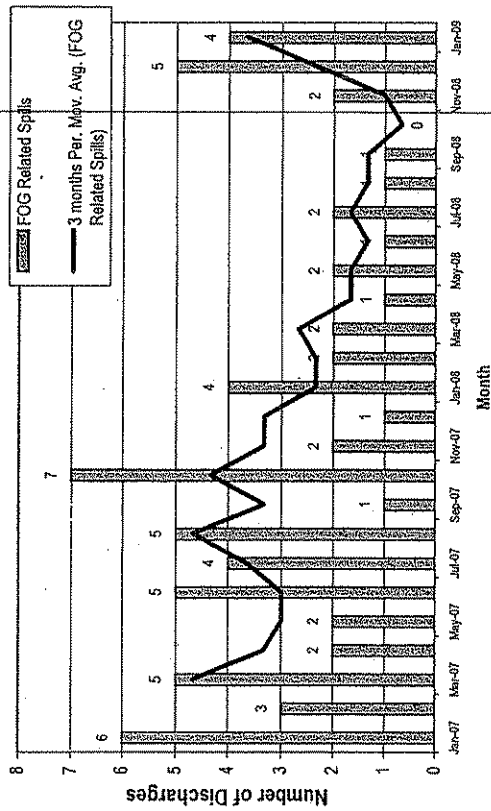


**Overtime Expenditures
Sewer Construction Maintenance Fund**

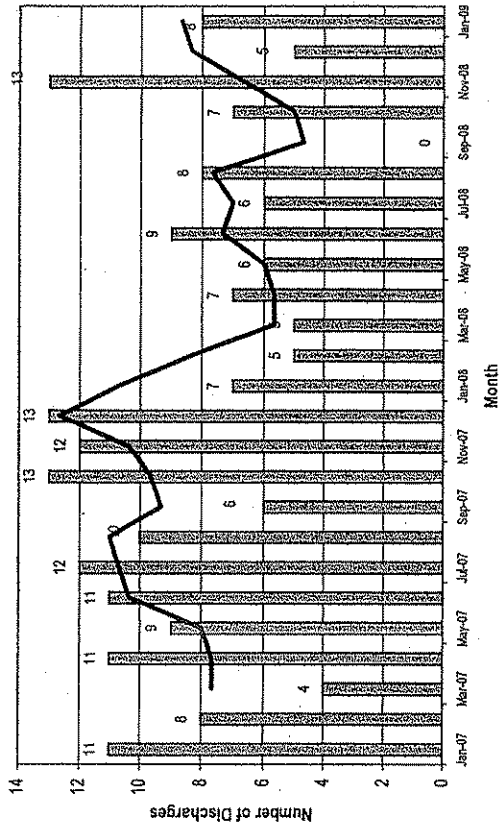
FY 07/08 (Pay Period 1 to 26)
FY 08/09 (Pay Period 1 to 15)



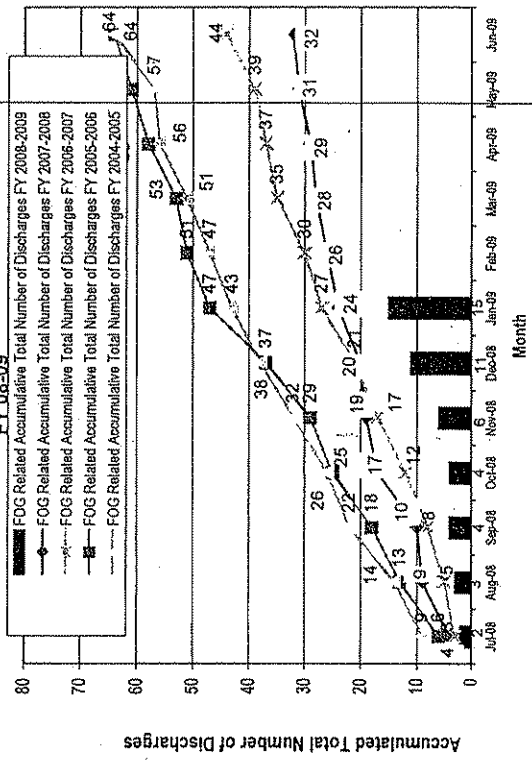
FOG RELATED UNANTICIPATED DISCHARGES OF WASTEWATER FROM THE COLLECTION SYSTEM (1/07-1/09)



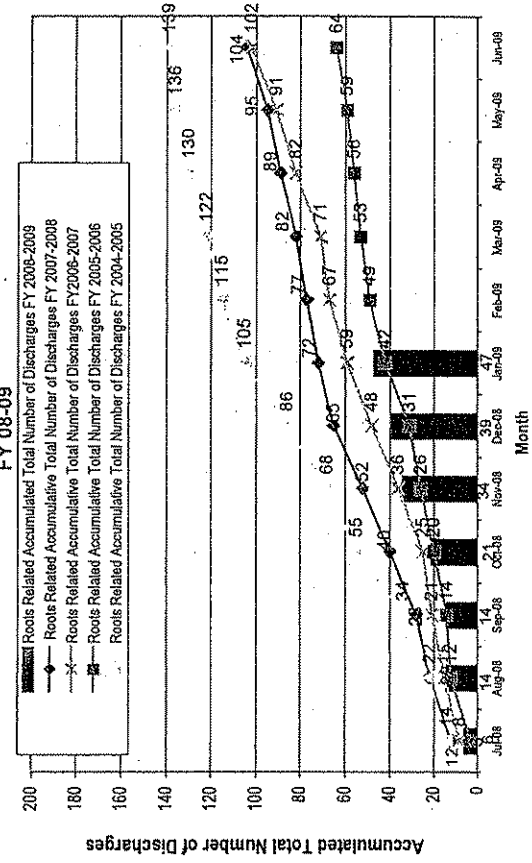
ROOT RELATED UNANTICIPATED DISCHARGES OF WASTEWATER FROM THE COLLECTION SYSTEM (1/07-1/09)



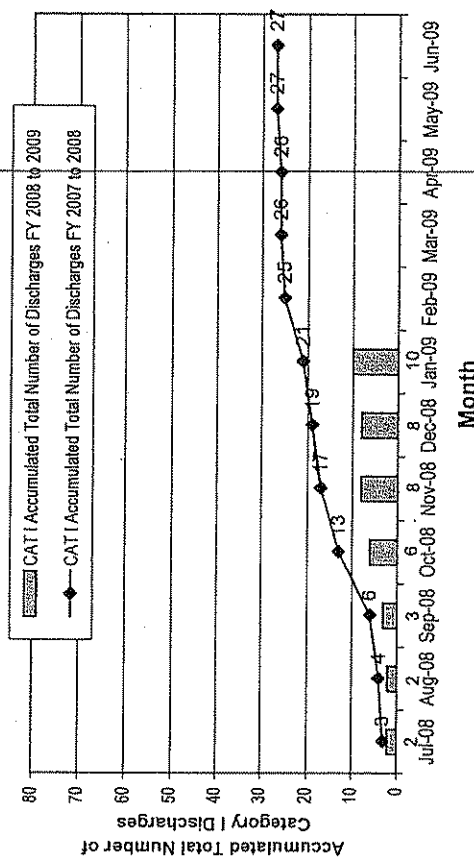
CITY OF LOS ANGELES Wastewater Discharges Attributed to FOG Comparison FY 08-09



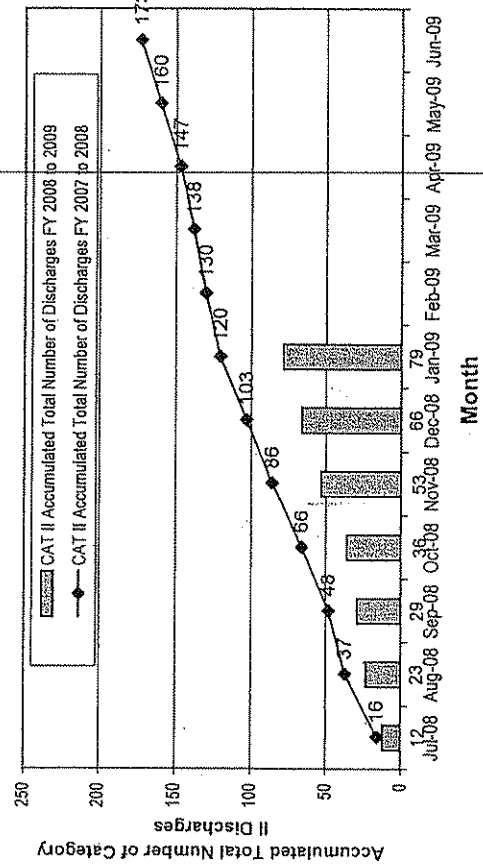
CITY OF LOS ANGELES Wastewater Discharges Attributed to Root Comparison FY 08-09



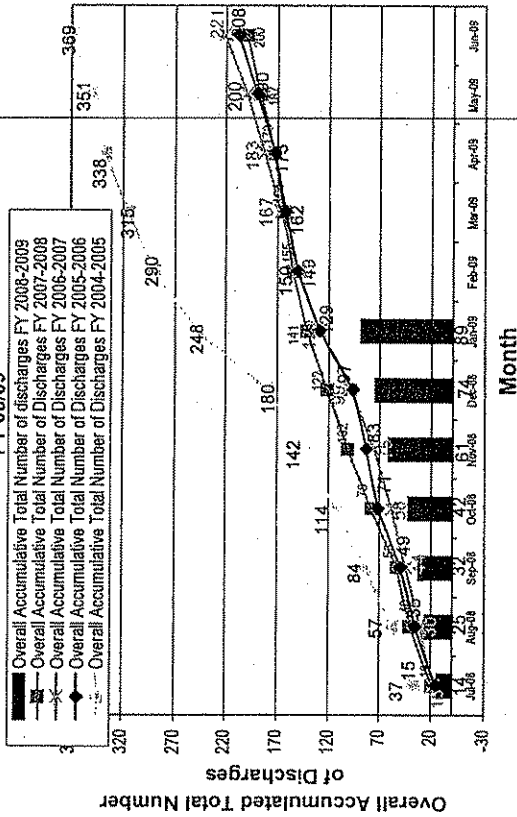
**CITY OF LOS ANGELES
New Regulations Category I
Spill Accumulative Total**



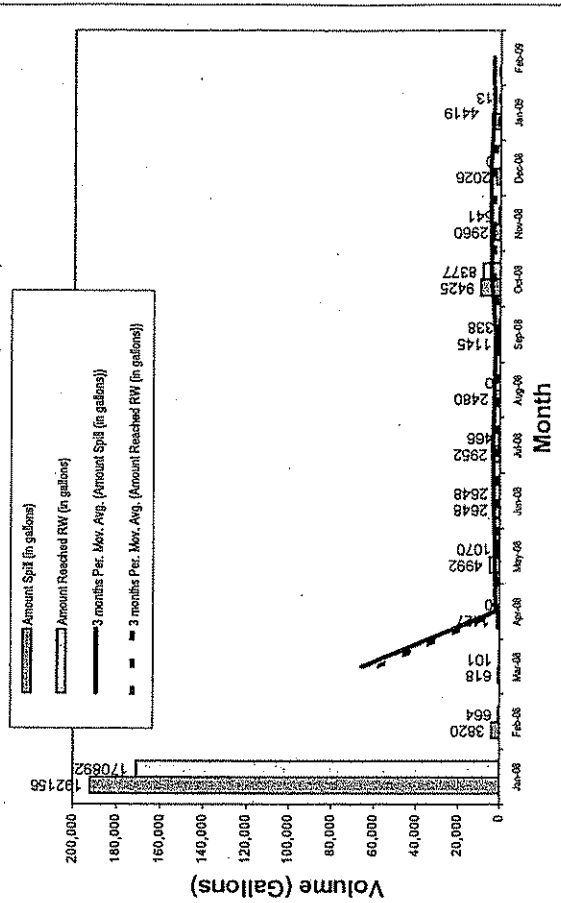
**CITY OF LOS ANGELES
New Regulations Category II
Spill Accumulative Total**



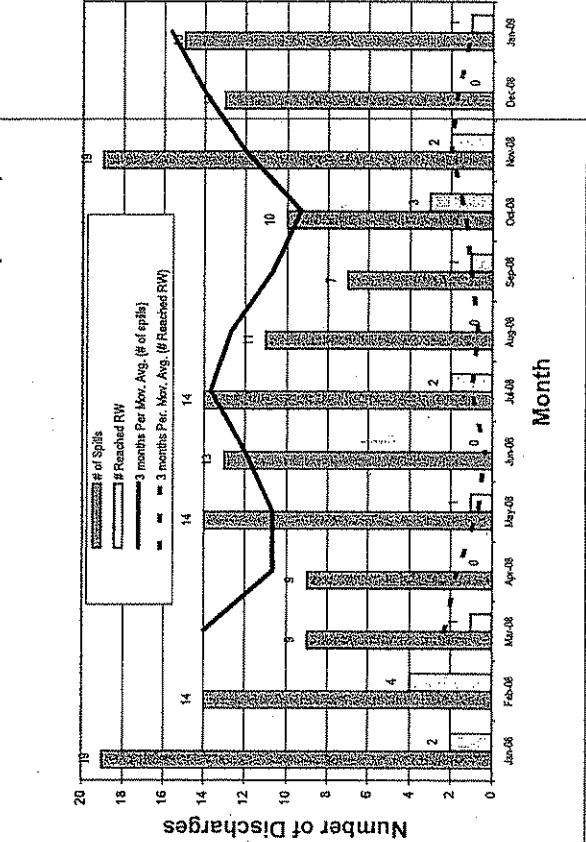
CITY OF LOS ANGELES
Overall Accumulative Total Number of Discharges Comparison
FY 08/09



CITY OF LOS ANGELES UNANTICIPATED DISCHARGES OF WASTEWATER
FROM THE COLLECTION SYSTEM (1/08-1/09)



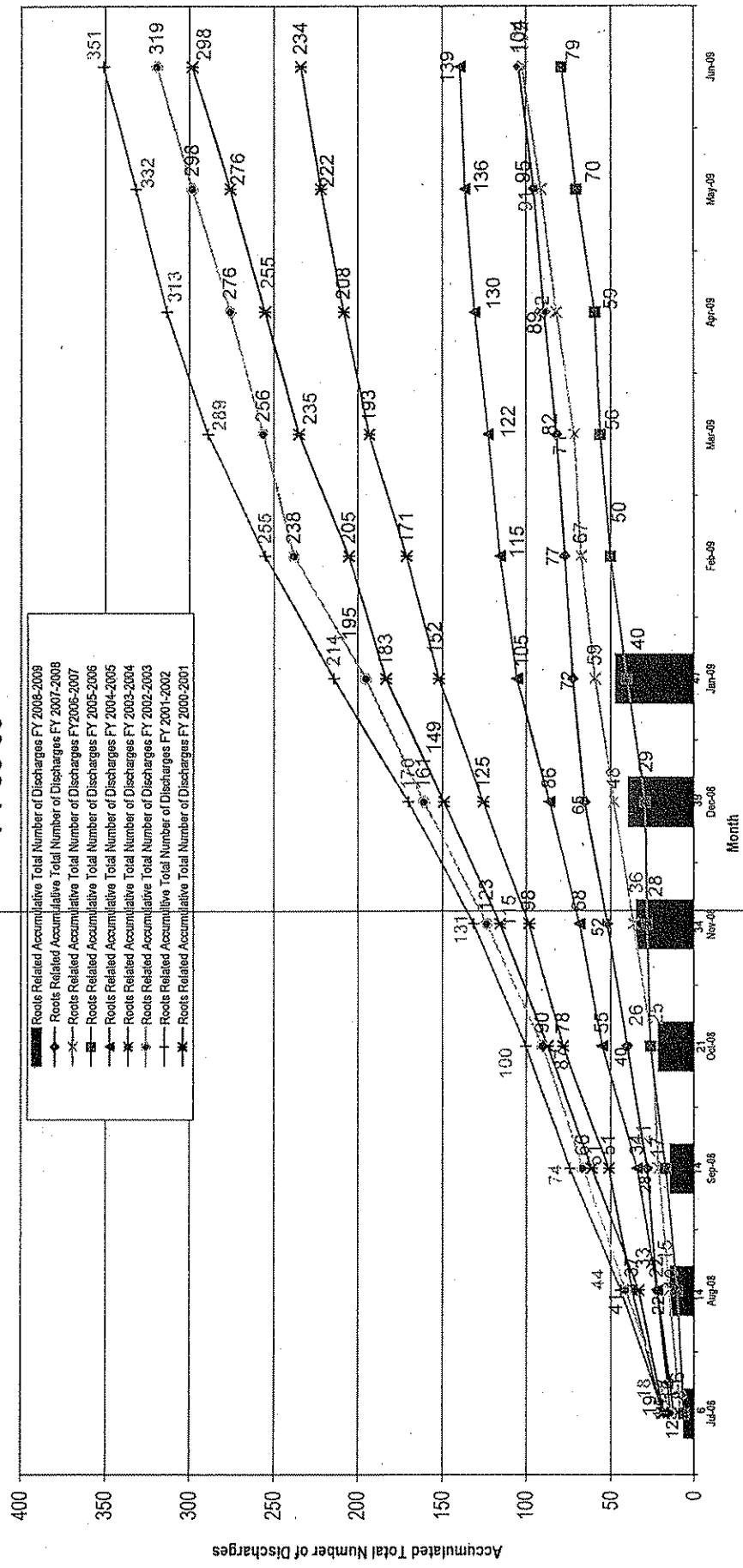
CITY OF LOS ANGELES UNANTICIPATED DISCHARGES OF WASTEWATER
FROM THE COLLECTION SYSTEM (1/08-1/09)



CITY OF LOS ANGELES

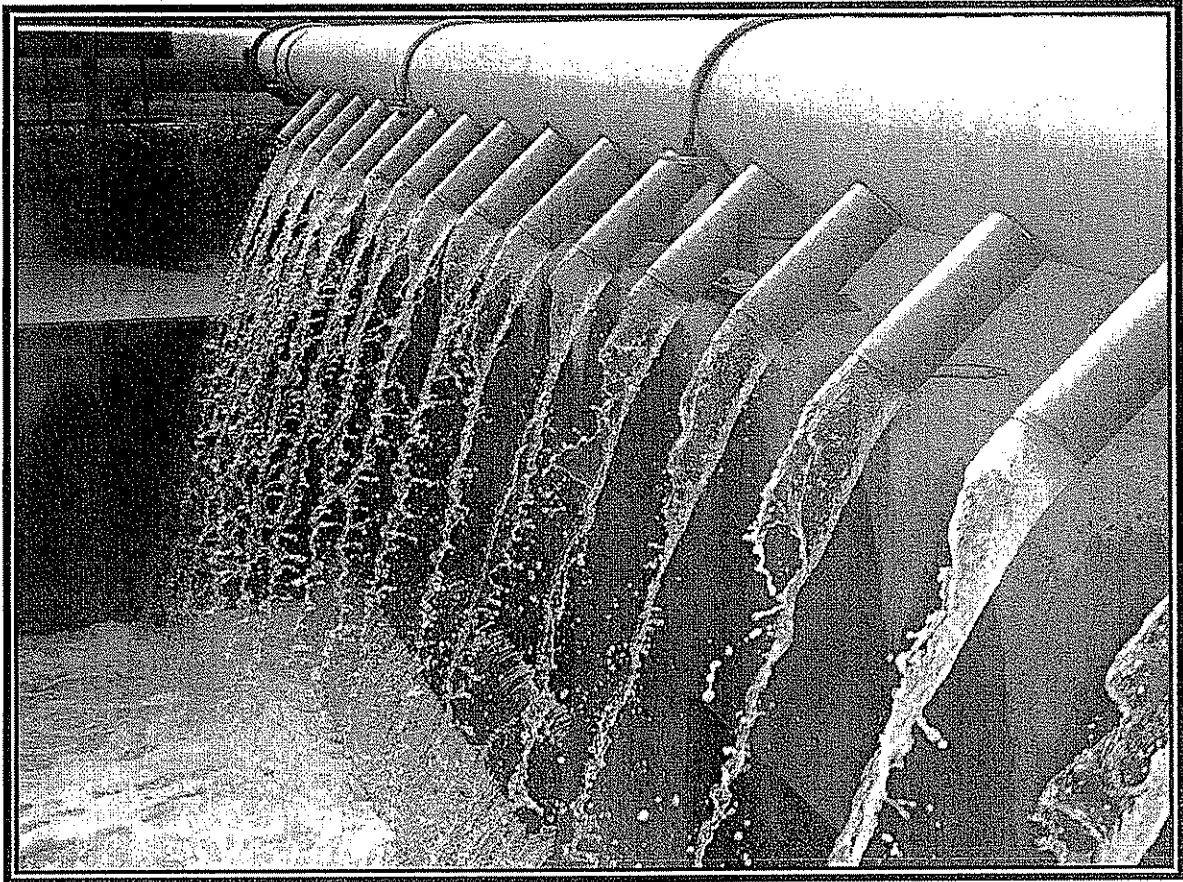
Wastewater Discharges Attributed to Root Comparison

FY 08-09



1-

EXHIBIT B - 6



MONTHLY PERFORMANCE REPORT

Hyperion Treatment Plant
Terminal Island Water Reclamation Plant
Donald C. Tillman Water Reclamation Plant
Los Angeles Glendale Water Reclamation Plant
Wastewater Collection Systems Division

DECEMBER 2008



CITY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUREAU OF SANITATION

CITY OF LOS ANGELES



SANITATION
DEPARTMENT OF
PUBLIC WORKS

THIS REPORT IS PREPARED FOR ADMINISTRATIVE, AND MANAGERIAL PURPOSES ONLY
This is not a report that will meet any of the City's Legal Reporting Requirements

**HYPERION TREATMENT PLANT
TERMINAL ISLAND WATER RECLAMATION PLANT
DONALD C. TILLMAN WATER RECLAMATION PLANT
LOS ANGELES-GLENDALE WATER RECLAMATION PLANT
WASTEWATER COLLECTION SYSTEMS DIVISION**

DECEMBER 2008

Transmitted for your use is a copy of the Monthly Report for Los Angeles City Treatment Plants and Wastewater Collection Systems Division. This report provides an overview of Plants activities. Starting October '97, we have consolidated reports from all four plants into one. We welcome your comments to improve the quality of this report. Please address all comments to Plant Manager at the Hyperion Treatment Plant.

Cover: Brine by-product of the Reverse Osmosis process being discharge to effluent pump wet well at Terminal Island Water Reclamation Plant.

BOARD OF PUBLIC WORKS (1) – 464

BUREAU OF SANITATION EXECUTIVES– 520

Traci Minamide
Varouj Abkian
Adel Hagekhalil

HYPERION TREATMENT PLANT - 535

Steve Fan, Plant Mgr – Preg 3
Mihran Sarkisian, Maint Mgr
Mark Starr, Eng Mgr – Preg 3
Emmanuel Alloh, Eng – Preg 3
Hansong Lee, Eng – Preg 3
Hi-Sang Kim, Eng – Preg 3
Joe Pascu, Training - HRDD
Tom Ardent, Safety – Preg 3
Jensen Liang, Oprs – Preg 1
Ron Bell, Oprs – Preg 1
Jordan Siplon, Oprs – Preg 3
Robert Planta, Oprs
Abbas Rahimdel, Oprs
Veretta Everheart, Admin. – Preg 3

OTHERS

Chris Westhoff, City Attorney-140
Karin Christie-177
John Mays, DCT-488
Michael Bell, DCT-488
Jim Feely, DCT-488

Hiddo Netto, DCT – 488
Bohlmann, Doug, TIWRD - 542
Seung Oh, TIWRD - 542
Dave Gumaer, TIWRD - 542
Brent Lorscheider, WESD - 544
Dan Pierce, ICSD - 911
David Bianchi (2), LAG - 541
Vlad Lorenzo, WCSD - 536
Barry Berggren, WCSD – 536-01
Jose Fuentes, EED – Preg 2
Kenneth Redd, EED – Preg 2
Kay Yamamoto (3), EMD-Preg 5
Sumitra Roy-Burman, EMD-Preg 5
Tim Haug, BOE EXEC.- 490
Tim Dafeta, IWMD-911
Sharam Kharaghani, WPD-1149/756
Omar Moghaddam, RAD – HRDD
Diane Gilbert, RAD – HRDD
Lisa Mowery, FMD-581
Stephen Petrich, ICSD – Preg 3
Len Bonilla, (EI Seg. Citizens)
James O'Neill, (EI Seg. Citizens)
James Clark, Black & Veatch
Lauren Fondahl, USEPA
File

Compiled by: Miguel Medina

HYPERION TREATMENT PLANT OVERALL SUMMARY

December 2008

DATE	DAY	PLANT INFLUENT												PLANT EFFLUENT										
		PLANT INFLUENT			FLOW WEIGHTED AVG OF SEWERS				PRIMARY INFLUENT WITH RECYCLE					WEST BASIN	5-MI FLOW	SUSPENDED SOLIDS		BOD		OIL & GREASE	SETTLE SOLIDS	TURB (LAB)		
		AVG FLOW	MAX FLOW	MIN FLOW	SUSPENDED SOLIDS		BOD		OIL & GREASE	SETTLE SOLIDS	SUSPENDED SOLIDS	BOD												
		MGD	MGD	MGD	mg/L	k#/D	mg/L	k#/D				mg/L	ml/L	mg/L	k#/D	mg/L	k#/D	mg/L	k#/D	mg/L	k#/D	mg/L	ml/L	
1	MON	308	407	130	279	717	339	871	90	20	386	986	322	622	30.0	277	20	46.2	22	50.8	<3	<0.1	7	
2	TUE	312	402	101	288	749	299	777		20	432	1107	282	723	27.6	283	19	44.8	18	42.5		<0.1	8	
3	WED	315	407	142	330	868	315	827		25	400	1053	295	777	24.4	290	17	41.1	18	43.5		<0.1	7	
4	THU	316	407	147	320	842	287	756		23	460	1227	325	867	27.3	287	18	41.9	19	45.5		<0.1	7	
5	FRI	316	416	146	236	622	259	682		20	378	1001	328	889	30.4	284	11	26.1	15	35.6		<0.1	7	
6	SAT	311	436	140	247	642	282	733		19	378	993	318	835	29.7	281	15	33.9	15	35.1		<0.1	8	
7	SUN	298	421	137	365	909	361	899	50	18	396	1003	305	772	29.7	268	23	50.7	16	35.7	<3	<0.1	7	
8	MON	307	391	137	340	870	343	879		23	376	902	358	858	27.5	279	16	36.0	15	34.9		<0.1	7	
9	TUE	305	414	131	320	814	315	802		18	354	861	311	756	26.9	277	18	40.4	16	37.0		<0.1	7	
10	WED	311	398	139	362	938	280	726		20	422	1115	294	777	29.0	281	22	50.4	15	35.2		<0.1	8	
11	THU	309	401	132	385	991	335	862		22	434	1144	306	806	31.5	276	23	53.0	15	34.6		<0.1	7	
12	FRI	309	396	134	303	782	337	870		20	420	1101	380	997	31.2	277	11	25.9	14	32.3		<0.1	7	
13	SAT	305	418	135	322	821	348	888		20	396	1025	344	891	30.1	275	20	44.9	18	41.3		<0.1	7	
14	SUN	302	428	120	362	912	383	964		22	402	1025	376	959	31.0	270	25	56.3	19	42.8		<0.1	11	
15	MON	372	527	223	257	799	268	833		15	374	1206	311	1003	23.7	347	19	55.0	19	55.0		<0.1	8	
16	TUE	323	399	144	316	849	330	888	36	23	438	1192	365	993	19.3	302	19	48.4	23	58.0	<3	<0.1	9	
17	WED	319	404	152	309	822	319	849		18	435	1195	341	936	22.9	295	23	56.6	26	64.0		<0.1	8	
18	THU	316	406	155	457	1205	406	1071		18	364	972	363	943	27.4	288	21	49.2	22	52.8		<0.1	9	
19	FRI	314	413	157	309	811	312	819		16	340	904	345	918	25.0	286	18	43.3	24	57.7		<0.1	10	
20	SAT	310	430	150	284	733	336	869		30	418	1093	424	1108	27.3	282	22	51.7	24	56.4		<0.1	11	
21	SUN	298	420	145	629	1564	319	794		25	508	1289	280	711	26.9	270	23	50.7	24	54.1		<0.1	10	
22	MON	307	414	145	303	774	295	754		18	392	1030	371	975	14.6	291	20	47.3	24	58.3		<0.1	10	
23	TUE	311	412	148	305	791	340	882		19	364	971	391	1043	30.0	280	23	53.7	24	56.1		<0.1	8	
24	WED	313	426	149	361	943	386	1008		19	426	1140	424	1134	22.4	290	22	51.9	27	65.2		<0.1	10	
25	THU	282	381	139	340	800	371	872	42	21	432	1008	376	878	28.5	253	19	39.0	25	52.7	<3	<0.1	7	
26	FRI	294	411	126	338	827	424	1039		18	378	936	400	991	29.9	263	15	33.3	24	52.6		<0.1	8	
27	SAT	301	425	125	355	889	373	935		20	428	1073	361	905	26.3	273	21	47.8	27	61.5		<0.1	10	
28	SUN	293	416	125	345	845	324	792		20	382	939	345	848	28.6	264	30	64.9	25	55.0		<0.1	7	
29	MON	303	423	132	302	763	334e	844e		21	428	1102	389	1002	28.2	274	20	45.7	24	54.8		<0.1	8	
30	TUE	309	432	145	378	974	402	1036		20	408	1070	338	887	28.1	280	23	52.5	27	63.1		<0.1	10	
31	WED	321	NR	NR	350	938	369	990		16	358	986	333	917	27.3	293	18	43.0	23	56.2		<0.1	9	
TOTAL																								
MAX		372	527	223	629	1564	424.4	1071	90	30	508	1289	424	1134	31.5	347	30	64.9	27	65.2	<3	<0.1	11	
MIN		282	381	101	236	622	259.1	682	36	15	340	861	280	711	14.6	253	11	25.9	14	32.3	<3	<0.1	6	
AVG		310	416	141	335	865	335e	865e	55	20	403	1055	345	900	27.2	282	20	46.0	20.9	49.0	<3	<0.1	8	

Generated by BJOHNSON at 02/24/2009 04:00:59 PM using the Production Database and WISARD V2.0

WISARD SECONDARIES OVERALL

Suspended Solids Removal: 94.66% OR 819 Klbs/d
 BOD Removal: 94.33% OR 816e Klbs/d

Overall_2008_12.xls

EXHIBIT B - 7

Sewer conveyance for the identified related projects would be provided by the LABS. The current flow levels and remaining capacities in the sewer lines serving the related projects are not provided by the LABS. However, each of the related projects would need to obtain a final approval from the LABS for a sewer capacity connection permit. The sewer line capacity for each related project would be evaluated on a case by case basis and would be mitigated to the extent feasible in accordance with CEQA. Therefore, cumulative impacts on wastewater conveyance infrastructure would be less than significant.

It is assumed that all of the related projects would rely on the wastewater treatment services provided by the HTP. As shown in Table IV.M-6, Cumulative Wastewater Generation, the estimated wastewater generated by the related projects in combination with the Proposed Project would be 321,251 gallons per day. As previously discussed, the design capacity of the HTP is 450 million gallons per day and the HTP's current average wastewater flow is 362 million gallons per day. Therefore, the HTP has a remaining capacity of approximately 88 million gallons per day. The cumulative sewage generation would be well within the design capacity of the HTP representing about 0.4 percent of the remaining capacity. Cumulative impacts to wastewater treatment capacity would be less than significant.

Furthermore, the City of Los Angeles is currently updating its Integrated Resources Plan and its Facilities Plan in order to identify specific facility improvements, including an expansion of the HTP and improvements to the sewer infrastructure in the project area. These wastewater facilities plans are based on SCAG's population projections for 2020, which account for the population growth generated in the project area. Therefore, the cumulative impact of the related projects in combination with the Proposed Project on wastewater facilities would be less than significant.

MITIGATION MEASURES

The following mitigation measure is required to mitigate any impacts to wastewater conveyance infrastructure to a less than significant level:

- M-15. If it is found that the adjacent sewer infrastructure has insufficient capacity for the Proposed Project, the developer shall be required to build another sewer line or additional laterals with direct flow to the nearest, larger line that has the available capacity.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the above mitigation measure, impacts to wastewater conveyance and treatment capacity infrastructure would be less than significant.

EXHIBIT B - 8

- The Project would cause a measurable increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained; or
- The Project's additional wastewater flows would substantially or incrementally exceed the future scheduled capacity of any one treatment plant by generating flows greater than those anticipated in the Wastewater Facilities Plan or General Plan or its elements.

b) Project Design Features

The Project Applicant has incorporated the following Project Design Features (PDFs) related to sewer service:

- As part of the normal construction/building permit process, the Project Applicant shall confirm with the City that the capacity of the local and trunk lines are sufficient to accommodate the Project's sewer flows during the construction and operation phases.
- The Project Applicant shall implement any upgrades to the sewer system serving the Project that could be needed to accommodate the Project's sewer generation.

The Project Applicant shall additionally implement the water conservation measures described in the previous subsection that would also reduce sewer flows.

c) Project Impacts

i) Construction

During the Project's construction phase, temporary dewatering would be required on Sites A and B to develop the subterranean parking. The dewatering activities would result in the extraction of a total of approximately 597,000 gpd or 1.83 AF per day. The dewatering flows would be discharged to either the local storm drain or the sanitary sewer. If discharged to the sanitary sewer, as part of the construction permit process and as a PDF, the Project Applicant would confirm with the City that the capacity of the sewer lines serving the site are sufficient to accommodate the dewatering flows and would implement any upgrades that are necessary. The HTP has adequate treatment capacity to accommodate the Project's dewatering flows. (Project impacts related to storm drain capacity are addressed in Section IV.L.1, Hydrology.) Therefore, Project impacts related to wastewater service during the construction phase would be less than significant.

ii) Operation

Implementation of the Project would increase the average and peak daily wastewater flows from the Project Site. As shown on Table IV.J-5, the average wastewater generation associated with Project build-out is approximately 272,624 gallons per day (gpd) for Project Phases 1 and 2, Option A, and 331,606 gpd for Project Phases 1 and 2, Option B.¹¹⁴

¹¹⁴ Refer to Section II, Project Description, for a description of Options A and B.

EXHIBIT B - 9

**Table IV.M-2
Cumulative Wastewater Generation**

No.	Proposed Land Use	Size ^a	Generation Factor ^b	Total Daily Wastewater Generation (gpd)
<i>Notes: sf = sq. ft.; du = dwelling unit; gpd = gallons per day</i>				
<i>^a Residential uses assumed to contain average of 2 bedrooms. Gas station uses assumed to contain 2 toilets.</i>				
<i>^b Source: City of Los Angeles, Draft L.A. CEQA Thresholds Guide Exhibit K.2-11, May 14, 1998</i>				
<i>^c Source: California Healthcare Foundation, Estimating the Compliance Costs for California SB 1953, website: http://www.chcf.org/documents/hospitals/ComplianceCostsForSB1953.pdf, November 22, 2005. The current hospital costs per bed and per square foot of hospital use are based upon the observation that hospitals are currently constructed with approximately 1,500 sq. ft. per bed. As a conservative estimate, this 1 bed/1,500 sf factor was utilized for calculating hospital bed numbers.</i>				
<i>^d Calculated based on an average of 1 seat/120 sf of theater uses.</i>				

The 46 related projects are all located within City of Los Angeles and would be provided wastewater treatment services by the HTP. As previously discussed, the design capacity of the HTP is 450 mgd, and the HTP's current average wastewater flow is 350 mgd. Therefore, the HTP has a remaining capacity of approximately 100 mgd. The cumulative sewage generation (1.14 mgd) would be within the design capacity of the HTP, representing about one percent of the remaining capacity. Therefore, the cumulative impact of the related projects in combination with the Proposed Project on wastewater facilities is not cumulatively considerable and impacts would be less than significant.

Based on the foregoing discussion, the Proposed Project would not incrementally increase the cumulative wastewater generation and, therefore, would not result in a cumulative impact on wastewater services and facilities.

MITIGATION MEASURES

The Proposed Project would not have an impact on wastewater services. Therefore, no mitigation measures are required.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

The Proposed Project would not have an impact on wastewater services.

EXHIBIT B - 10

Project Impacts

The Proposed Project is anticipated to generate approximately 39,635 gallons per day (gpd) of wastewater (see Table IV.L-1). Because the project site is currently vacant, the 39,635 gpd of anticipated wastewater generated by the Proposed Project also represents the net increase of wastewater generated at the project site.

**Table IV.L-1
Proposed 959 Seward Street Development Estimated Sewage Generation**

Land Use	Size	Generation Rate	Total (gallons/day)
Office	237,568 sf	0.15 gallons/sf/day	35,635
Commissary	4,000 sf	1.0 gallon/sf/day	4,000
Total			39,635
<i>Source: City of Los Angeles Bureau of Sanitation, Sewer Generation Rates Table, March 20, 2002 and the Los Angeles County Sanitation Districts Wastewater Generation Factors, Table 1, March 23, 2004.</i>			

According to the City of Los Angeles, Department of Public Works and Bureau of Sanitation, the Proposed Project's contribution of sewage to the current wastewater flows could generate a potential impact on the existing sewer line infrastructure adjacent to the project. However, wastewater generated by the Proposed Project would continue to be conveyed to the HTP, which has sufficient capacity for the Proposed Project. Additionally, water conservation measures required by City ordinance (e.g., installation of low flow toilets and plumbing fixtures, limitations on hose washing of driveways and parking areas, etc.) would be implemented as part of the Proposed Project and would help reduce the amount of wastewater generated with respect to sewer service. As such, with implementation of mitigation measure L-1, project impacts with respect to wastewater treatment capacity would be less than significant.

CUMULATIVE IMPACTS

Implementation of the Proposed Project in conjunction with the identified related projects in Section III, Environmental Setting would further increase wastewater generation. The cumulative development in the project area would continue to increase the wastewater flow in area sewers and incrementally decrease the capacity of the Hyperion Treatment Facility. It is assumed that all of the related projects would rely on the wastewater treatment services by the HTP. As shown in Table IV.L-2, Cumulative Wastewater Generation, the estimated wastewater generated by the related projects in combination with the Proposed Project would be 1,658,635 gallons per day. As previously discussed, the design capacity of the HTP is 450 million gallons per day and the HTP's current average wastewater flow is 360 million gallons per day. Therefore, the HTP has a remaining capacity of approximately 90 million gallons per day. The cumulative sewage generation would be well within the design capacity of the HTP, representing about 1.8% of the remaining capacity.

EXHIBIT B - 11

HYPERION TREATMENT PLANT

ANNUAL MONITORING REPORT

2006

CITY OF LOS ANGELES
CALIFORNIA



ANTONIO R. VILLARAIGOSA
MAYOR

DEPARTMENT OF
PUBLIC WORKS
—
BUREAU OF SANITATION
—

RITA L. ROBINSON
DIRECTOR

ENRIQUE C. ZALDIVAR
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TRACI J. MINAMIDE
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BOARD OF
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VALERIE LYNNE SHAW

April 11, 2007

Mr. Jonathan Bishop
Executive Officer
California Regional Water Quality
Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013
Attention: Information Technology Unit

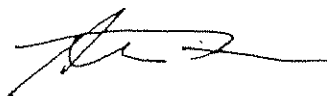
2006 Annual Monitoring Report
Hyperion Treatment Plant and Santa Monica Bay
NPDES Permit No. CA0109991
Compliance File No. 1492

Dear Mr. Bishop:

In accordance with the requirements of the plant's National Pollutants Discharge Elimination System discharge permit, the enclosed annual summary report covers the calendar year 2006. The report includes tabular and graphical data summaries, a review of permit parameters and a discussion of any noncompliance with respective explanations and associated corrective actions necessary to bring the plant into full compliance.

For questions regarding this report, please contact Kay Yamamoto at (310) 648-5727.

Very truly yours,


Steven S. Fan, Plant Manager
Hyperion Treatment Plant

MD:KMY
Enclosure: 1. Annual Monitoring Report



AFFIRMATION

2006
ANNUAL MONITORING REPORT
HYPERION TREATMENT PLANT AND SANTA MONICA BAY

NPDES Permit Holder: City of Los Angeles, California
Department of Public Works
Bureau of Sanitation
Hyperion Treatment Plant

NPDES Permit Number: CA0109991
Order Number: R4-2005-0020
Compliance File Number: 1492

Period Covered by the Report: January 2006 - December 2006


All analyses were conducted at a laboratory certified for such analyses by the California State Department of Health Services and in accordance with current EPA guideline procedures or as specified in the NPDES Permit Monitoring Program.

I certify under penalty of law all laboratory data and compliance tables in this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

Executed on the 4th day
of April, 2007
at Los Angeles, California

Signature: _____


Masahiro Dojiri, Division Manager
Environmental Monitoring Division

AFFIRMATION

2006
ANNUAL MONITORING REPORT
HYPERION TREATMENT PLANT AND SANTA MONICA BAY

NPDES Permit Holder: City of Los Angeles, California
Department of Public Works
Bureau of Sanitation
Hyperion Treatment Plant

NPDES Permit Number: CA0109991
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Period Covered by the Report: January 2006 - December 2006

All analyses were conducted at a laboratory certified for such analyses by the California State Department of Health Services and in accordance with current EPA guideline procedures or as specified in the NPDES Permit Monitoring Program.

I certify under penalty of law all information other than laboratory data and compliance tables in this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

Executed on the 5th day
of April, 2007
at Los Angeles, California

Signature: _____

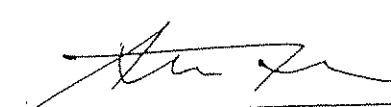

Steven S. Fan, Plant Manager
Hyperion Treatment Plant

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Chapter 1

Annual Summary

ANNUAL SUMMARY

This annual summary report is in accordance with the U.S. Clean Water Act of 1977, National Pollutant Discharge Elimination System (NPDES) Permit, No. CA0109991, R4-2005-0020, effective on May 14, 2005, to the City of Los Angeles and Hyperion Treatment Plant (HTP) by the Regional Administrator, Environmental Protection Agency, Region IX and the California Regional Water Quality Control Board, Los Angeles Region.

Please note that this annual summary of data reflects the reporting requirements of Order No. R4-2005-0020 from January 1, 2006 through December 31, 2006. Order No. R4-2005-0020 requires a separate submittal of receiving water and bacteriological data by August 1, 2007. Included in this report is a summary of influent and effluent analysis along with an annual biosolids summary.

This issued NPDES permit provides guidelines referred to as Ocean Discharge Criteria to prevent unreasonable degradation of the local marine environment and to maintain healthy marine recreational areas. To ensure these goals, effluent limitations were authorized.

In compliance with the requirements of these permits to provide an adequate monitoring program of the HTP influent and effluent discharge quality, as well as the effect of that discharge on the receiving waters, the Environmental Monitoring Division of the Bureau of Sanitation, City of Los Angeles, has prepared this annual monitoring report. A summary of Quality Assurance activities is also included in this report.

SUMMARY OF NON-COMPLIANCE

The HTP influent, effluent, and the receiving waters were monitored in accordance with limits specified in the Waste Discharge Requirements Order No. R4-2005-0020.

During 2006, an average of 317 MGD of wastewater was treated through the full secondary process. The secondary effluent suspended solids averaged 22 mg/L while BOD averaged 20 mg/L.

For calendar year 2006, HTP effluent was in compliance with limitations for all effluent constituents except the following receiving water and chronic toxicity non-compliances. See the following summary. Also, on November 29, 2006, Discharge Serial No. 001, exceeded the effluent Ammonia daily maximum limit.

Receiving water non-compliance - January 25, 2006

On January 25, 2006, a large slick was observed at approximately 10:30 a.m. in the vicinity of the 5-Mile Outfall, extending from the south leg of the wye to approximately 1.4 nautical miles west of the outfall. The presence of rubber goods and grease particles constitute a violation of the receiving water limits. On January 26, 2006, at approximately 11:30 a.m., grease particles were observed again in the vicinity of the 5-Mile Outfall near station Z1, along the north leg of the wye, but were less dense and generally smaller sized than those observed on January 25th.

Both rubber goods and grease particles were collected on January 26, in addition to samples for microbiological analysis. On January 27, 2006, the City of Los Angeles vessel, La Mer, was dispatched to the area and observed some particulates, but due to rough seas, samples could not be collected. On January 28, 2006, the La Mer crew surveyed both legs of the wye outfall up to ½ mile from the pipe and observed no floating particulates. No microbiological samples were taken due to this and no further follow-up boat surveys were performed. The microbiological results from January 25th and 26th samples and showed that AB411 standards were not exceeded.

Receiving water non-compliance - April 3, 2006.

On April 3, 2006, at approximately 12:40 p.m., materials of sewage origin (MOSO) were observed in the vicinity of the Five-Mile Outfall. Grease particles were visible in slicks that ranged from 4 to 8 feet in width and as long as 0.5 mile. Samples of grease particles were collected and a sample for microbiological analysis was taken and delivered to the microbiology laboratory. On April 4, 2006 the Five-Mile Outfall was again checked for materials of sewage origin, but none were observed. The sea conditions were such that the failure to observe one may not be indicative of it's absence. It may have been present but not observable due to rough seas. On April 6, the Five-Mile Outfall area was inspected for MOSO. While grease particles, rubber goods, and straws were skimmed from just below the surface, it was hard to determine if this was MOSO or normal storm water-related debris. Since there were major rain events this same week and during the prior week, there was an offshore wind, we can assume that storm water-derived plastic debris was present. However, we cannot definitively distinguish whether the rubber good originated from storm water runoff or from the Plant's discharged effluent. On April 18, 2006, another inspection was made of the Five-Mile Outfall area and no MOSO was observed.

The microbiological results showed that AB411 standards were not exceeded for the samples collected. However, the presence of rubber goods and grease particles constitute a violation of the receiving water limits provided on page 38 of the HTP NPDES permit.

Receiving water non-compliance - June 2006

On June 6, 2006, at approximately 8:50 am, a large, oily-sheen slick was observed by the La Mer Boat Crew in the vicinity of the Five-Mile Outfall. The slick contained 6-10 mm diameter particles of what appeared to be sewage grease. Bits of rubber, including condoms, and a few "Band-Aid" wound bandages were also observed, but not collected. Estimated density of the grease particles ranged from 10-15 particles per square meter. Conditions at sea were calm, with no wind and a southwest two-foot swell at six seconds. There were approximately 10-15 birds present on the water surface in the immediate area. Samples were collected for microbiological analysis and transferred to the Microbiology Laboratory for processing. No photos were taken.

On June 7, 2006, at approximately 9:05 am, grease particles were observed again by the Boat Crew and a Water Microbiologist in the vicinity of the Five-Mile Outfall. Particle size was approximately 10 mm and density was approximately six particles per square meter. Conditions at sea were calm, with no wind and a southwest two-foot swell at six seconds. No birds were present in the vicinity. Grease particles and microbiological samples were collected and

transferred to the Data and Sample Management Section and Microbiology Laboratory, respectively. Photos were taken and have been archived.

On June 8, 2006, at approximately 8:28 am, grease particles were observed again by the Boat Crew, a Water Biologist III, and a HTP Shift Superintendent in the vicinity of the Five-Mile Outfall. Average particle size was approximately 5-7 mm in diameter with some as large as 10 mm. Density could not be determined by visual observation due to the wind causing the water surface to be choppy. Additionally, an apparent piece of tar, approximately 10 mm in diameter, was observed and collected. Many of these particles had a single flat surface possibly indicating there once adhered to a pipe or wall. Conditions at sea were choppy, with a west wind at 11 nautical miles per hour and a southwest two-foot swell at six seconds. There were approximately 30 birds in the general vicinity. Microbiological samples were collected and transferred to Microbiology Laboratory for analysis. All collected grease particles and the single tar piece were maintained in the custody of the attending Shift Superintendent. Photos were taken and have been archived.

On June 13, 2006, at approximately 9:14 am, grease particles and condoms were observed by the Boat Crew, six Environmental Monitoring Division scientists, and five scientists from SCCWRP and CSULB in the vicinity of the Five-Mile Outfall while occupying Station Z2 for an endocrine disruptor special study. Particle size was approximately 1-2 mm and density was approximately five particles per cubic meter. Conditions at sea were calm, with a southwest wind at six nautical miles per hour and a southwest two-foot swell at eight seconds. Five birds were present in the vicinity. Grease particles, condoms, and microbiological samples were collected and transferred to the Data and Sample Management Section and Microbiology Laboratory, respectively. Photos were taken and archived.

On June 14, 2006, at approximately 9:37 am, grease particles and small pieces of plastic were observed again by Boat Crew and a Water Biologist in the vicinity of the Five-Mile Outfall. Particle size was approximately 10 mm and density was approximately six particles per square meter. Conditions at sea were choppy, with a west wind at 12 nautical miles per hour and a west two-foot swell at 12 seconds. Approximately 200 birds were present in the vicinity. Microbiological samples were collected and transferred to the Microbiology Laboratory for analysis. No photos were taken.

The microbiological results showed that AB411 standards were not exceeded. However, the presence of rubber goods and grease particles constitute a violation of the receiving water limits specified on page 38 of the HTP NPDES Permit "The waste discharged shall not: a. Cause floating particulates and oil and grease to be visible:"

Review of our Five-Mile Outfall sample results was made after each incident and showed that the effluent discharge was in compliance. However, the location of the slick and the nature of the material would be consistent with what we treat in the Plant, but would never be normally discharged from the Plant. All primary and secondary grease skimming procedures have been reviewed and reinforced with Operations supervisors and their staff.

Effluent Serial Discharge No. 001 Ammonia Non-compliance - November 29, 2006

For Serial Discharge No. 001, also known as the One-Mile Outfall, the Ammonia-Nitrogen concentration of 38.1 mg/L exceeded the daily maximum limit of 34 mg/L on November 29, 2006. No corrective action or additional samples could be taken as the One-Mile flow was re-directed back to Serial No. 002 on November 30, 2006. The One-Mile effluent sampling point was located approximately 10 feet upstream of the effluent chlorination point, resulting in non-detected total chlorine residual results on November 28, 29, and November 30, 2006. Total chlorine residual was detected at most of the end-of-pipe receiving water stations (A2, A2+50, and A2-50) on each day of the three-day event. As volatile organic compound samples were taken upstream of chlorine addition, the affect of chlorine on these compounds, especially the trihalomethane group of compounds, could not be determined.

On November 29, 2006, shoreline bacterial concentrations per Resolution No. 2002-022 and 2002-004, Santa Monica Bay Beaches Bacterial Total Maximum Daily Load (SMBBB TMDL) at stations SMB-2-10, SMB-2-11, and SMB-2-12 exceeded designated marine water contact recreation (REC-1) single-sample limits. At station SMB-2-10, Total Coliform exceeded the single sample limit of 10,000 MPN/100 mL with a result of >13,000 MPN/100 mL. At station SMB-2-11, Total Coliform and *Escherichia coli*, exceeded the single-sample limits of 10,000 and 400 MPN/100 mL, with results of >13,000 and 500 MPN/100 mL, respectively. At station SMB-2-12, Total Coliform exceeded the single-sample limit of 10,000 MPN/100 mL with a result of >13,000 MPN/100 mL. The origin of these high bacterial counts is not known with certainty, but the geographical distribution of the high counts and preliminary analyses of plume tracking data suggest they are most likely related to storm water runoff associated with rainfall on Monday, November 27.

Per Order No. R4-2005-0020 and Resolution Nos. 2002-022 and 2002-004, HTP was allocated zero (0) days exceedance of single-sample numeric limits at these shoreline compliance points during wet weather. As indicated above, we do not believe the exceedances on November 29, were related to the One-Mile discharge; they are more likely related to storm water runoff. Thus, they do not constitute an exceedance by HTP.

At the time of this reporting, it was discovered that conflicting permit instructions for the One-Mile Outfall Chronic Toxicity test are contained in Order No. R4-2005-0020. See page T-30, item 3(d), of the monitoring and reporting section of the permit, where quality assurance directions specify using a 7.0% chronic in-stream waste concentration (IWC) for the One-Mile outfall. This 7.0% IWC results in a value of 14.3 TUC which exceeds the daily maximum limit of 13 TUC specified on page 32 of the Order. The correct value for chronic IWC should be 7.69%. Our contract laboratory, Aquatic Testing Laboratory of Ventura, California, implicitly followed these incorrect quality assurance permit specifications, which resulted in a lowest possible TUC of 14.3; therefore, this should not be considered a permit exceedance.

November 28 - 30, 2006 One-Mile Diversion Event

The City of Los Angeles, Bureau of Sanitation, conducted an internal maintenance inspection of Serial Discharge No. 002, also known as the Five-Mile Outfall, between November 28 and November 30, 2006. An approval letter from the Los Angeles Regional Water Quality Control Board, dated October 20, 2006, was received by the City of Los Angeles allowing the event and the proposed receiving water monitoring program. During this time period, chlorinated secondary effluent and West Basin brine were diverted to Serial Discharge No. 001, the One-Mile Outfall. Monthly average permit limits for the One-Mile Outfall were considered inapplicable as this event was of short duration. Please note that under normal operating conditions, Serial Discharge No. 001 is not used.

This report contains permit-required, One-Mile Outfall tabulated data and compliance checking. Under separate cover, a data report of the approved One-Mile effluent monitoring and receiving water program was submitted on January 15, 2007. A more detailed assessment study will be submitted in partial fulfillment of the Hyperion NPDES Special Studies requirement in conformance with a schedule to be determined by the Regional Board.

EFFLUENT TOXICITY SUMMARY

Chronic Toxicity

May 2006 Exceedance

The HTP is required under its NPDES permit to conduct monthly chronic toxicity tests of its effluent. This directive requires that three species of marine organisms be tested every two years for three consecutive months, not to exceed five, to select the most-sensitive species. The three test organisms chosen for these screening tests are the veliger larvae of the red abalone (*Haliotis rufescens*), sporophytes of the giant kelp (*Macrocystis pyrifera*), and the larvae of the topsmelt (*Atherinops affinis*). At the end of this screening period, the most-sensitive species is to be used for the remainder of the year. Currently the most-sensitive species is the red abalone.

The chronic toxicity test limit is 84.0 TUc (chronic toxicity units) under the HTP NPDES permit. To comply with the TUc limit of 84.0, test organisms must not show any chronic toxic response in 1.20 % plant effluent. HTP effluent did not exceed the permit limit for chronic toxicity for samples collected and tested from January through April 2006.

A HTP effluent sample collected on May 12, 2006, exceeded its permit limit (TUc 142.86) and as a result accelerated testing was implemented. Accelerated testing consists of six additional tests, approximately every two weeks, over a 12-week period. Effluent sampling for the first accelerated test is required to commence within 3 days of receipt of the test results showing exceedance of the toxicity limitations. In addition, if all the results of the six additional tests are in compliance with the toxicity limitation, the discharger may resume regular monthly testing. If the results of any of the six additional tests exceed the limitation, then the Discharger shall continue to monitor once every two weeks until six consecutive biweekly tests are in compliance. At that time, the Discharger may resume regular monthly testing. If the result of

any two of the six additional tests exceeds the limitation, then the Discharger shall implement an initial Toxicity Reduction Evaluation (TRE) investigation. If the implementation of the initial TRE investigation workplan indicates the source of toxicity, then the Discharger shall return to the regular testing frequency.

On May 22, the first accelerated sample was collected and tested on May 23. The results of the toxicity test did not exceed the permit limit (TUc 83.3). Accelerated testing continued in June, July, and August at approximate two week intervals (Table 1). Four accelerated tests conducted in June, July, and August did not exceed the permit limit; however accelerated tests conducted in July (July 24) and in August (August 28) did exceed the permit limit. The August 28 sample was the third exceedance of the accelerated testing and prompted an initial TRE investigation.

Interestingly, a sample of the August 28 HTP effluent was manipulated by aeration and the results of this test showed no exceedance (TUc 83.3). Aeration commonly removes ammonia, volatile organics, or surfactants and may provide insight into the cause of the effluent toxicity.

Table 1. HTP Chronic Abalone Accelerated Toxicity Test Results

Date Collected	Date tested	TUc	Type of test	Comments
5/8	5/9	142.86	Monthly	Exceeded permit limit
5/22	5/23	83.3	1 st accelerated test	No exceedance
6/5	6/6	47.6	2 nd accelerated test	No exceedance
6/26	6/27	N/A	3 rd accelerated test	No eggs, test was not run
7/4	7/5	10.0	3 rd accelerated test (repeat)	No exceedance
7/11	7/12	47.6	4 th accelerated test	No exceedance
7/24	7/25	142.86	5 th accelerated test	Exceedance
8/14	8/15	83.3	6 th accelerated test	No exceedance
8/28	8/29	142.86	7 th accelerated test (3 rd accelerated test of the 2 nd set)	Exceedance
8/28	8/29	83.3	Aeration of HTP	No exceedance

Chronic Toxicity Initial Investigation Toxicity Reduction Evaluation

As a result of the initial test exceedance on May 12, 2006 and the two accelerated tests exceeding the 84 TUc limit in July and August 2006, the Discharger (HTP) implemented an Initial Investigation Toxicity Reduction Evaluation (TRE).

The TRE testing was initiated in September 2006 and was designed to determine if filtering or aerating HTP effluent would reduce the toxicity of the HTP effluent. The results of the HTP baseline tests, filtered HTP effluent, and aerated HTP effluent did not exceed the permit limit

(Table 2). As a result of the effluent being within the permit limit, testing gave no indication of what caused the exceedances in previous testing.

Table 2. Test Results for September 2006 HTP Chronic Abalone Toxicity

Date Collected	Date tested	TUc	Type of test	Comments
9/11	9/12	10.0	HTP baseline	No exceedance
9/11	9/12	10.0	Filtered HTP	No exceedance
9/25	9/26	10.0	HTP baseline	No exceedance
9/25	9/26	10.0	Aerated HTP	No exceedance

In November 2006, two chronic abalone test series were conducted on HTP effluent as part of the Initial TRE investigation. The first series was conducted on November 7, 2006, on samples collected November 6, 2006 and the second series was scheduled to be conducted on November 30, 2006 on a 5-mile sample collected November 27, 2006 and a 1-mile sample collected on November 29, 2006.

The testing focused on manipulations that would implicate ammonia, surfactants, volatile organics, or metals. Unfortunately, the results of the November 7 and the November 30 chronic abalone tests conducted at EMD were invalid. The tests were invalid due to unacceptably high abnormal shell formation for the seawater control of the reference toxicant (RT). As a result of the invalid tests conducted on November 7, the testing was repeated on November 30. Due to the uncertainty of conducting a successful test, an outside laboratory (Aquatic Testing Laboratories in Ventura, California) was sent a split sample from November 27 and 29. The tests were conducted at Aquatic Testing Laboratories (ATL) on November 30 and the results were submitted for reporting. Both the 5-mile and the 1-mile tests passed the HTP permit (TUc 47.6 and 14.29, respectively) (Table 3).

The 5-mile sample collected on November 27 was to serve two purposes; as an accelerated TRE sample and for comparison to the scheduled 1-mile diversion. The 1-mile diversion was scheduled to allow the inspection of the 5-mile effluent discharge pipe. The diversion of HTP effluent was to occur on November 28 and, as a result, in order to sample the 5-mile effluent prior to the diversion, a 24-hr composite sample had to be taken on November 27. On November 28, the effluent would be in transition from the 5-mile to the 1-mile and a 1-mile 24-hr composite could not be taken until November 29. This delayed the start of the test until November 30, which would allow time for any TRE effluent manipulations and the composite sampling. Unfortunately, EMD testing was invalid so only the ATL results are available for reporting. Although the 5-mile November 27 sample did not meet the holding time criterion for routine monthly reporting, it still can be used for TRE/accelerated reporting and as a comparison for the 1-mile diversion. The 1-mile effluent was within the required holding time and can be reported for HTP permitting requirements.

Table 3. November 2006 HTP Chronic Abalone Toxicity Test Results

Date Collected	Date tested	TUc	Type of test	Comments
11/6	11/7	N/A	HTP baseline	Invalid test
11/6	11/7	N/A	Aerated HTP	Invalid test
11/6	11/7	N/A	Post-Zeolite	Invalid test
11/6	11/7	N/A	HTP plus EDTA	Invalid test
11/6	11/7	N/A	Ammonia add-back	Invalid test
11/27	11/30	N/A	EMD HTP baseline	Invalid test
11/27	11/30	N/A	EMD Post-Zeolite	Invalid test
11/27	11/30	N/A	EMD Ammonia add-back	Invalid test
11/27	11/30	47.6	ATL HTP 5-mile effluent	No exceedance
11/29	11/30	14.29	ATL HTP 1-mile effluent	No exceedance

In December 2006, a series of chronic abalone tests were conducted on HTP effluent as part of the Initial TRE investigation. This series was conducted December 13, 2006 on samples collected December 11, 2006; and on December 20, 2006 on a 5-mile sample collected December 18, 2006. Again the testing focused on manipulations that would implicate ammonia, surfactants, volatile organics, or metals.

The results of both the December 11 and 18 HTP samples were within the permit limit. Although in both tests the baseline passed the permit limit, chronic toxicity was present in the higher effluent concentrations. Effluent manipulations may provide insight into the source of the toxicity in these higher concentrations (Table 4).

Past aeration tests have indicated that there are toxic compounds present in the HTP effluent that are removed by aeration. Such compounds include ammonia, volatiles, and surfactants. The removal of ammonia and the ammonia add-back tests have implicated ammonia as one of the toxicants present in the HTP effluent. However, there may be other compounds present in the HTP effluent that may be removed by aeration.

The results of past ammonia add-back tests have indicated that the concentration of ammonia present in the HTP effluent may be related to its toxicity. However, the results of the December 13 ammonia add-back tests were the same as the manipulations in which ammonia was removed, indicating that ammonia may not be the source of toxicity in that sample (Table 5).

It appears that the manipulation that removes ammonia (Post-Zeolite) also removed copper and iron and the removal of these metals may be related to the reduction of toxicity in this sample. As a result, any reduction of toxicity by removal of ammonia must consider metals as well (Figure 1).

The Initial Investigation TRE concluded in January 2007 as six initial TRE investigation baseline tests were within the permit limit.

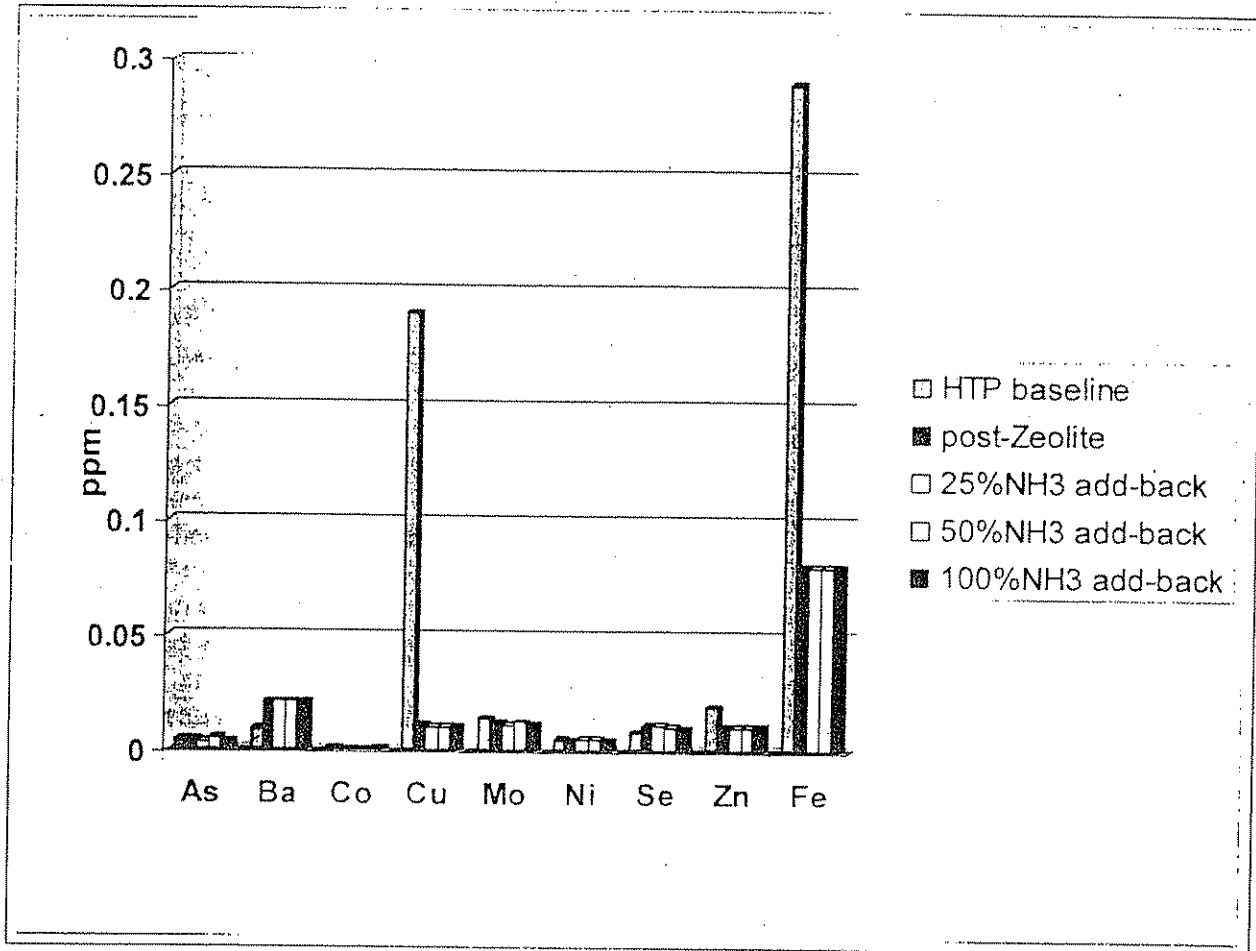
Table 4. Test Results for December 2006 HTP Chronic Abalone Toxicity

Sample Date	Date tested	TUc	Type of test	Comments
12/11	12/13	47.6	HTP baseline	Within permit limit
12/11	12/13	10.0	Post-Zeolite	Within permit limit
12/11	12/13	10.0	Aerated	Within permit limit
12/11	12/13	10.0	25% Ammonia add-back	Within permit limit
12/11	12/13	10.0	50% Ammonia add-back	Within permit limit
12/11	12/13	10.0	100% Ammonia add-back	Within permit limit
12/18	12/20	47.6	HTP baseline	Within permit limit

Table 5. Ammonia Concentrations for December 13, 2006 HTP Chronic Abalone Toxicity Tests.

Date tested	Type of test	NH ₃ ppm	TUc	Comments
12/13	HTP baseline	35.1	47.6	N/A
12/13	Post-Zeolite	0.298	10.0	99% removal of ammonia
12/13	25% Ammonia add-back	8.95	10.0	25.5% true % of ammonia add-back
12/13	50% Ammonia add-back	17.6	10.0	50.1% true % of ammonia add-back
12/13	100% Ammonia add-back	32.8	10.0	93.4% true % of ammonia add-back

Figure 1. Metal results of HTP sample collected on December 11, 2006 and manipulations



Acute Toxicity

The HTP is mandated by the Los Angeles Regional Water Quality Control Board under permit no. CA0109991 to conduct 2 most sensitive species screening acute toxicity tests every 24 months to the HTP effluent using an invertebrate and a vertebrate. The most sensitive species testing will be conducted for three consecutive months and then the most sensitive species will continue to be tested monthly until the next screening period. The presence of acute toxicity shall be estimated as specified in EPA/821-R-02-12. The species tested included the topsmelt (*Atherinops affinis*) and the mysid (*Mysidopsis bahia*). In 2005, the most sensitive species to HTP effluent was determined to be the topsmelt.

The permit also states that the toxicity of the HTP effluent shall be such that the LC50 shall not exceed a 2.8 TUa (IWC 35%) when conducting 96-hour static renewal acute toxicity test on 24-hour composite samples.

The acute toxicity results indicated no "exceedance" for 2006 (Table 1). In February and April of 2006 no topsmelt were available from the vendor. In its place the inland silverside, *Menidia beryllina*, was substituted. Once topsmelt became available it resumed as the testing organism.

Table 1. 2006 HTP Acute Toxicity Testing Results

MONTH	ACUTE (TUa)	PASS/EXCEED
JAN	2.2 <i>Atherinops affinis</i>	PASS
FEB	<i>Menidia beryllina</i>	Invalid
MAR	2.3 <i>Atherinops affinis</i>	PASS
APR	1.14 <i>Menidia beryllina</i>	PASS
MAY	2.0 <i>Atherinops affinis</i>	PASS
JUN	2.1 <i>Atherinops affinis</i>	PASS
JUL	1.8 <i>Atherinops affinis</i>	PASS
AUG	2.2 <i>Atherinops affinis</i>	PASS
SEP	1.9 <i>Atherinops affinis</i>	PASS
OCT	2.1 <i>Atherinops affinis</i>	PASS
NOV	1.8 <i>Atherinops affinis</i>	PASS
DEC	1.8 <i>Atherinops affinis</i>	PASS

PERFORMANCE GOALS SUMMARY OF NON-COMPLIANCE

During calendar year 2006, three constituents exceeded performance goal limitations. One non-compliance for tributyltin occurred in January 2006 and three non-compliances for chloroform occurred in January, April and July 2006. Five non-compliances for Ammonia-N occurred in February, March, May, June, and November 2006. No corrective action measures were required in 2006, as the permit specifies that the non-compliance must occur in three successive monitoring periods.

2006 Annual Performance Goals Summary for HTP effluent, January – December

MONTH	COMPLIANCE	COMMENTS
JAN	Two non-compliances	Tributyltin and Chloroform
FEB	One non-compliance	Ammonia-N
MAR	One non-compliance	Ammonia-N
APR	One non-compliance	Chloroform
MAY	One non-compliance	Ammonia-N
JUN	One non-compliance	Ammonia-N
JUL	One non-compliance	Chloroform
AUG	In compliance	
SEP	In compliance	
OCT	In compliance	
NOV	One non-compliance	Ammonia-N
DEC	In compliance	

PLANT OPTIMIZATION

During the calendar year of 2006, staff continued their aggressive implementation of Plant Optimization projects. These projects were initiated for the purpose of reducing O & M costs, improving process stability and treatment efficiency. Throughout the year, plant staff focused on Gas Handling Facility Improvements, Primary Treatment System improvements, Oxygen Generation Facility modifications, and the Outfall Inspection Program.

Major accomplishments in 2006 were:

- At the Oxygen Generating Facility, Operations staff successfully shutdown Cold Box #1 and placed Cold Box #3 on line with no major incidents.
- At Gas Handling Facility, plant staff successfully placed the new Low Pressure Gas Holder on-line and removed the old Low Pressure Gas Holder from service.
- At the Effluent Pumping Plant, plant staff performed special operations to re-route the secondary effluent from 5-Mile Outfall to 1-Mile Outfall for approximately 50 hours. This allowed contracted divers to enter the 5-Mile Outfall safely and perform an inspection of the pipe for the very first time in 50 years.

- Plant staff Completed light detector installation and programming all PLC to the Distributed Control Systems (DCS) at Primary Battery "D".

In addition, Plant Process Engineers, Operations, Maintenance, and Management Staff continued to upgrade three major process areas: Headworks Grit Removal System, Raw Gas Compressor System, and Low Pressure Gas Holder. The completion of these upgrades has significantly improved treatment stability and efficiency.

TESTING PERFORMED BY EXTERNAL LABORATORIES

Fruit Growers Laboratory Environmental, ELAP No. 1573, located in Santa Paula, California, performed Gross Alpha and Beta Radioactivity analyses. Severn Trent Laboratories, Incorporated, ELAP No. 12439, located in Sacramento, California performed dioxin analysis. CRG Marine Laboratory in Torrance, California performed tributyltin analyses. Columbia Analytical Services, ELAP No. 1296A, located in Canoga Park, California, performed 2006 PAH analysis.

OCEAN OUTFALL INSPECTIONS

Hyperion's two underwater outfalls (Serial Discharge 001 or the 1-Mile and Serial Discharge 002 or the 5-Mile) are inspected annually by Undersea Graphics, Inc. using a submarine and SCUBA divers. In addition to the annual external inspections, internal inspections of both outfalls were also conducted this year to provide comprehensive evaluation of structural integrity and hydraulic analyses. The inspection on the 5-mile outfall was completed during November. The 1-Mile outfall was inspected after the 5-Mile Outfall flow was diverted to the 1-Mile Outfall on November 28th and 29th of 2006. Both outfalls were videotaped along their entire length to assess their structural integrity and check for damage or other problems. Both outfalls appear to have no major structural problems.

ENVIRONMENTAL MONITORING DIVISION – QUALITY ASSURANCE PROGRAM

The EMD of the Bureau of Sanitation, Department of Public Works, City of Los Angeles, provides analytical services to the Bureau of Sanitation's HTP, TITP, DCT, and LAG. The Environmental Laboratory Accreditation Program (ELAP) of the State of California Department of Health Services, under separate certifications, certifies EMD laboratories at the four plant sites. EMD's commitment to providing the four plant sites with quality laboratory services in support of their National Pollutant Discharge Elimination System Monitoring Programs is demonstrated by its continuing review of its quality assurance program. EMD's Quality Assurance Program is defined in a Quality Assurance Manual, which was last reviewed and updated in December 2006.

Quality Control System

Basic elements of the EMD quality assurance program include a technically competent staff, modern laboratory facilities, state-of-the-art equipment, good laboratory and good measurement practices, standard operating procedures, documentation, and staff training.

The division is currently staffed with over 100 analysts, many with advanced degrees in diverse disciplines. New staff members are trained and must demonstrate proficiency prior to analyzing legally mandated samples.

EMD's laboratory facility at the Harry Pregerson Building of HTP provides approximately 78,000 square feet laboratory space, including a centralized sample receiving area. EMD laboratories are equipped with state-of-the-art equipment including Gas Chromatographs, Gas Chromatograph/Mass Spectrometers, Inductively Coupled Plasma Spectrometers, an Inductively Coupled Plasma/Mass Spectrometer, Cold Vapor / Hydride Generation Atomic Absorption Spectrophotometers, Ion Chromatographs, and Flow Injection Analyzers. Samples are analyzed on these instruments in accordance with written Standard Operating Procedures based on EPA-approved methods. Good Laboratory and Measurement practices relating to sample management and analyses, documentation, analyst training, record keeping, and housekeeping are implemented in EMD's routine operations. Standard operating procedures are periodically reviewed by the analysts, supervisors, laboratory managers, and Quality Assurance Unit. New procedures, Acute *Mysidopsis* Toxicity using EPA Method 2007 (EPA-821-R-02-012) and analysis of PCB congeners using EPA Method 8082 were used for routine testing.

Quality Assessment

At EMD, quality assessment techniques consist of control charts for precision and accuracy, internal test samples, external performance evaluation study programs, corrective actions for out-of-control occurrences, periodic inspection of the laboratories, external audits, and accreditation.

Shewhart Quality Control Charts are used to assess the quality of the measurement process. Out-of-control occurrences, when identified, are investigated by supervisors and corrective action is implemented. Control charts for precision, based on duplicate analyses of samples and matrix spikes, and control charts for accuracy, based on internal traceable QC standards and matrix spikes, are plotted by the staff for review and evaluation. The frequency at which QC samples

are analyzed in relation to the number of samples analyzed is dependent on the analyte of interest. Basically, the frequency is one QC sample for every ten samples (10%). Constituents for which control charts are created include, but are not limited to, toxic and conventional pollutants. The data for HTP control charts are presented in Chapter 5.

Periodically, the Quality Assurance Unit submits blind samples to the laboratory from its inventory of QC samples. Results submitted by the laboratory are compared to "true values". In 2006, the QA Unit submitted 114 blind sample sets to the laboratories, consisting of water and soil matrices. All 475 constituents analyzed were within acceptance range.

As a major permittee in the National Pollutant Discharge Elimination System Program, EMD participates in the yearly Discharge Monitoring Report (DMR) Quality Assurance (QA) Programs for Chemistry and Whole Effluent Toxicity (WET). For HTP DMR QA Study Number 26, the constituents tested are given in Table 1 for Chemistry and Table 2 for WET. The success rate for the chemistry and WET studies for 2006 is 100%.

The laboratories of EMD are also participants in the Water Pollution (WP) Performance Evaluation Study Program, Water Supply (WS) Study for Microbiology, and Hazardous Waste (HW) Study, as part of the accreditation requirements of ELAP. Analyses performed are those listed in EMD's ELAP certificates. ELAP requires that a laboratory obtain an acceptable rating from a PE study at least once a year. A laboratory can participate in a second study to comply with this requirement if they did not receive an acceptable rating in the first study. For the year 2006, EMD laboratories at the four plant sites performed and recorded acceptable evaluations for all the analytes required for ELAP certification.

In the event of a "not acceptable" result for the DMR, WP, WS (Microbiology), or HW programs, the laboratory in question must submit in writing the results of their investigation of the reasons for the "not acceptable" result. Part of the submittal must consist of the corrective actions taken by the laboratory to prevent a recurrence of the analytical problem. Additional blind samples are then analyzed to ensure that problems have been corrected.

EMD's Quality Assurance staff conducts systematic audits of the laboratory. If any deficiencies are discovered, the staff will issue a report of the deficiencies in operations and makes recommendations for corrections to supervisors/managers.

EMD laboratories are accredited as environmental testing laboratories for wastewater, hazardous waste, drinking water (microbiology), and recreational water (microbiology) by the California Department of Health Services, ELAP. Part of the accreditation requirement is successful completion of an on-site visit by ELAP auditors biennially.

Table 1. DMR Chemical Analyses

Parameter	Analytes
Trace Metals	Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Thallium, Zinc
pH	pH
Nutrients	Ammonia, Nitrate, Total Kjeldahl Nitrogen, Total Phosphorus
Demand	5-day BOD, TOC
Cyanide	Total Cyanide
Residue	TSS
Oil and Grease	Oil and Grease
Chlorine	Total Residual Chlorine
Turbidity	Turbidity
Settleable Solid	Settleable Solids
Chromium, hexavalent	Chromium, hexavalent
Microbiology	Total and Fecal Coliform

Table 2. DMR WET Analyses

Parameter	Endpoint
Acute Toxicity	Survival of Fathead Minnow, Survival of Acute <i>Mysidopsis</i> , Survival of Inland Silverside
Chronic Toxicity	Survival/Growth of Fathead Minnow, Survival/Reproduction of <i>Ceriodaphnia dubia</i>

EXHIBIT B - 12

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HARRY PREGERSON BUILDING
12000 VISTA DEL MAR
PLAYA DEL REY, CA 90293
TEL (310) 648-5231
FAX (310) 648-5731

October 10, 2008

Ms. Tracy Egoscue
Executive Officer
California Regional Water Quality
Control Board, Los Angeles Region
320 West Fourth Street, Suite 200
Los Angeles, CA 90013
Attention: Information Technology Unit

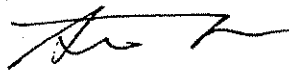
**MONTHLY MONITORING REPORT – AUGUST 2008
HYPERION TREATMENT PLANT AND SANTA MONICA BAY
NPDES PERMIT NO. CA0109991, ORDER NO. R4-2005-0020
COMPLIANCE FILE NO. CI-1492**

Dear Ms. Egoscue:

The enclosed Monthly Monitoring Report complies with the requirements of the plant's National Pollutant Discharge Elimination System (NPDES) permit. The report includes tabular monitoring data, a narrative summary of plant performance for the month, and all other requirements specified in Order No. R4-2005-0020, adopted on May 14, 2005, by the California Regional Water Quality Control Board, Los Angeles Region, and the Regional Administrator, Environmental Protection Agency, Region IX.

For questions regarding this report, please contact Ms. Kay Yamamoto at (310) 648-5727.

Very truly yours,


Steven S. Fan, Plant Manager
Hyperion Treatment Plant

MD: KMY
Enclosure: Monthly Monitoring Report (1)
c: County of Los Angeles, Department of Public Health



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BUREAU OF SANITATION
HYPERION TREATMENT PLANT
ORDER NO. R4-2005-0020
NPDES Permit No. CA0109991 – Compliance File No. CI-1492

AUGUST 2008

SUMMARY OF NON-COMPLIANCE

This monitoring report is submitted by Steven S. Fan, Plant Manager, in compliance with requirements of Order No. R4-2005-0020 adopted on May 14, 2005 by the California Regional Water Quality Control Board, Los Angeles Region, for the Hyperion Treatment Plant (HTP).

All requirements specified in Order No. R4-2005-0020 adopted by the Regional Water Quality Control Board, Los Angeles Region, on May 14, 2005 were in compliance.

REMARKS – INFLUENT AND EFFLUENT MONITORING AND REPORTING PROGRAM

One-Mile Diversion Event - August 20, 2008

On August 20, 2008, HTP performed functional testing on Serial Discharge No. 001, commonly referred to as the one-mile outfall gates. During the test, the gates operated properly from all three locations: the local control panel, the remote panel, and the Distributed Control System. Approximately 1,800,000 gallons of chlorinated secondary effluent was discharged through the one-mile outfall.

This report contains permit-required, one-mile outfall tabulated microbiological and total chlorine residual monitoring data. All permit requirements pertaining to Serial Discharge No. 001 were in compliance.

Offshore Water Quality Monitoring

The HTP NPDES Permit No. CA0109991, Order No. R4-2005-0020 requires CTD receiving water monitoring and discrete water sample analyses of ammonia nitrogen, total and fecal coliforms, and enterococcus during the third quarter of 2008. As the EMD is participating in the 2008 Southern California Bight Regional Monitoring Program, the Los Angeles Regional Water Quality Control Board approval letter dated July 11, 2008 allows these analyses to be waived for this quarter to facilitate our participation in the Program.

Ammonia Performance Goal Exceedance

On August 3, 2008, HTP exceeded the effluent ammonia performance goal of 36.3 mg/L with a value of 37 mg/L. This is the sixth consecutive exceedance following the July 2008 level of 37.2 mg/L. With the exception of February 2008, HTP has exceeded the goal each month since November 2007.

After reviewing influent and effluent ammonia and organic nitrogen data for the last 15 years, the Task Force believes the most important factor leading to the high effluent ammonia concentration is higher loading to the plant. Please refer to the July 2008 report. Hyperion was not designed or operated to

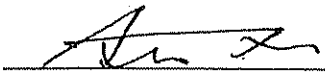
REMARKS – INFLUENT AND EFFLUENT MONITORING AND REPORTING PROGRAM
Page 2 of 2

nitrify organic- or ammonia- nitrogen in its liquid processes; therefore, the higher influent ammonia loading directly affects the ammonia concentration in the effluent. Therefore, beginning with this reporting period, the Task Force has shifted its efforts to evaluating nitrogen data in the influent in a more detailed manner. The nitrogen data on individual sewer lines are being evaluated. At the same time, other wastewater treatment plants in Southern California are being contacted to see if similar trends of increased ammonia loading are evident. These results will be presented in upcoming monthly reports.

Reporting of Grab Sample Times

In order to fulfill permit reporting requirements of submitting sample times, the grab sample times are reported in the appended Chain-of-Custody documents as our current reporting system is unable to capture this information.

This report submitted by

 on October 7, 2008

Steven S. Fan
Plant Manager

CITY OF LOS ANGELES
CALIFORNIA



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MAYOR

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LOS ANGELES, CA 90015
TEL: (213) 485-2210
FAX: (213) 485-2579

August 21, 2008

Tracy Egoscue, Executive Director
California Regional Water Quality Control Board
Los Angeles Region
320 West Fourth Street, Suite 200
Los Angeles, California 90013

**DISCHARGE OF CHLORINATED SECONDARY EFFLUENT THROUGH THE ONE-MILE OCEAN
OUTFALL GATES DURING FUNCTIONAL TESTING ON AUGUST 20, 2008 — NPDES NO. CA0109991**

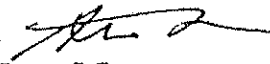
Dear Ms. Egoscue:

On August 20, 2008, the Hyperion Treatment Plant performed functional testing on the three One-Mile Ocean Outfall gates. During the test the gates operated properly from all three locations (local control panel, remote panel, and the Distributed Control System).

During the test approximately 1,800,000 gallons of chlorinated secondary effluent was discharged to the one mile outfall.

If you require any additional information, please contact me at (310) 648-5168 or Michael Ruiz, Shift Superintendent II of my staff at (310) 648-5328.

Very truly yours,


Steven S. Fan
Plant Manager

Cc: Dr. Jau-Ren Chen, CRWQCB
Traci Minamide
Michael Ruiz
Masahiro Dojiri, EMD
Shift Superintendents
HTP File



HYPERION TREATMENT PLANT
MONTHLY SUMMARY REPORT
NPDES PERMIT NO. CA0109991
COMPLIANCE FILE NO. 1492
PLANT FLOWS

August 2008

PAGE I-1

DATE	DAY	TOTAL PLANT FLOW	NORS FLOW	NOS FLOW	NCOS FLOW	COS FLOW	CWIS FLOW	FIVE-MILE OUTFALL FLOW	WEST BASIN FLOW
		MGD	MGD	MGD	MGD	MGD	MGD	MGD	MGD
1	FRI	358	218	3	112	2	23	318	39
2	SAT	323	211	3	84	2	23	285	37
3	SUN	324	203	3	94	2	22	286	37
4	MON	339	217	3	94	2	23	299	39
5	TUE	348	217	3	102	2	23	308	39
6	WED	342	216	3	98	2	23	302	39
7	THU	329	217	3	85	2	23	289	39
8	FRI	331	219	3	85	2	23	289	41
9	SAT	320	210	3	83	2	22	281	38
10	SUN	307	201	3	79	2	22	269	37
11	MON	323	213	3	82	2	23	284	38
12	TUE	327	216	3	84	2	22	287	39
13	WED	329	217	3	84	2	22	292	36
14	THU	332	219	3	85	2	22	292	39
15	FRI	330	219	3	83	2	23	288	40
16	SAT	318	209	3	82	2	22	279	38
17	SUN	308	201	3	80	2	22	270	37
18	MON	323	213	3	82	2	22	283	39
19	TUE	327	216	3	84	2	22	288	38
20	WED	326	215	3	83	2	22	286	39
21	THU	327	216	3	83	2	23	287	39
22	FRI	330	217	3	85	2	23	290	38
23	SAT	321	210	3	85	2	22	281	39
24	SUN	313	202	3	84	2	22	274	37
25	MON	328	215	3	86	2	23	288	40
26	TUE	331	215	3	89	2	22	309	21
27	WED	330	213	3	90	2	22	291	37
28	THU	338	214	3	98	2	22	298	39
29	FRI	352	217	3	108	2	22	313	38
30	SAT	339	206	3	106	2	22	297	40
31	SUN	322	192	3	104	2	21	283	39
TOTAL		10194	6583	93	2763	62	693	8986	1177
MAXIMUM		358	219	3	112	2	23	318	41
MINIMUM		307	192	3	79	2	21	269	21
AVERAGE		329	212	3	89	2	22	290	38

Generated by NDL at 10/02/2008 06:46:26 AM using the Production Database and WISARD V2.0
WISARD - Legal HTP - HTP Effluent Monthly

LEGEND: IF - Instrument Failure
value + "e" - Estimated result

NC - Not Calculable
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PLAYA DEL REY, CA 90293
TEL: (310) 648-5231
FAX: (310) 648-5731

June 11, 2008

Ms. Tracy Egoscue
Executive Officer
California Regional Water Quality
Control Board, Los Angeles Region
320 West Fourth Street, Suite 200
Los Angeles, CA 90013
Attention: Information Technology Unit

MONTHLY MONITORING REPORT – APRIL 2008
HYPERION TREATMENT PLANT AND SANTA MONICA BAY
NPDES PERMIT NO. CA0109991, ORDER NO. R4-2005-0020
COMPLIANCE FILE NO. CI-1492

Dear Ms. Egoscue:

The enclosed Monthly Monitoring Report complies with the requirements of the plant's National Pollutant Discharge Elimination System (NPDES) permit. The report includes tabular monitoring data, a narrative summary of plant performance for the month, and all other requirements specified in Order No. R4-2005-0020, adopted on May 14, 2005, by the California Regional Water Quality Control Board, Los Angeles Region, and the Regional Administrator, Environmental Protection Agency, Region IX.

For questions regarding this report, please contact Ms. Kay Yamamoto at (310) 648-5727.

Very truly yours,


Steven S. Fan, Plant Manager
Hyperion Treatment Plant

MD: KMY
Enclosure: Monthly Monitoring Report (1)
c: County of Los Angeles, Department of Public Health



APRIL 2008

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SECTION A

SUMMARY OF NON-COMPLIANCE

CITY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUREAU OF SANITATION
HYPERION TREATMENT PLANT
ORDER NO. R4-2005-0020
NPDES Permit No. CA0109991 – Compliance File No. CI-1492

APRIL 2008

SUMMARY OF NON-COMPLIANCE

This monitoring report is submitted by Steven S. Fan, Plant Manager, in compliance with requirements of Order No. R4-2005-0020 adopted on May 14, 2005 by the California Regional Water Quality Control Board, Los Angeles Region, for the Hyperion Treatment Plant (HTP).

All requirements specified in Order No. R4-2005-0020 adopted by the Regional Water Quality Control Board, Los Angeles Region, on May 14, 2005 were in compliance.

REMARKS – INFLUENT AND EFFLUENT MONITORING AND REPORTING PROGRAM

Acute Toxicity

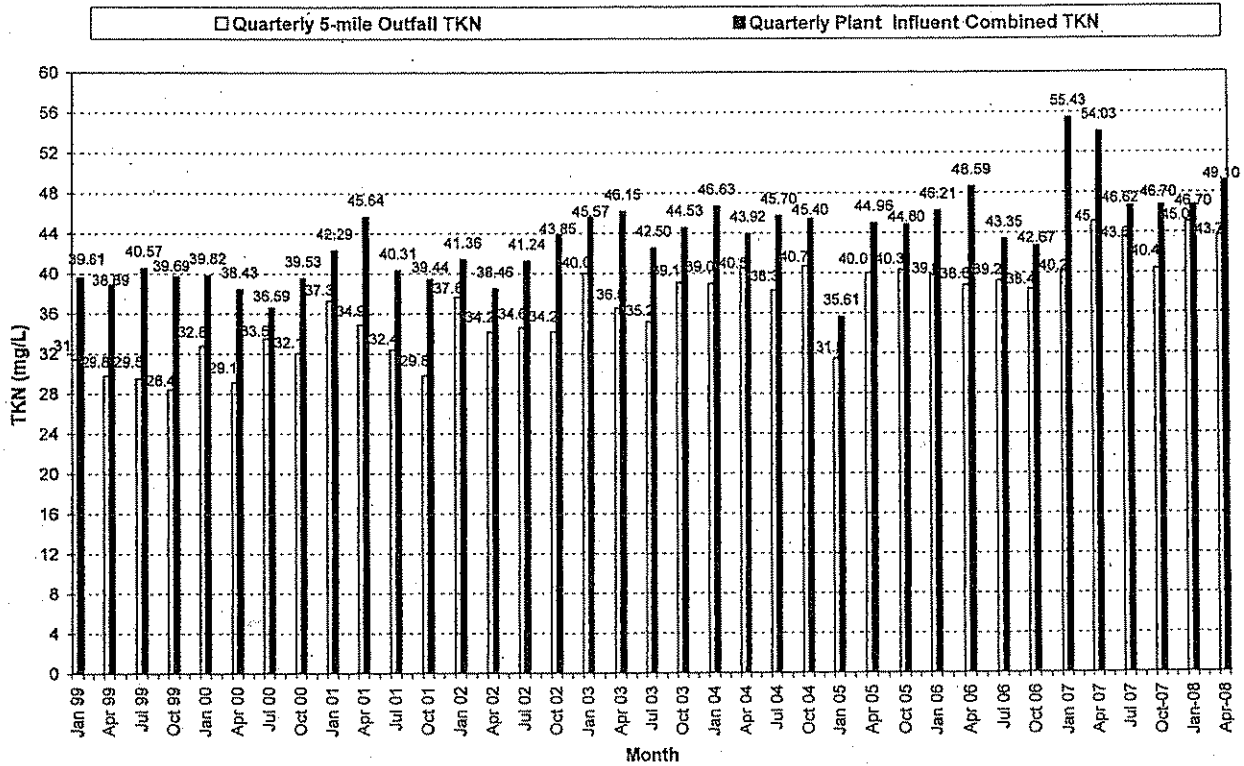
The NPDES permit requires Hyperion Treatment Plant to conduct monthly acute toxicity tests with the topsmelt, *Atherinops affinis*. The first series of acute topsmelt tests were conducted on the April 9, 2008 with a composite sample collected on April 8, 2008. The reference toxicant results did not fall within two standard deviations of the mean, the test acceptability criteria for a valid reference toxicant test. As a result, the HTP test linked to the failed reference toxicant test is invalid. The April HTP acute test was then repeated on April 23, 2008 with a composite sample collected on April 22, 2008. All test acceptability criteria were met and the plant was in compliance for the month (TUa = 2.5). This is the third consecutive test within compliance in the accelerated testing series. A total of six consecutive tests within compliance must be conducted in order to exit accelerated testing. The next accelerated test is scheduled for May 7, 2008.

Performance Goal Exceedance

On April 1, 2008, ammonia exceeded its performance goal of 36.3 mg/L, with a result of 40.7 mg/L in the HTP effluent sample. This is the second consecutive exceedance following the previous month's (March 2008) level of 38.7 mg/L. Except for February 2008, HTP has exceeded the goal since November 2007.

In this month, the Task Force continued to work on bench-scale study on breakpoint chlorination of the centrate stream from the biosolids dewatering process, which was believed to carry high concentrate of ammonia nitrogen or TKN. As reported in the March 2008 report, the Task Force ran into analytical complications when highly chlorinated solution was tested for ammonia concentration. Determination of ammonia concentration is needed to complete the investigation of chlorination on ammonia and organic nitrogen reduction. The problem has not been fully resolved yet in this reporting month. Once the analytical issue is resolved, a test will be conducted and reported to RWQCB.

Total Kjeldahl Nitrogen (Org-N + NH3-N)



Reporting of Grab Sample Times

In order to fulfill permit reporting requirements of submitting sample times, the grab sample times are reported in the appended Chain-of-Custody documents as our current reporting system is unable to capture this information.

This report submitted by

Steven S. Fan on June 9, 2008

Steven S. Fan
Plant Manager

SECTION B

PERJURY STATEMENT

CITY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUREAU OF SANITATION
HYPERION TREATMENT PLANT

NPDES PERMIT NO. CA0109991 - COMPLIANCE FILE NO. CI-1492

MONTHLY EXAMINATION OF RAW INFLUENT, PLANT EFFLUENT,
AND THE SANTA MONICA RECEIVING WATERS

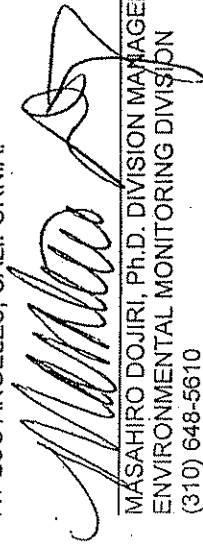
APRIL 2008

ALL ANALYSES WERE CONDUCTED AT A LABORATORY CERTIFIED FOR SUCH ANALYSES BY THE CALIFORNIA STATE DEPARTMENT OF HEALTH SERVICES AND IN ACCORDANCE WITH CURRENT EPA GUIDELINE PROCEDURES OR AS SPECIFIED IN THE NPDES PERMIT MONITORING PROGRAM.

I CERTIFY UNDER PENALTY OF LAW ALL LABORATORY DATA AND COMPLIANCE TABLES IN THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED.

BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY, OF A FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

EXECUTED ON THE 9 DAY OF JUNE, 2008
AT LOS ANGELES, CALIFORNIA.



MASAHIRO DOJIRI, Ph.D. DIVISION MANAGER
ENVIRONMENTAL MONITORING DIVISION
(310) 648-5610

(SIGNATURE)

I CERTIFY UNDER PENALTY OF LAW THAT ALL INFORMATION OTHER THAN LABORATORY DATA AND COMPLIANCE TABLES IN THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED.

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EXECUTE ON THE 9 DAY OF June, 2008
AT LOS ANGELES, CALIFORNIA.


STEVEN S. FAN, PLANT MANAGER
HYPERION TREATMENT PLANT
(310) 648-5221

(SIGNATURE)

SECTION C

BIOSOLIDS DISPOSAL AND HAULING REPORT

Hyperion Treatment Plant

HTP Biosolids Dewatered

Land Fill

Waste Market (C-57995)	City Of Los Angeles - USA WASTE OF CALIFORNIA/WM (by w/tons)
04/02/2008	38.18
04/08/2008	33.47
04/09/2008	21.60
04/15/2008	21.01
04/23/2008	44.36
Total weight (by w/tons)	158.62
Solid Solutions (C110634)	FLEET INDUSTRIES (by w/tons)
04/19/2008	46.75
04/30/2008	17.82
Total weight (by w/tons)	64.57

Land Application

Solid Solutions (C110634)	FLEET INDUSTRIES (by w/tons)
04/01/2008	22.94
04/06/2008	46.53
04/09/2008	23.08
04/13/2008	95.37
04/20/2008	47.30
04/30/2008	23.23
Total weight (by w/tons)	258.45
Responsible Biosolids Mgmt (C-94375)	LUTREL Trucking, INC (by w/tons)
04/01/2008	607.67
04/02/2008	688.46
04/03/2008	527.99
04/04/2008	686.96
04/05/2008	711.34
04/06/2008	710.89
04/07/2008	588.80
04/08/2008	555.13
04/09/2008	630.76
04/10/2008	554.76
04/11/2008	583.40
04/12/2008	738.62
04/13/2008	579.37
04/14/2008	684.20
04/15/2008	762.35
04/16/2008	817.13
04/17/2008	582.75
04/18/2008	712.69
04/19/2008	710.45
04/20/2008	471.65
04/21/2008	735.33
04/22/2008	659.70
04/23/2008	766.55
04/24/2008	741.83
04/25/2008	769.84
04/26/2008	554.28
04/27/2008	553.50
04/28/2008	686.46
04/29/2008	432.67
04/30/2008	419.22
Total weight (by w/tons)	19,224.76

Lawn and Garden (Griffith Park Composting)

04/20/2008	24.90
04/26/2008	25.35
04/29/2008	25.24
Total weight (by w/tons)	194.91
Lawn and Garden (Griffith Park Composting)	
Solid Solutions (C110634)	FLEET INDUSTRIES (by w/tons)
04/02/2008	47.25
04/03/2008	40.20
04/04/2008	46.96
04/05/2008	47.95
04/06/2008	24.68
04/07/2008	24.00
04/08/2008	23.45
04/10/2008	23.55
04/11/2008	47.16
04/12/2008	50.70
04/13/2008	24.65
04/16/2008	24.85
04/19/2008	49.69
04/20/2008	25.35
04/21/2008	50.01
04/22/2008	50.70
04/23/2008	50.55
04/24/2008	49.36
04/25/2008	50.35
04/26/2008	24.95
04/27/2008	25.01
04/30/2008	50.20
Total weight (by w/tons)	851.57
As of June 02, 2008 11:08:33	

SECTION D

ANALYSIS OF INFLUENT AND EFFLUENT QUALITY

**HYPERION TREATMENT PLANT
MONTHLY SUMMARY REPORT
NPDES PERMIT NO. CA0109991
COMPLIANCE FILE NO. 1492
PLANT FLOWS**

April 2008

PAGE I-1

DATE	DAY	TOTAL PLANT FLOW	NORS FLOW	NOS FLOW	NCOS FLOW	COŞ FLOW	CWIS FLOW	FIVE-MILE OUTFALL FLOW	WEST BASIN FLOW
		MGD	MGD	MGD	MGD	MGD	MGD	MGD	MGD
1	TUE	313	215	3	69	2	23	279	33
2	WED	316	215	3	72	2	24	285	30
3	THU	317	214	3	74	2	24	286	30
4	FRI	322	216	3	76	2	24	291	29
5	SAT	316	212	3	77	2	23	283	33
6	SUN	308	205	3	75	2	23	277	30
7	MON	318	214	3	76	2	24	284	33
8	TUE	320	215	3	76	2	24	289	31
9	WED	319	214	3	76	2	24	286	32
10	THU	320	215	3	76	2	24	288	32
11	FRI	321	216	3	75	2	24	287	33
12	SAT	318	213	3	77	2	23	285	32
13	SUN	309	206	3	75	2	23	275	33
14	MON	315	212	3	75	2	23	282	32
15	TUE	312	210	3	75	2	23	278	33
16	WED	319	215	3	75	2	23	286	32
17	THU	320	215	3	77	2	23	292	27
18	FRI	320	216	3	76	2	23	286	33
19	SAT	311	209	3	74	2	22	278	32
20	SUN	304	204	3	73	2	22	274	29
21	MON	308	212	3	68	2	23	274	33
22	TUE	310	218	3	64	2	23	278	31
23	WED	309	215	3	65	2	23	274	34
24	THU	309	213	3	67	2	23	273	35
25	FRI	316	215	3	73	2	23	283	32
26	SAT	315	211	3	76	2	23	281	34
27	SUN	306	203	3	76	2	22	270	35
28	MON	319	214	3	76	2	23	282	36
29	TUE	322	217	3	77	2	23	284	37
30	WED	317	213	3	76	2	23	284	32
TOTAL		9451	6384	90	2219	60	699	8452	969
MAXIMUM		322	218	3	77	2	24	292	37
MINIMUM		304	203	3	64	2	22	270	27
AVERAGE		315	213	3	74	2	23	282	32

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WISARD - Legal HTP - HTP Effluent Monthly

LEGEND: IF - Instrument Failure
value + "e" - Estimated result

NC - Not Calculable
NR - Not Representative

HYPERION TREATMENT PLANT
MONTHLY SUMMARY REPORT
NPDES PERMIT NO. CA0109991
COMPLIANCE FILE NO. 1492
WEEKLY ANALYSIS OF INFLUENT SEWERS

April 2008

PAGE I-3

DATE	DAY	pH						OIL AND GREASE						
		FLOW WT AVG	NORS	NOS	NCOS	COS	CWIS	FLOW WT AVG mg/L	NORS mg/L	NOS mg/L	NCOS mg/L	COS mg/L	CWIS mg/L	
1	TUE													
2	WED													
3	THU													
4	FRI													
5	SAT													
6	SUN													
7	MON	7.5	7.4	8.4	7.6	8.1	7.3	50	50	23	51	65	44	
8	TUE													
9	WED													
10	THU													
11	FRI													
12	SAT													
13	SUN													
14	MON													
15	TUE	7.5	7.3	7.2	7.9	8.1	7.4	52	52	56	56	58	41	
16	WED													
17	THU													
18	FRI													
19	SAT													
20	SUN													
21	MON													
22	TUE													
23	WED													
24	THU	7.3	7.3	8.3	7.0	8.2	7.3	49	50	18	45	61	48	
25	FRI													
26	SAT													
27	SUN													
28	MON													
29	TUE													
30	WED													
MAXIMUM		7.5	7.4	8.4	7.9	8.2	7.4	52	52	56	56	65	48	
MINIMUM		7.3	7.3	7.2	7.0	8.1	7.3	49	50	18	45	58	41	
AVERAGE		7.4	7.3	8.0	7.5	8.1	7.3	50	51	32	51	61	44	
ANALYTICAL METHOD		SM4500-H+ B						EPA 1664						
MDL									3	3	3	3	3	3
RML			0.1	0.1	0.1	0.1	0.1		5	5	5	5	5	5
ML			0.1	0.1	0.1	0.1	0.1		5	5	5	5	5	5
SAMPLE TYPE		GRAB						GRAB						

Generated by NDL at 06/02/2008 10:53:11 AM using the Production Database and WISARD V2.0
WISARD - Legal HTP - HTP Effluent Monthly

LEGEND: AE - Analyst Error
CM - Conditional Monitoring
IF - Instrument Failure

NC - Not Calculable
NR - Not Representative
NS - Not Sampled

ND - Not Detected
value + "e" - Estimated result

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PLAYA DEL REY, CA 90293
TEL: (310) 648-5231
FAX: (310) 648-5731

May 9, 2008

Ms. Tracy Egoscue
Executive Officer
California Regional Water Quality
Control Board, Los Angeles Region
320 West Fourth Street, Suite 200
Los Angeles, CA 90013
Attention: Information Technology Unit

MONTHLY MONITORING REPORT – MARCH 2008
HYPERION TREATMENT PLANT AND SANTA MONICA BAY
NPDES PERMIT NO. CA0109991, ORDER NO. R4-2005-0020
COMPLIANCE FILE NO. CI-1492

Dear Ms. Egoscue:

The enclosed Monthly Monitoring Report complies with the requirements of the plant's National Pollutant Discharge Elimination System (NPDES) permit. The report includes tabular monitoring data, a narrative summary of plant performance for the month, and all other requirements specified in Order No. R4-2005-0020, adopted on May 14, 2005, by the California Regional Water Quality Control Board, Los Angeles Region, and the Regional Administrator, Environmental Protection Agency, Region IX.

For questions regarding this report, please contact Ms. Kay Yamamoto at (310) 648-5727.

Very truly yours,


Steven S. Fan, Plant Manager
Hyperion Treatment Plant

MD: KMY

Enclosure: Monthly Monitoring Report (1)

c: County of Los Angeles, Department of Public Health



MARCH 2008

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SECTION A

SUMMARY OF NON-COMPLIANCE

CITY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
BUREAU OF SANITATION
HYPERION TREATMENT PLANT
ORDER NO. R4-2005-0020
NPDES Permit No. CA0109991 – Compliance File No. CI-1492

MARCH 2008

SUMMARY OF NON-COMPLIANCE

This monitoring report is submitted by Steven S. Fan, Plant Manager, in compliance with requirements of Order No. R4-2005-0020 adopted on May 14, 2005 by the California Regional Water Quality Control Board, Los Angeles Region, for the Hyperion Treatment Plant (HTP).

All requirements specified in Order No. R4-2005-0020 adopted by the Regional Water Quality Control Board, Los Angeles Region, on May 14, 2005 were in compliance except for Acute Toxicity. See below.

Acute Toxicity

The HTP is mandated by the Los Angeles Regional Water Quality Control Board (RWQCB) under permit no. CA0109991 to conduct acute toxicity testing of its effluent. This directive requires that two marine species be tested biennially for three consecutive months. The two test species chosen for screening are the Mysid (*Americamysis bahia*), formerly known as *Mysidopsis bahia*, and the topsmelt (*Atherinops affinis*). At the end of this screening period, the most-sensitive species is to be used for the remainder of the year. Currently, the topsmelt, *Atherinops affinis* is the most sensitive species.

On March 12, 2008, an HTP acute topsmelt toxicity test was conducted on a 24-hour composite effluent sample collected on March 11, 2008. This test resulted in an exceedance of the permit limit of 2.8 TUa with a result of 3.0. This exceedance triggered accelerated testing which began on March 26, 2008 with a 24-hour composite sample collected on March 25, 2008. The first series of accelerated testing met permit compliance with a TUa = 2.5. A second series of accelerated testing is scheduled for April 23, 2008. If the results of six consecutive tests are within compliance, routine monthly testing will resume.

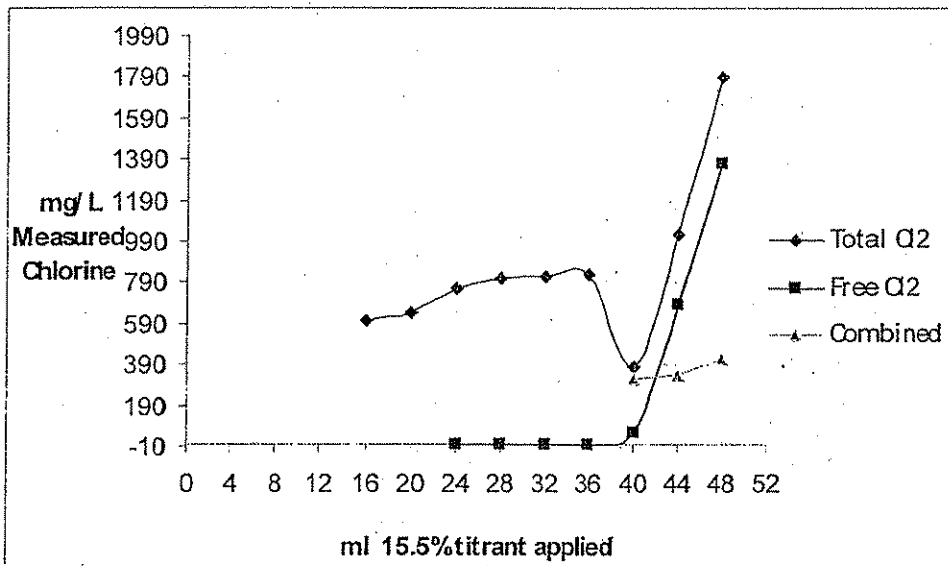
REMARKS – INFLUENT AND EFFLUENT MONITORING AND REPORTING PROGRAM

Ammonia Performance Goal

On March 1st, the effluent ammonia concentration slightly exceeded the performance goal of 36.3 mg/L, with a result of 38.7 mg/L in the HTP sample. In February 2008, the ammonia concentration was below the goal at 35.5 mg/L. However, ammonia levels in the preceding three months prior to February were above the goal with results of 40.8 mg/L, 37.2 mg/L, 42.2 mg/L, for November 2007, December 2007, and January 2008, respectively.

In March 2008, the Task Force carrying out the Ammonia Reduction Plan, studied the possibility of breakpoint chlorination. As reported in February 2008, a high portion of TKN loading to primary treatment at HTP is from the plant recycle flows. The special tests conducted in December 2007 showed that the centrate from the biosolids dewatering process had 17 tons per day of TKN, compared

Titrant (ml)	Total Chlorine (mg/L)	Free Chlorine (mg/L)
0		
4		
8		
12		
16	608	
20	648	
24	768	0
28	810	0
32	825	0
36	835	0
40	385	60
44	1032	688
48	1790	1370



The data shows that the breakpoint chlorination was accomplished with about 40 ml of the titrant (155,000 mg available chlorine/L). With 1220 mg/L of ammonia nitrogen concentration and 500 ml of centrate volume, the breakpoint chlorination requires 10.2 weight ratio of chlorine to ammonia nitrogen. It is higher than the theoretical ratio of 7.6. However, it is fully expected, because the centrate also contains organic nitrogen and other compounds and ions that can be combined with chlorine.

There are two other points to be mentioned about the test. The first point is that a significant amount of foam was produced throughout the test, with some lessening at the end. The second point is that the ammonia-nitrogen concentration was not measured because a complication of testing arose due to high chlorine concentration found in the chlorinated samples. In the April, the Task Force will attempt

SECTION D

ANALYSIS OF INFLUENT AND EFFLUENT QUALITY

HYPERION TREATMENT PLANT
MONTHLY SUMMARY REPORT
NPDES PERMIT NO. CA0109991
COMPLIANCE FILE NO. 1492
PLANT FLOWS

March 2008

PAGE I-1

DATE	DAY	TOTAL PLANT FLOW	NORS FLOW	NOS FLOW	NCOS FLOW	COS FLOW	CWIS FLOW	FIVE-MILE OUTFALL FLOW	WEST BASIN FLOW
		MGD	MGD	MGD	MGD	MGD	MGD	MGD	MGD
1	SAT	320	218	3	76	2	21	288	31
2	SUN	318	215	3	76	2	21	284	33
3	MON	323	219	3	77	2	22	290	33
4	TUE	329	222	3	80	2	21	300	27
5	WED	334	227	3	80	2	21	301	32
6	THU	336	228	3	82	2	21	301	34
7	FRI	332	224	3	83	2	21	304	27
8	SAT	329	220	3	83	2	21	299	29
9	SUN	316	211	3	80	2	20	285	30
10	MON	332	225	3	81	2	21	295	36
11	TUE	315	213	3	77	2	20	282	33
12	WED	327	223	3	79	2	21	295	31
13	THU	329	223	3	80	2	21	298	30
14	FRI	331	225	3	80	2	21	297	33
15	SAT	323	216	3	80	2	21	289	32
16	SUN	311	207	3	78	2	20	280	30
17	MON	317e	217e	3	74e	2	21	282e	34
18	TUE	312	218	3	68	2	21	278	33
19	WED	311	217	3	68	2	21	279	31
20	THU	311	216	3	69	2	20	282	28
21	FRI	313	217	3	70	2	20	282	29
22	SAT	309	213	3	70	2	20	275	32
23	SUN	297	203	3	69	2	20	264	32
24	MON	312	215	3	71	2	20	275	35
25	TUE	315	216	3	73	2	21	285	29
26	WED	320	218	3	74	2	23	286	32
27	THU	321	216	3	78	2	23	286	34
28	FRI	323	217	3	78	2	23	289	33
29	SAT	317	212	3	78	2	22	282	34
30	SUN	309	205	3	77	2	23	274	34
31	MON	321	215	3	77	2	23	286	34
TOTAL		9913e	6733e	93	2366e	62	658	8895e	987
MAXIMUM		336	228	3	83	2	23	304	36
MINIMUM		297	203	3	68	2	20	264	27
AVERAGE		320e	217e	3	76e	2	21	287e	32

Generated by NDL at 04/22/2008 07:47:12 AM using the Production Database and WISARD V2.0
WISARD - Legal HTP - HTP Effluent Monthly

LEGEND:

IF - Instrument Failure
value + "e" - Estimated result

NC - Not Calculable
NR - Not Representative

EXHIBIT B - 13

Draft Environmental Impact Reports (DEIR's)

NOTE:

All comments must be submitted in writing to the Environmental Review Unit, City of Los Angeles Planning Department, 200 N. Spring, 7th Floor, Los Angeles, California, 90012 by 5:00 p.m. on the final day of the circulation period.

Community Recycling and Resource Recovery Facility

Case No. ENV-2006-6373-EIR State Clearinghouse Number: 2007041015
Council District: 6 Community Plan Area: Sun Valley-La Tuna
Canyon

Project Address: 9143 to 9189 De Garmo Avenue and 11300 W.
Pendleton Street, Sun Valley, California 91352

Project Description: The Project site is used as a solid waste facility and a recycling and resource recovery operation which is currently permitted for a 1,700 tons per day (TPD) transfer station/materials recycling facility (MRF) and which for recycling receives approximately 1,200 TPD of construction materials, 1,200 TPD of source-separated green waste, 350 TPD of source-separated supermarket trim and cull, and 150 TPD of source-separated wood waste. The Proposed Project includes construction of an approximate 107,000-square-foot enclosure building with air filtration system to be located over the existing source-separated green waste, supermarket trim and cull, and wood waste areas, with 40 parking spaces (already existing), and a revised Solid Waste Facilities Permit for the entire facility. The purpose of the revised permit is to consolidate all resource recovery operations under one comprehensive permit in order to respond to new recycling industry regulations. Under the new permit, the applicant is seeking approval to receive up to 2,000 TPD of construction material, up to 1,500 TPD of source-separated green waste, up to 500 TPD of source-separated supermarket trim and cull, and up to 200 TPD of source-separated wood waste. The applicant is also seeking to increase the permit for the transfer station/MRF to 2,500 TPD. The permit increase in tonnage over time would require up to one additional shift to be added to the operations.

REVIEW LOCATIONS: The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

- 1) Sun Valley Branch Library - 7935 Vineland Avenue, Sun Valley, CA 90071
- 2) Central Library - 630 West Fifth Street, Los Angeles, CA 90071

- 3) Lake View Branch Library - 12002 Osborn Street, Sylmar, CA 91342
- 4) Pacoima Branch Library – 13605 Van Nuys Blvd., Pacoima, CA 91331

COMMENT DUE DATE: If you wish to submit comments following review of the Draft Environmental Impact Report (DEIR) please submit them in writing by June 22, 2009. Send comments to: Adam Villani, Environmental Review Coordinator Los Angeles Department of City Planning 200 North Spring Street, Room 750 Los Angeles, California 90012 Adam.Villani@lacity.org

Plaza at the Glen Mixed Use Project

Case No. ENV
2007-4063-EIR

State Clearinghouse Number: 2007121170

Council District: 2

Community Plan Area: North Hollywood-Valley
Village

Project Address: 13003 - 13075 Victory Boulevard

Project Description: The proposed project would develop the site with a 1,300,000 net (or rentable) square foot (up to 1,500,000 gross square feet) urban community that provides employment, services, entertainment, lodging and housing, while integrating transit, and urban amenities into a single mixed-use development. Specifically, the project would provide 150 multi-family residential units, a 230 room hotel, approximately 550,000 net square feet of office space (of which 100,000 net square feet would be medical office), a 2,700 seat theater complex, a 45,000 net square foot gym and 285,000 net square feet of shopping center which is broken down as follows; 140,000 net square feet of retail, 100,000 net square feet of restaurant space, and a 45,000 net square-foot market. Development would range from a minimum of one-story to a maximum of seven stories in order to spread density around the site and maintain lower profiles around site edges, specifically adjacent to residential uses to the north and northeast. The project is intended to create a "village" like setting that includes using low-rise rooftop spaces for pedestrian plazas, amenities and circulation, and a trolley that runs through the middle of the project. A transit plaza would also be developed over the Tujunga Wash between Victory Boulevard and Ethel Avenue and extending about 250 feet north of the current Ethel Avenue bridge. The transit plaza would cover the Wash as well as portions of the recently-planted Greenway adjacent to the Wash. The transit plaza would have the intention of connecting to an extension of an

existing DASH route and Orange Line Busway, providing direct transit access to the San Fernando Valley and greater Los Angeles area as well as to an existing MTA bus route connecting the project to Warner Center and the City of Burbank Business District. Subterranean parking for 3,312 vehicles is proposed, requiring excavation of approximately 592,000 cubic yards of material to create 3-4 levels of subterranean parking. As with the current site, access would be from Victory Boulevard at Ethel Avenue. A second access would be provided off Victory Boulevard at the eastern property boundary.

REVIEW LOCATIONS: The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

- 1) Los Angeles Department of City Planning - 6262 Van Nuys Boulevard, Suite 351, Van Nuys, CA 91401
- 2) Central Library - 630 West Fifth Street, Los Angeles, CA 90071
- 3) Valley Plaza Branch Library - 12311 Vanowen Street, North Hollywood, CA 91605
- 4) Van Nuys Branch Library – 6250 Sylmar Avenue, Van Nuys, CA 91401
- 5) Studio City Branch Library -- 12511 Moorpark Street, Studio City, CA 91604

COMMENT DUE DATE: The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. To purchase a copy, contact Dave Somers at (213) 978-1355.

Circulation Period: March 5, 2009 to April 21, 2009.

YULA Boys High School Expansion

Case No. ENV-2008-1799-EIR	State Clearinghouse Number: 2008051066
Council District: 5	Community Plan Area: West Los Angeles Community Plan Area

Project Description: Project Description: The project substantially implements the campus expansion authorized by the existing Conditional Use Permit (CUP) issued in 1999 (Case Number ZA-1999-279-CU-ZV-PA1), (and accompanying Mitigated Negative Declaration, MND-99-0151), while requesting amendments to specific permit conditions. The Applicant is proposing to: (1) complete build-out of the campus with modification of the full build-out plans approved pursuant to the 1999 CUP; (2) increase permitted enrollment for the Judaic boys high

school while decreasing permitted enrollment for adult education programs; and (3) modify the specific permit conditions of the 1999 CUP, including but not limited to, increased flexibility as to the number and nature of events conducted at the project site, extended evening hours for various activities, extended use of the facilities by YULA Girls High School, and extended use of the facilities for orthodox religious services.

REVIEW LOCATIONS: The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

- (1) Central Library: 630 W. Fifth St, Los Angeles, CA 90071
- (2) West Los Angeles Branch Library, 11360 Santa Monica Blvd, Los Angeles, CA 90025
- (3) Robertson Branch Library, 1719 S Robertson Blvd, Los Angeles, CA 90035

COMMENT DUE DATE: The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. To purchase a copy, contact Diana Kitching at (213) 978-1351.

Circulation Period: February 26, 2009 to April 13, 2009.

Village at Playa Vista

Case No. ENV-2002-6129-EIR	State Clearinghouse Number: 2002111065
Council District: 11	Community Plan Area: Westchester - Playa Del Rey Community Plan Area

Project Description: In 2004, the City initially approved the Village at Playa Vista project and certified a Final Environmental Impact Report, which included the Original Draft EIR prepared for the Proposed Project in 2003. This Recirculated Sections of Draft EIR (RS-DEIR) replaces certain sections of the Original Draft EIR in response to the California Court of Appeal's ruling in the consolidated cases of City of Santa Monica v. City of Los Angeles and Ballona Ecosystem Education Project v. City of Los Angeles that the Original Final EIR contained legal deficiencies with respect to the analysis of land use impacts, archaeological resources and wastewater impacts. The City is recirculating this RS-DEIR pursuant to California Environmental Quality Act Guidelines section 15088.5, subdivision (c), which requires the modified sections of an EIR to be recirculated. As CEQA Guidelines section 15088.5, subdivision (f)(2) permits, the City requests that reviewers limit the scope of their

comments to that material which is within the text of the sections in the RS-DEIR and the appendices included in the RS-DEIR. The Village at Playa Vista consists of the following two components: (1) the Urban Development Component and (2) a Habitat Creation/Restoration Component. The Urban Development Component would enable the development of a master planned community composed of 2,600 dwelling units, 175,000 square feet (sq.ft.) of office space, 150,000 sq.ft. of retail space, and 40,000 sq.ft. of community-serving uses. This development would occur on an approximately 99.3-acre site consisting of 87.5 acres of development, 11.4 acres of parks, and 0.4 acre of other passive open space. The Habitat Creation/Restoration Component includes a total of 11.7 acres, of which the Riparian Corridor involves approximately 6.7 acres, with the restoration of the adjoining portion of the Westchester Bluffs occurring over the remaining 5 acres. The construction of the Riparian Corridor would complete a 25-acre riparian corridor that also includes sections east and west of the Riparian Corridor, ultimately feeding into the Playa Vista First Phase Freshwater Marsh. The Village at Playa Vista is comprised of 111.0 acres located within the Westside area of the City of Los Angeles, approximately two miles inland from Santa Monica Bay. An Equivalency Program is also proposed to allow a limited exchange of office uses for retail and/or assisted living uses. All of the potential impacts with regard to the four issues analyzed in this RS-DEIR (namely, Land Use, Archeology, Wastewater and Global Climate Change) are concluded to be less than significant.

REVIEW LOCATIONS: The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

- (1) Central Library: 630 W. Fifth St, Los Angeles, CA 90071;
- (2) Culver City Library: 4975 Overland Ave, Los Angeles, CA. 90230;
- (3) Westchester/Loyola Village Library: 7114 W. Manchester Ave., Los Angeles, CA 90045;
- (4) Mar Vista Library: 12006 Venice Blvd., Los Angeles, CA 90066;
- (5) Venice Library: 501 S. Venice Blvd., Venice, CA 90291
- (6) Marina del Rey Library: 4533 Admiralty Way, Marina del Rey, CA 90292; (7) UCLA Library: Reference Department, A4510 Young Research Library, Los Angeles, CA 90095; and
- (8) Playa Vista Branch Library: 6400 Playa Vista Dr., Los Angeles, 90094

COMMENT DUE DATE: The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. To purchase a copy, contact David Somers at (213) 978-1355.

Circulation Period: January 29, 2009 to April 30, 2009.

The Wetherly Project

Case No. ENV-2007-1620-EIR State Clearinghouse Number: 2007091074

Council District: 5 Community Plan Area: Wilshire

Project Address: 300 & 302, 304 & 306, 312, 316 & 318, and 322 S Wetherly Drive; and 301 & 303, 307, 313, 319, and 321 & 323 S Almont Drive.

Project Description: The approximately 1.285-acre project site is located in the Wilshire community of the City of Los Angeles and is bound by S. Wetherly Drive to the west, W. 3rd Street to the north, S. Almont Drive to the east, and an alley to the south. The Wetherly Project (Proposed Project) would demolish 84 existing apartment and condominium units in seven buildings and construct approximately 132 condominium units in one 16-story building (208 feet tall) and eight townhouse units in a three-story building (35 feet tall). The condominium tower would be approximately 259,716 square feet in total, while the townhomes would be approximately 28,200 square feet in total. Total building area on the project site would be approximately 287,916 square feet. A total of 350 parking spaces would be provided in a subterranean parking structure. The Proposed Project would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver certification, which would exceed the requirements of the City of Los Angeles Green Building Ordinance. The project site is currently zoned [Q]R4-1-O. Requested entitlements include Vesting Tentative Tract Map for both condominiums and townhomes, Zone change from Height District 1 to Height District 2, Zone change to remove [Q] Condition Number 1, Building Line Removal, and Site Plan Review.

REVIEW LOCATIONS: The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

1. Central Library: 630 W. Fifth St, Los Angeles, CA 90071;
2. West Los Angeles Library Branch: 11360 Santa Monica Blvd, Los Angeles, CA 90025;
3. Robertson Branch: 1719 S. Roberston Blvd. Los Angeles, CA 90035;
4. Fairfax Branch: 161 S. Gardner St. Los Angeles, CA 90036;

COMMENT DUE DATE: The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. Contact Diana Kitching at (213) 978-1351.

Circulation Period: October 30, 2008 to December 15, 2008.

Occidental College Specific Plan

Case No. ENV-2006-3025-EIR State Clearinghouse Number: 2006081153

Council District: 14 Community Plan Area: Northeast Los Angeles
Project Address: 1600 Campus Road.

Project Description: The Occidental College Specific Plan would limit development (including renovation and demolition) to a net addition of approximately 550,250 square feet (sf) to the existing 1,148,044 sf of building area. Maximum Specific Plan Floor Area would not exceed 1,698,294 sf square feet (existing plus net new of 550,250 to equal 1,698,294). Building heights would not exceed four stories (3 stories in Subareas 1 and 3) or 75 feet. Occidental College is not proposing to substantially increase the student body above the existing (mid-2006 when the NOP was published) approximately 1,750 students. The current cap on the number students at Occidental College is 2,000. For purposes of analysis, a student body of 2000 (an increase of just over 10 percent of the 2006 student body) is analyzed in this EIR as the future student population; no increase above 2000 students is proposed. The Specific Plan identifies three subareas. Subarea 1 consists of the northern, northwestern, western, and southern portions of the campus that are within 25 to 450 feet of the public street adjacent to the campus, and considered to be the entrance and transition area between the college and neighborhoods. The Specific Plan vision for Subarea 1 includes the reduction of the use of fencing, as feasible, and scaled development that would complement the adjacent residences. Subarea 2, considered to be the heritage and academic area, is the location of most of the built areas of the campus and is the core of the campus. The Specific Plan vision for this subarea includes more dense development with buildings that complement existing historically significant buildings and topographical features. Subarea 3, considered to be a scenic residential and active recreation area, would provide open space and recreational opportunities for students and employees, and as well as views that overlook the campus below. Development of this area, which is now mostly undeveloped, would include faculty/staff multi-family housing along Townsend Avenue. Development in each subarea would be limited by square footage, and campus-wide, development would be limited by use. The Specific Plan identifies 29 Building Opportunity Sites (BOS) across the campus. No specific buildings are identified in the Specific Plan.

REVIEW LOCATIONS: The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

1) Central Library - 630 W. 5th Street, Los Angeles, CA 90071

- 2) Eagle Rock Branch Library – 5027 Caspar Ave, Los Angeles, CA 90041
- 3) Arroyo Seco Branch Library – 6145 N Figueroa St, Los Angeles, CA, 90042
- 4) Atwater Village Branch Library – 3379 Glendale Blvd, Los Angeles, CA 90039

COMMENT DUE DATE: The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. Contact Diana Kitching at (213) 978-1351.

Circulation Period: October 9, 2008 to November 24, 2008.

Archstone Hollywood Mixed-Use Project

Case No. ENV-2007-3810-EIR State Clearinghouse Number: 2007101024

Council District: 4 Community Plan Area: Hollywood

Project Address: 6911 & 6931 Santa Monica Blvd., 1125 and 1155 Mansfield Ave., 1120, 1130, and 1150 Orange Dr.

Project Description: Development of 348 apartment units, 40,654 square feet of office uses, and 15,101 square feet of ground floor retail/restaurant space. Parking for 983 cars in one to 1.5 subterranean levels and one level covered at grade. Office uses in free-standing building over one level below-grade parking. Total site development of 445,559 square feet with 2.56:1 FAR. Vehicle access from Mansfield Avenue and Orange Drive. Maximum height 5 stories/65 feet residential, 5 stories/85 feet office. Zone change and height district change from R3-1XL, C2-1D, and M1-1VL to C2-2D. General Plan Amendment from Medium Residential, Highway-Oriented Commercial, and Limited Manufacturing to General Commercial. Other actions include a merger into one lot and subdivision of 348 condominium units, a Conditional Use Permit for alcohol at restaurants, Site Plan Review, and a possible agreement for funding on off-site sewer improvements.

REVIEW LOCATIONS: The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

1. Central Library: 630 W. Fifth St, Los Angeles, CA 90071;
2. Durant Branch: 7140 Sunset Blvd., Los Angeles, CA 90046;
3. Fairfax Branch: 161 S. Gardner St., Los Angeles, CA 90036;
4. Goldwyn-Hollywood Regional Branch: 1623 N. Ivar Ave., Hollywood, CA 90028;
5. Fremont Branch: 6121 Melrose Ave., Los Angeles, CA 90038.

COMMENT DUE DATE: The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. Contact Adam Villani at (213) 978-1472. .

Circulation Period: September 18, 2008 to November 3, 2008.

Temple Israel of Hollywood Enhancement Project

Case No. ENV-2007-2147-EIR State Clearinghouse Number: 2007071023

Council District: 4 Community Plan Area: Hollywood

Project Address: 7300 Hollywood Boulevard

Project Description: The Proposed Project is intended to renovate and upgrade, with new construction, the existing on-site parking, school, sanctuary, and administration facilities. The Proposed Project would also reconfigure traffic circulation on the project site and adjacent to the project site in order to provide more efficient on-site circulation and limit traffic impacts on surrounding streets. Development of the Proposed Project would involve sequential development within five Sub Areas. The facility would be served by three driveways from Martel Avenue.

REVIEW LOCATIONS: The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

- 1) Central Library - 630 W. 5th Street, Los Angeles, CA 90071
- 2) John C. Fremont Branch Library - 6121 Melrose Ave, Los Angeles CA, 90038
- 3) Will & Ariel Durant Branch Library – 7140 W. Sunset Blvd, Los Angeles, CA 90046
- 4) Frances Howard Goldwyn – Hollywood Regional Library – 1623 N. Ivar Avenue, Hollywood, CA 90028

COMMENT DUE DATE: The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. Contact Srimal Hewawitharana at (213) 978-1202 or Jimmy Liao at (213) 978-1331.

Circulation Period: September 11, 2008 to October 27, 2008.

WestField - Fashion Square

Case No. ENV
2007-9914-EIR

State Clearinghouse Number: 2007071103

Council District: 2

Community Plan Area: Sherman Oaks-Studio
City-Toluca Lake

Project Address: 14006 Riverside Drive, Sherman Oaks, California 91423.

Project Description: The Fashion Square Expansion Project is proposed by the Applicant, Sherman Oaks Fashion Associates (an affiliated company of Westfield). The Applicant seeks approval of to expand the existing Fashion Square shopping center on an approximate 28.8-acre site. Implementation of the shopping center expansion project requires a Zone Change to bring the entire site to (T)(Q)C2-1L, a Conditional Use Permit for construction of a "Major Development Project" (MDP) that exceeds the threshold of 100,000 square feet of non-residential development, a Conditional Use Permit for Commercial Corner development, a Zone Variance to deviate from the 45-foot height restriction of the Commercial Corner regulations, a Conditional Use Permit for the on-site sale and consumption of a full line of alcoholic beverages (CUB), and a request for Shared Parking.

REVIEW LOCATIONS: The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

- 1.) Los Angeles Department of City Planning - 6262 Van Nuys Boulevard, Suite 351, Van Nuys, CA 91401
- 2.) Central Library - 630 West Fifth Street, Los Angeles, CA 90071
- 3.) Sherman Oaks Branch Library - 14245 Moorpark Street, Sherman Oaks, CA 91423
- 4.) Encino-Tarzana Branch Library - 18231 Ventura Boulevard, Tarzana, CA 91356

COMMENT DUE DATE: The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. To purchase a copy, contact Tom Glick at (818) 375-5070.

Circulation Period: September 11, 2008 to October 27, 2008.

Panorama Place Project

Case No.
ENV-2006-2133-EIR

State Clearinghouse Number: 2006061027

Council District: 7

Community Plan Area: Panorama City-Mission Hills

Project Address: 14665-14697 W. Roscoe Blvd.

Project Description: The project proposes to develop approximately 504 residential condominium units (approximately 494,360 square feet of residential space) and approximately 452,400 square feet of retail uses (including, but not limited to retail, restaurant, health club and grocery store uses) on an 8.7-acre site within the Panorama City community of the City of Los Angeles. The northern building component would include subterranean parking, up to six levels of above ground retail parking and 12 levels of residential units, and would extend to up to approximately 240 feet in total height. The southern building component would be up to approximately 80 feet in height at the parapet wall and up to approximately 105 feet in height from the highest billboard, and would include three levels of retail uses and an enclosed truck loading dock. The northern and southern components of the proposed project would be separated by a three-level covered boulevard approximately 100 feet in height, which would accommodate vehicular traffic at the ground-level and pedestrian access to the parking garage at each retail level. The project would include the demolition of three one-to two-story commercial structures that are currently vacant and surface parking lots. The onsite structures include a former Montgomery Ward Building, former auto repair shop, and former restaurant building.

REVIEW LOCATIONS: The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

1. Central Library: 630 W. Fifth St, Los Angeles, CA 90071
2. Panorama City Branch Library - 14345 Roscoe Blvd., Panorama City, CA 91402

COMMENT DUE DATE: The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. To purchase a copy, contact David Somers at (213) 978-1355.

Circulation Period: September 5, 2008 to October 20, 2008.

Metro Universal Project

Case No.

State Clearinghouse Number: 2007061078

ENV-2007-933-EIR

Council District: 4 Sherman Oaks - Studio City -Toluca Lake -
Cahuenga Pass Community Plan Area

Project Address: 3875 N. Lankershim Boulevard

Project Description: The Metro Universal Project proposes the development of approximately 1.47 million square foot feet of new commercial and possible residential uses in two phases. Phase 1 would include a 655,200 square-foot office and 315,000 square-foot media production complex with up to 1,929 parking spaces, and a separate parking garage with up to 1,780 parking spaces, which would include park & ride spaces for Metro patrons. Phase 1 would also include up to 25,000 square feet of retail/restaurant facilities. Phase 2 would include a 489,100 square-foot office building or a mixed-use hotel/residential building with 400 residential units, 300 hotel rooms and ancillary meeting rooms, restaurant/lounge areas, spa and residential amenities. Up to 1,467 parking spaces would be provided. The Project would also include new bus drop-off, transfer and layover facilities associated with the Metro Red Line station.

REVIEW LOCATIONS: The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. To purchase a copy, contact Mariana Salazar at (213) 978-1797. The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

- (1) Central Library: 630 W. Fifth St, Los Angeles, CA 90071
- (2) North Hollywood Regional Branch Library: 5211 Tujunga Avenue, Los Angeles, CA 91601
- (3) Studio City Branch Library: 12511 Moorpark Street, Los Angeles, CA 91604

COMMENT DUE DATE: If you wish to submit comments following review of the Draft EIR please submit them in writing by November 24, 2008 to:

Jon Foreman
Los Angeles Department of City Planning - City Hall
200 N. Spring St, Rm#601
Los Angeles, CA 90012

Circulation Period: August 25, 2008 to November 24, 2008

The New Leaf Hills Master Plan Project

Case No. ENV-2007-2769-EAF State Clearinghouse Number: 2007071145

Council District: 4 Hollywood Community Plan Area

Project Address: 2500 - 2529 N. Woodstock, 2500 – 2548 Thames, 2500 – 2551 Leicester, Los Angeles, CA 90046

Project Description: A residential project in the Mt. Olympus area of the City of Los Angeles. At the time the Notice of Preparation (NOP) for this project was sent out the project included the construction of 11 new homes (compared to the one new home now proposed) and remodeling of the five existing unfinished homes (now the applicant proposes to complete these five homes rather than substantially remodel and complete them). Since publication of the NOP the project applicant has held extensive discussions with surrounding property owners and has agreed to reduce the project to the currently proposed plan. The applicant, Alan Kapilow, now proposes to construct one new home and complete 5 partially constructed homes on a 3.37-acre site. About 0.40 acres of unimproved street would remain on the site (Leicester Drive). The full improvement of about 0.39 acres of public streets (Woodstock Road) is proposed; Woodstock Road through the site is currently graded but not paved. Woodstock Road and Leicester Drive pass through the site and terminate just southwest of the site. A large area of the site (13 lots) would be maintained as an open space easement through donation to the Santa Monica Mountains Conservancy or other means.

REVIEW LOCATIONS: The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. To purchase a copy, contact Dan O'Donnell at (818) 374-5066. The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

1. 14410 Sylvan Street, Rm#351, Van Nuys, CA 91401
2. Central Library: 630 W. Fifth St, Los Angeles, CA 90071
3. Will & Ariel Durant Branch Library: 710 W.Sunset Blvd, Los Angeles, CA 90046
4. Frances Howard Goldwyn-Hollywood Regional Branch Library: 1623 N. Ivar Ave, Hollywood, CA 90028

COMMENT DUE DATE: If you wish to submit comments following review of the Draft EIR please submit them in writing by October 06, 2008. Send comments to:

Dan O'Donnell, City Planner
Los Angeles Department of City Planning
14410 Sylvan Street, Rm# 351
Van Nuys, CA 91401
Dan O'Donnell

Circulation Period: August 20, 2008 to October 06, 2008

The Bellwood Condo Project

Case No. ENV-2007-4551-EIR State Clearinghouse Number: 2007111089

Council District: 5 West Los Angeles Community Plan Area

Project Address: 10330 - 10380 Bellwood Ave, Los Angeles Ca 90064

Project Description: The project site presently consists of 26,218 square feet of lot area that is zoned C2-1VL-O and 47,201 square feet of lot area that is zoned R3-1-O, as well as Bellwood Avenue which runs through the project site. The site is currently occupied by 112 apartment units that will be removed as part of the proposed project. The project proposes 158 for-sale flats and townhome units. Pursuant to California State Government Code Section 65915 (a)(b)(1)(B), five percent of the project's total units are proposed to be set aside for very low income tenants for a period of 30 years. The project's building consists of 210,372 square feet of floor area in one structure comprised of a parking garage with grade-level and subterranean parking, with four residential building elements above. The total floor area ratio (FAR) of the proposed project would be approximately 2.6:1. The project site slopes downward from east to west, with an elevation change of approximately 20 feet. As measured vertically, from nearest adjacent grade, the two five-story buildings elements (Building Elements B and C), would be 58 feet in height. As measured vertically, from nearest adjacent grade, the remaining four-story buildings elements (Buildings Elements A and D and the eastern portion of C) would reach an approximate height of 43 feet. The project proposes a zone change for project site from C2-1VL-O and R3-1-O to RAS4-1VL. The project also proposes the merger and resubdivision of the project site, including the vacation of the public street easement for Bellwood Avenue through the project site. As part of the project, a new private street easement will be created pursuant to LAMC § 17.09. The new private street easement will be realigned and will provide public vehicular and pedestrian access to both ends of Bellwood Avenue substantially similar to the access currently provided.

REVIEW LOCATIONS: The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. To purchase a copy, contact Diana Kitching at (213) 978-1351. The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

1. Palms Library: 2920 Overland Ave. Los Angeles, CA 90064

2. West Los Angeles Branch Library: 11360 Santa Monica Blvd. Los Angeles, CA 90025
3. Robertson Branch Library: 1719 South Robertson Boulevard, Los Angeles, CA 90035
4. Westwood Brentwood Library: 1246 Glendon Ave., Los Angeles, CA 90024

COMMENT DUE DATE: If you wish to submit comments following review of the Draft EIR please submit them in writing by September 18, 2008. Send comments to:

Diana Kitching: Environmental Review Coordinator
Los Angeles Department of City Planning
200 North Spring Street, Room 750
Los Angeles, California 90012
Diana.Kitching@lacity.org

Circulation Period: August 8, 2008 to September 18, 2008 Comments

The Lexington Project

Case No. ENV-2006-9653-EIR State Clearinghouse Number: 2007031159

Council District: 4 Hollywood Community Plan Area
Project Address: 6677 W. Santa Monica Blvd., Los Angeles, CA 90038

Project Description: The proposed Lexington Project would include the development of approximately 786 residential units with approximately 22,200 square feet of community-serving retail and restaurant uses. The residential uses would be located within six buildings ranging from five to six stories in height and would include open space and recreational amenities. The community-serving retail and restaurant uses would be located on the ground level along the Santa Monica Boulevard frontage. Additionally, a three level parking facility, providing approximately 1,612 spaces within two subterranean levels and one ground level, would be located below the residential uses. To accommodate the proposed project, existing structures on the site would be removed.

The project would require various approvals and may include, but may not be limited to, the following: certification of an Environmental Impact Report; a vesting tentative tract map; general plan amendment to change the designation of the site from Limited Industrial to General Commercial; zoning change to change the zoning of the site from [Q] M1-1VL-SN to

C2-2D-SN; Site Plan Review Findings; relief from the Advisory Agency's parking policy; Conditional Use Permit for alcoholic beverages; Project Permit Compliance or other necessary signage approvals pursuant to the requirements of the Hollywood Signage Supplemental Use District; demolition, grading, excavation, foundation, and associated building permits; haul route approval; and any additional actions as may be deemed necessary.

REVIEW LOCATIONS AND COMMENT DUE DATE: REVIEW

LOCATIONS AND COMMENT DUE DATE: The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

1. Central Library: 630 W. Fifth St, Los Angeles, CA 90071
2. John C. Freemont Branch Library: 6121 Melrose Ave., Los Angeles, CA 90038
3. Will & Ariel Durant Branch Library: 7140 W. Sunset Blvd., Los Angeles, CA 90046
4. Frances Howard Goldwyn - Hollywood Regional Branch: 1623 N. Ivar Avenue, Hollywood, CA 90028

The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. To purchase a copy, contact David Somers at (213) 978-1355.

Circulation Period: June 19, 2008 to August 4, 2008

Hidden Creek Estates

Case No. ENV-2005-6657- EIR State Clearinghouse Number: 2006031049

Council District: West of CD 12 Immediately northwest of the Porter Ranch Community

Project Address:
12100 Browns Canyon Road (to be annexed to the City)

Project Description: Development of the proposed project would include the construction of 188 single-family residences, associated roadways and infrastructure, a 15.5-acre public park and a new 15.8-acre equestrian boarding facility on approximately half of the total 259-acre project site. The majority of the residential lots would be clustered on a graded, centralized plateau currently used for ongoing filming operations and grazing. Hidden Creeks Estates is planned as a gated community with 158 single-family residential lots and 25 residential equestrian lots

along with a public park and an equestrian facility. The undeveloped portion of the project site would be preserved as parkland and open space. The envelope of open space surrounding the project would buffer the proposed residential development from the existing community of Porter Ranch to the east and south and would complement adjacent open space areas, including the Michael Antonovich Parkland, which lies just beyond the northern and western boundaries of the project site. Primary access to the project site is proposed via a new roadway extending from the current northern terminus of Mason Avenue and connecting to the northeast edge of the project site, near the proposed park. The road would traverse through an easement to be granted to the City of Los Angeles by Southern California Gas Company. The project would also involve the construction of internal streets and cul-de-sacs to provide access to the 188 proposed individual lots. Browns Canyon Road would provide secondary emergency access to the site and surrounding area. Public access to the equestrian facility would also be provided from Browns Canyon Road. Construction of the proposed project would involve demolition of the existing single-family residence and associated equestrian facility. Following demolition, the project site would be graded, with an estimated 6.8 million cubic yards of earth material being moved. All earth material would remain on the project site, as no dirt would be imported or exported as a result of project construction or operation. Upon completion of site grading, project infrastructure would be installed followed by construction of the 188 single-family residences and the equestrian facility. The project site is currently located in an unincorporated portion of Los Angeles County. Implementation of the proposed project requires an amendment to the City's sphere of influence that must be approved by LAFCO as well as the annexation of the property to the City of Los Angeles. The project site would then fall within the Chatsworth-Porter Ranch Community Plan Area. Therefore, Citywide General Plan and Community Plan amendments would be required for the annexed project site to correspond with the proposed land use and zoning designations. Proposed zoning and land use designations are shown in the attached figures.

REVIEW LOCATIONS AND COMMENT DUE DATE: If you wish to review a copy of the Draft Environmental Impact Report (Draft EIR) or the documents referenced in the Draft EIR, you may do so at the City of Los Angeles, Department of City Planning at 200 North Spring Street, Room 750, Los Angeles. Copies of the Draft EIR are also at the following Library Branches:

- 1) Central Library - 630 W. 5th Street, Los Angeles, CA 90071
- 2) Porter Ranch Library, 11371 Tampa Avenue, Los Angeles, CA 91326
- 3) Chatsworth Branch Library, 21052 Devonshire Street, Los Angeles, CA 90004

The DEIR is also available online at the Department of City Planning's website [<http://cityplanning.lacity.org/>] (click on "Environmental" and then

“Draft Environmental Impact Reports”]. If you wish to submit comments following review of the Draft EIR, please reference the environmental case number (ENV-2005-6657-EIR), and submit them in writing by May 19, 2008. Please direct your responses to:

Nicholas Hendricks, Environmental Review Coordinator
 Department of City Planning
 6262 Van Nuys Blvd, Room 351
 Van Nuys, CA 91401
 (818) 374-5046
nick.hendricks@lacity.org

Circulation Period: April 3, 2008 to May 19, 2008.

MDR Tower - Vesting Tentative Tract No. 66643

Case No. ENV-2006-2641-EIR State Clearinghouse Number: 2006091035

Council District: 11 Venice Community Plan Area

Project Address: : 4363 Lincoln Blvd., Los Angeles, CA 90292

Project Description: MDR Tower, LLC is proposing to build a 31-story (366-foot) mixed-use retail and condominium project on a 1.49-gross acre (1.09-net acres) triangular site at 4363 Lincoln Boulevard in the Oxford Triangle portion of the Venice Community Plan area. The project will consist of 158 residential units, including 10% of the units designated as affordable for Very Low-Income households. The for-sale condominiums will consist of a combination of one, two and three-bedroom units. Residents-only amenities will include a fitness center and a recreation deck with pool and spa facilities. There will also be 3,178 square feet of small convenience retail/ commercial space, which will primarily serve Oxford Triangle residents. The project will provide a total of 19,175 square feet of open space, or 40.6 % of the 1.09-net acre site. The open space will consist of 9,617 square feet of hardscape along Lincoln Boulevard, 4,229 square feet of landscaping at the northwest side yard and 5,329 square feet of landscaping at the southwest side yard. A total of 408 parking spaces will be provided in a 6-level, above-ground structure designed to be indiscernible from the outside. The pool deck will be located on top of the parking structure. Located in close proximity to the 90 Freeway, vehicular ingress and egress to the project site will be from Lincoln Boulevard, a transit corridor.

REVIEW LOCATIONS AND COMMENT DUE DATE: The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other

locations.

- 1. Central Library: 630 W. Fifth St, Los Angeles, CA 90071
- 2. Venice-Abbot Kinney Memorial Branch Library: 501 S. Venice Boulevard, Venice, CA 90291
- 3. Westchester - Loyola Village Branch Library: 7114 W. Manchester Avenue, Los Angeles, CA 90045
- 4. Mar Vista Branch Library: 12006 Venice Boulevard , Los Angeles, CA 90066

The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. To purchase a copy, contact David Somers at (213) 978-1355.

Circulation Period: November 26, 2007 to February 02, 2008.

New Paradise Church of God and Christ

Case No. ENV-2003-6669-EIR State Clearinghouse Number: 2006032073

Council District: 7 Sylmar Community Plan Area

Project Address: : 13187 North Fellows Avenue, Sylmar, CA 91342

Project Description: Conditional Use Permit (CUP) to permit the construction of a 44' high, 11,000 square-foot (sq. ft.) church, with 425 congregants and 85 on-site parking spaces with a circular driveway in the front. Then project site is a 54,506 sq. ft. parcel in the RA-1 zone.

REVIEW LOCATIONS AND COMMENT DUE DATE: The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations.

- 1. Central Library - 630 W. 5th Street, Los Angeles, CA 90071
 - 2. Sylmar Branch Library - 14561 Polk Street, Sylmar, CA 91342
- The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. To purchase a copy, contact David Somers at (213) 978-1355.

Circulation Period: October 18, 2007 to December 03, 2007.

Sea Glass Townhomes Project

Case No. ENV-2004-7360-EIR State Clearinghouse Number: 2006041063

Council District 11 Westchester-Playa del Rey

Project Address: 6719-6823 S. Pacific Avenue

Project Description: The proposed project involves the development of an approximately 3.3 acre site with 35 residential condominium units with maximum height of 36 feet, totaling approximately 87,000 square feet, plus approximately 4,000 square feet of retail space on ground floor, and 128 parking spaces; Coastal Development Permit for same; approximately 1.5 acres of parcel will be dedicated open space. The project site is bounded to the east by Pacific Avenue, to the north by an undeveloped City-owned lot, to the south by Culver Boulevard, and to the west by public beach. Del Rey Lagoon Park is situated on the other side of Pacific Avenue, along with retail uses and multi-family residences in Zones [Q]C4-1VL and R3-1.

REVIEW LOCATIONS AND COMMENT DUE DATE: The environmental impact report is available for review at the Department of City Planning, 200 North Spring Street, Room 750, Los Angeles, CA 90012 and other locations, listed below.

1. Central Library - 630 W. 5th Street, Los Angeles, CA 90071
2. Westchester-Loyola Village Library - 7114 W. Manchester Ave, Los Angeles, CA 90045
3. Playa Vista Library-6400 Playa Vista Dr, Los Angeles, CA 90094
4. Venice-Abbot Kinney Memorial Library-501 S. Venice Blvd, Los Angeles, CA 90291

The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. To purchase a copy, contact Jonathan Riker at (213) 978-1355.

Circulation Period: October 27, 2006 to December 15, 2006.

Paseo Plaza Hollywood Project

Case No. ENV-2005-7720-EIR State Clearinghouse Number: 2005111018

Council District 13 Hollywood

Project Address: 5651 Santa Monica Boulevard

Project Description: Vesting Tentative Tract Map, Zone Change (C4-1VL and R4-1VL to RAS4-1), Zoning Variances (height, Floor Area Ratio, commercial uses below ground floor), Site Plan Review Findings, demolition permit and other applicable administrative and discretionary permits such as haul route, grading and building permits to allow the construction of a 664,440 square foot mixed use project consisting of neighborhood retail and residential components. The Project Site consists of three properties (Site I, II and III). Site I consists of 13 tax

parcels that total approximately 212,669 square feet (4.9 acres). The Proposed Project would involve the development of a mixed-use development with approximately 437 residential units, and 377,900 square feet of commercial space (including, but not limited to, retail, restaurant and commercial office uses) on site. Total parking proposed would be 1,811 spaces in three below grade structures.

REVIEW LOCATIONS AND COMMENT DUE DATE: The environmental impact report is available for review at the Department of City Planning at 200 North Spring Street, Room 750, Los Angeles. Copies of the Draft EIR are also at the following Library Branches:

- 1) Central Library - 630 W. 5th Street, Los Angeles, CA 90071
- 2) John C. Freemont Branch Library – 6121 Melrose Avenue, Los Angeles, CA 90038
- 3) Frances Howard Goldwyn - Hollywood Branch Regional Library - 1623 North Ivar Street Los Angeles, CA 90028
- 4) Wilshire Library - 149 North St. Andrews Place, Los Angeles, CA 90004

The Draft EIR may be purchased on CD-ROM for \$7.50 per copy. To purchase a copy, contact Jonathan Riker at (213) 978-1355.

Circulation Period: May 19, 2006 - July 5, 2006.

Health Sciences Campus - University of Southern California (*Broadband Highly Recommended*) Available Now!

Case No. ENV-2004-1950-EIR State Clearinghouse Number: 2004101084

Council District 14 Northeast Los Angeles

Project Address: USC Health Sciences Campus/1510-1520 San Pablo Street

Project Description: The Project is proposed to occur on seven development sites within the USC Health Sciences Campus (HSC). The seven development sites are identified as Development Sites A through G. The Project consists of the development of between 585,000 and 765,000 square feet of academic and medical research facilities as well as medical clinic facilities. The development sites currently contain surface parking lots and/or are underdeveloped. Parking accommodations to support the proposed academic and medical-related uses are also included as part of the Project. The seven development sites comprise approximately 22 acres within the existing HSC. Actions requested by the applicant include: a General Plan Amendment from Public Facilities to General Commercial for Development Site C; a Zone

Change from PF to C2 for Development Site C; a Zone Change for the Development Sites to establish [Q] conditions; a Height District Change from 2 to 3 for Development Site B; a Height District Change from 1VL to 2 for Development Site D; a Height District Change from 1 to 2 for Development Site F; a Development Agreement; a Variance from the distance requirement for parking to be provided within 750 feet of the proposed use; and possible subdivision actions.

REVIEW LOCATIONS AND COMMENT DUE DATE: The Draft EIR is available for review at the locations listed below. Written comments pertaining to the Draft EIR are welcome and should be submitted by July 11, 2005 and addressed to:

Jimmy Liao, City Planner/Project Coordinator
Environmental Review Section
Department of City Planning
200 N. Spring Street, Room 750
Los Angeles, CA 90012

Circulation Period: May 26, 2005 - July 11, 2005

Westchester Community Plan Update *Available Now!*

Please direct your responses to: Faisal Roble, Project Manager
CPB/EIR Unit
Department of City Planning
200 N. Spring St, Room 667
Los Angeles, Ca 90012

City of LA EIR No.:	City Plan Case No. :	State Clearinghouse No. :
2003-1922-EIR	1998-0010-CPU	2002061090
Council District 11 and 8	Westchester - Playa Del Rey Community Plan Area	

Project Description: The project is the proposed update of the existing 1974 Westchester-Playa del Rey Community Plan and the refinement of the existing 1996 General Plan Framework Element to guide development through 2025. The Westchester Playa del Rey CPA comprises an area of approximately 15,225 acres, located about 6 miles west of downtown of Los Angeles. The CPA is generally bounded by Ballona Creek and the unincorporated Marina del Rey area to the northwest, Jefferson Boulevard and the Palms-Mar Vista Community Plan Area to the north, the City of Inglewood to the east and Los Angeles world Airport (LAWA) to the south and the Pacific Ocean to the west. The

Lead Agency has identified the following areas where the Project may have an impact on the environment: Earth, Air Quality, Noise, Land Use, Population, Employment and Housing, Transportation/Circulation, Public Services, Utilities, Recreation. Alternatives to the project consist of the "Existing 2000 conditions (No Project)" alternative, the "Proposed Community Plan Update (Project)" alternative, the "existing Plan Capacity (No Growth)" alternative and Southern California Association of Governments 2025 Market Forecast.

The General Plan Framework Element projects the following population, housing and employment levels for the Westchester Playa del Rey CPA for the year 2025:

	Existing (2000)	CPU projections to 2025	Market Forecast
Population (persons):	51,255	93,841	103,520
Housing (units):	22,502	46,950	45,502
Jobs:	62,628	72,551	72,551

The proposed Plan projects a maximum population capacity that is greater than the level of development predicted by the SCAG 2025 Market Forecast for the period of implementation. However, it has a lower housing and employment capacity than the level forecasted by SCAG for the year 2025. During the life of the adopted Plan, growth will be monitored for the Congestion Management Program (CMP), adopted in December 1993 by the Los Angeles County Transportation Authority, and reported in the City's Annual Report on Growth and Infrastructure which is submitted to the City Planning Commission, the Mayor, and the City Council. In the fifth year following Plan adoption (and every five years thereafter), the Director of Planning shall report to the City Planning Commission on the relationship between population, employment, housing growth and plan capacities. If growth has occurred faster than projected, a revised environmental analysis will be prepared and appropriate changes to the Community Plan and zoning will be recommended. These Plan and zoning changes, and any related moratoria or interim control ordinances, shall be submitted to the City Planning Commission, the Mayor, and the City Council, as specified in the Los Angeles Municipal Code (LAMC).

Final Environmental Impact Reports (FEIR's)

Bellwood Condos Project

Case No. ENV-2007-4551-EIR State Clearinghouse Number: 2007111089

Council District: 5 Community Plan Area: West Los Angeles

Project Address: 10330 Bellwood Avenue, Los Angeles, California

Project Description: The project site consists of 26,218 square feet of lot area zoned C2-1VL-O and 47,201 square feet zoned R3-1-O, 112 apartment units, and Bellwood Ave. The project proposes 158 for-sale flats and townhome units, with a zone change for the project site from C2-1VL-O and R3-1-O to RAS4-1VL. The project also proposes the merger and re-subdivision of the project site, including the vacation of the public street easement for Bellwood Avenue through the project site. As part of the project, a new private street easement will be created pursuant to LAMC § 17.09. The new private street easement will be realigned and will provide public vehicular and pedestrian access to both ends of Bellwood Avenue. The proposed dwelling unit intensity of the proposed project is approximately 73.5 units per acre. The project site slopes downward from east to west, with an elevation change of approximately 20 feet from the highest corner of the project site to the lowest corner of the project site. As measured vertically, from nearest adjacent grade, the two five-story buildings elements (Building Element B adjacent to Olympic Boulevard and the western portion of Building Element C), would be 58 feet in height. As measured vertically, from nearest adjacent grade, the remaining four-story buildings elements (Buildings Elements A and D and the eastern portion of Building Element C) would reach an approximate height of 43 feet. Pursuant to the LAMC, because it is a single building, the project is considered to have only one height measurement, which is calculated from the proposed finished grade elevation established by the podium. To account for significant grade changes, such as the one at the project site, LAMC § 12.21.1(B)(2) allows a building to exceed the maximum height prescribed by the applicable zone by not more than 12 feet as measured from the lowest point of elevation of the finished surface of the ground between the building and a line five feet from the building. Pursuant to California State Government Code Section 65915 (a)(b)(1)(B), five percent of the project's total units are proposed to be set aside for very low income tenants for a period of 30 years. The project's building will consist of 210,372 square feet of floor area in one structure comprised of a parking garage with grade-level and subterranean parking, with four residential building elements above. The total floor area ratio (FAR) of the proposed project would be approximately 2.6:1.

The Wetherly Project

Case No. ENV-2007-1620-EIR State Clearinghouse Number: 2007091074

Council District: 5 Community Plan Area: Los Angeles

Project Address: 300 South Wetherly Drive, Los Angeles, California, 90048

Project Description: The Wetherly Project (Proposed Project) would demolish 84 existing apartment and condominium units in seven buildings and construct approximately 132 condominium units in one 16-story building (208 feet tall) and eight townhouse units in a three-story building (35 feet tall). The condominium tower would be approximately 259,716 square feet in total, while the townhomes would be approximately 28,200 square feet in total. Total building area on the project site would be approximately 287,916 square feet. A total of 350 parking spaces would be provided in a subterranean parking structure. The Proposed Project would be designed to achieve Leadership in Energy and Environmental Design (LEED) Silver certification, which would exceed the requirements of the City of Los Angeles Green Building Ordinance.

Wilshire and La Brea Project

Case No. ENV-2007-1604-EIR State Clearinghouse Number: 2007071053

Council District: 4 Wilshire Community Plan Area

Project Address: 5200-5224 Wilshire Boulevard, 700-758 La Brea Avenue, and 719-757 Sycamore Avenue, Los Angeles, California

Project Description: BRE Properties, Inc. is proposing to build a mixed-use residential and retail project on a 3.4-acre site at the corner of Wilshire Boulevard and La Brea Avenue in the Wilshire Community Plan area. Specifically, the site is bounded by Wilshire Boulevard on the north, Sycamore Avenue on the east, West 8th Street on the south, and La Brea Avenue on the west. The project would consist of 562 residential units and approximately 45,000 square feet of commercial space. The residential mix would include 138 one-bedroom studio units, 315 one-bedroom apartment units, 99 two-bedroom apartment units, and 10 two-bedroom townhome units. The retail component would include 37,000 square feet of general retail and 8,000 square feet of restaurant space. Residents-only amenities would include indoor recreation and fitness areas, an outdoor pool, a spa, and both public and private open

space gardens and decks. The proposed structure would consist of six levels of apartment dwellings atop an elevated base; the base would be approximately 20 feet above street level at the Wilshire Boulevard end of the property and approximately 28 feet above street level at 8th Street. The residential floors would consist of two elements: a primary structure arranged in a "wing" configuration, which would create building "fingers" that would surround open-ended courtyards, and a smaller "bar" structure along the base edge at Sycamore Avenue. The taller building would be six stories plus mezzanines above the base, while the smaller building would be two stories above the base. Overall, the taller building would be a maximum of 100 feet above grade, and the smaller building would be up to 44 feet above grade. An accent tower at the corner of Wilshire Boulevard and La Brea Avenue would be up to 130 feet above grade; the highest parts would contain equipment and provide a decorative element for the building. The proposed structure would have a floor area ratio (FAR) of 3.4:1. The project would provide a total of approximately 62,000 square feet of open space. Of this total, 8,100 square feet of open space would be at grade and would consist of a large strip of landscaping along Sycamore Avenue and smaller intermittent planters along Wilshire Boulevard, La Brea Avenue, and West 8th Street, along with paved areas in plazas. The remainder would include over 39,000 square feet of open space on a 2nd floor pool deck, and 22,400 square feet of open space in private decks. A total of 1,083 parking spaces would be provided on 4 1/2 levels. Parking would be provided in a partial above-ground "mezzanine" level, in a ground level and in a 2.5 level subterranean structure. The retail and commercial parking spaces would be provided within a partial aboveground mezzanine level located at the southern end of the project site, in the at-grade parking level, and in the top subterranean parking level. Residential parking spaces would be provided in the 2.5 subterranean parking levels. Access points to the parking structure would be located on Sycamore Avenue (residential and retail), and West 8th Street (residential and retail.) Loading zones are proposed to be located completely within the interior of the structure.

Temple Israel of Hollywood Enhancement Project

Case No. ENV-2007-2147-EIR State Clearinghouse Number: 2007071023

Council District: 4 Community Plan Area: Hollywood
Project Address: 7300 Hollywood Boulevard, Hollywood, CA

Project Description: The Proposed Project would involve the construction of 47,010 square feet of school and sanctuary uses including 224 parking spaces, the renovation of the existing sanctuary, pre-school classrooms,

and administrative facilities, as well as, the demolition of the 8,590-square foot Weisz Building.

The Museum of Tolerance

Case No. ENV-2007-2476-EIR State Clearinghouse Number: 2008031095

Council District: 5 Community Plan Area: West Los Angeles

Project Address: 9786 and 9760 W. Pico Boulevard and 1414, 1420, and 1424 Roxbury Drive, Los Angeles, CA

Project Description: Vesting Zone Change and Height District Change from R1-1 to [Q]C4-2D-O for three lots (1414, 1420, and 1424 South Roxbury Drive), General Plan Amendment to change the land use designation from Low Density Residential to Neighborhood Commercial for three lots (1414, 1420, and 1424 South Roxbury Drive) and General Plan Amendment on four lots (9786 West Pico Boulevard, 1414, 1420, and 1424 South Roxbury Drive) to amend Footnote No. 1 of the West Los Angeles Community Plan to include "institutional property at southeast corner of Pico Boulevard and Roxbury Drive" in the list of exceptions to Height District 1 with the Neighborhood Commercial land use designation, Vesting Zone Change and Height District Change on existing commercial lot (9786 West Pico Boulevard) from C4-1VL-O to [Q]C4-2D-O, Zoning Administrator Approval, pursuant to Further Authority and LAMC §12.24 X.22, to permit buildings on lots in the C Zone to exceed the maximum heights set by LAMC§12.21.1A.10, Zoning Administrator's Determination regarding Shared Parking at 1399 Roxbury Drive, Plan Approval to amend the conditions of the Conditional Use Permit, Site Plan Review Approval for change of use and net increase in average daily trips, Zoning Administrator Approval, pursuant to Further Authority and LAMC §12.24-F for Height and Area Relief, CPC Authorization for Reduced On-Site Parking with Remote Off-site Parking, and any additional actions as may be determined necessary or desirable, which may include a development agreement. Additionally, Approval for Public Benefit Project for Museum use and Vesting Tentative Tract map for airspace subdivision are requested for the adjoining building (9760 West Pico Boulevard) to facilitate the incorporation of its West Wing and use for Museum purposes. The proposed project would involve the addition of approximately 20,809 square feet of floor area to the existing 69,477-square-foot Museum of Tolerance. The proposed project would also involve the extension of Museum operating hours. The extended Museum operating hours, with the exception of the Exhibition Space, would be Sun.-Thurs. 7 AM-midnight, Fri. 7AM-sundown, and Sat. sundown-midnight. The Exhibition Space operating hours would be from 10 AM to 9:30 PM Sun.-Thurs. and 10AM to sundown on Fri. Professional

classes may start at 7 AM Sun.-Fri. and student classes may start at 8:30 AM Sun.-Thurs.

Cedars-Sinai Medical Center West Tower Project

Case No. ENV-2008-620-EIR State Clearinghouse Number: 2008031040

Council District: 5 Community Plan Area: Wilshire

Project Address: 8720 Beverly Blvd.

Project Description: Cedars-Sinai Medical Center (CSMC) proposes to develop a new medical facility on the CSMC campus on approximately 2 acres currently occupied by a 2-story building and parking. Zone Change and Height District Change to amend current [T][Q]C2-2D-O zoning. Amendment to existing Development Agreement and Master Plan to permit an additional 200,000 square feet and parking on CSMC campus. Proposed West Tower would be 11 stories, 185 feet tall, and 460,650 square feet of floor area, comprising 200,000 square feet pursuant to this application, 170,650 square feet previously approved and vested (not built) under existing Master Plan, and 90,000 square feet offset from existing building at 8723 Alden Dr. to be demolished. An attached parking structure would be 7 levels, including 3 below grade, providing approximately 700 spaces.

La Brea Gateway Project

Case No. ENV-2005-6164-EIR State Clearinghouse Number: 2008041053

Council District: 5 Hollywood Community Plan Area

Project Address: 915 North La Brea Avenue, Los Angeles, Ca

Project Description: General Plan Amendment (from Limited Manufacturing to Neighborhood Commercial), Zone Change (from MR1-1 to RAS4-1), Tentative Tract Map, and Site Plan Review to permit the construction and operation of a mixed-use development consisting of 219 apartment units and approximately 35,000 square feet of retail space, along with 542 code-required parking spaces on six parcels totaling 2.27 acres of land. The Project site is currently developed with approximately 56,673 square feet of studio-related industrial uses.

La Cienega Eldercare Facility Project

Case No. ENV-2008-1994-EIR State Clearinghouse Number: 2008061124

Council District: 5 Community Plan Area: Wilshire

Project Address: 1022 to 1054 S. La Cienega Blvd.

Project Description: Construction of a four- to five-story, approximately 150,500-square-foot eldercare facility over two levels of subterranean parking. The facility would reach 70 feet at its highest point and would comprise 22 skilled nursing care guest rooms, four Alzheimer's/Dementia Care guest rooms, and 149 Assisted Living Care dwelling units. Amenities would include landscaped terraces and courtyards, private balconies, lounges, administrative offices, theater, physical therapy, activity rooms, gym, and showers. The project would be developed under the provisions of Senate Bill 1818 (density bonus). Parking would comprise 212 underground spaces and 6 at-grade for 218 total.

959 Seward St Project

Case No. ENV-2007-717-EIR State Clearinghouse Number: 2007031050

Council District: 4 Hollywood Community Plan Area

Project Address: 959 Seward St., Los Angeles, CA 90038

Project Description: The Proposed Project is designed to be an entertainment campus to cater primarily to entertainment type users for offices, editing, and post-production. The combined floor area of the proposed office buildings is approximately 241,568 square feet, of which approximately 237,568 square feet will be devoted to entertainment business-related office uses and 4,000 square feet will be restaurant use. The maximum building height on the project site would be approximately 76 feet. Parking for the Proposed Project will be located within a separate parking structure on the northern portion of the project site; the parking structure will contain approximately 700 parking spaces in eight above grade levels and one subterranean parking level. Parking supply for the Proposed Project would exceed Los Angeles Municipal Code requirements. The Proposed Project has been designed with pedestrian-friendly uses. The proposed building edges would be set back from the surrounding roadways to provide landscaped public walkways along the site perimeter. Access to the project site (3.7 acres) would be provided from Romaine Street on the north and from Seward Street on the east. Both access points would allow vehicular and pedestrian ingress and egress. Access to the parking structure and valet parking would be provided via the internal roadway proposed for the project. An equipment

loading dock would be located adjacent to the ingress/egress on North Seward Street. Requested Land use entitlements requests include the following: Vesting Zone Change from MR1 (Restricted Industrial Zone) to M1 (Industrial) Vesting Conditional Use Permit for Major Development Project, Conditional Use Permit Alcohol (CUB), Conditional Use Permit Commercial Corner (CUZ), Site Plan Review, and Haul Route Permit.

Bradley Landfill Recycling Center

Case No. ENV-2001-3267-EIR State Clearinghouse Number: 2002121027
Council District 6 Sun Valley
Project Address: 9227 Tujunga Avenue

Project Description: This EIR evaluates the applicant's proposed transitional activities associated with the change from on-site landfilling to use of the site as a Transfer Station and Materials Recycling Facility (TS/MRF). The plan consists of two phases, which include proposed activities on both Bradley West/West Extension and Bradley East. Phase I of the Proposed Project would include the following components: transitional 43 foot vertical expansion of the existing landfill; construction of the new TS/MRF; expansion of existing green and wood waste processing operation and transitional expansion of existing MRF operation. Phase II of the Proposed Project would involve conversion of the existing landfill operation to the proposed TS/MRF operation; closure of the existing landfill, including installation of final cover; and continued operation of the expanded green and wood waste processing facility that began in Phase I.

New Century Plan

Case No. ENV-2006-1914-EIR State Clearinghouse Number: 2006061096
Council District: 5 West Los Angeles Community Plan Area
Project Address:
10250 Santa Monica Blvd, 1801 Ave of the Stars, 1930 Century Park West, Los Angeles, Ca 90067

Project Description: Westfield, LLC (the Applicant) proposes the New Century Plan (proposed project) within the Century City community of the City of Los Angeles. The proposed project would create an integrated center within the community by providing a broad array of shopping and dining choices, entertainment opportunities, outdoor spaces and amenities within an approximately 22-acre site. Specifically, the existing

buildings, department stores, and outdoor areas within the shopping center would be reconfigured or renovated to provide for new retail and restaurant spaces, along with landscaping and open space amenities. In addition, the project would remove two existing office buildings that together comprise approximately 360,964 square feet adjacent to the shopping center, and replace them with new residential uses, shopping center uses, office uses and parking facilities, all of which would be physically integrated with the existing shopping center. Upon completion, the project would include approximately 358,881 square feet of net new shopping center space, a reduction in office uses from 360,964 square feet to 106,523 square feet, and approximately 262 multi-family residential apartment or condominium units. When accounting for existing commercial uses to be removed, the proposed project would result in a net increase of approximately 104,440 square feet of commercial uses. The new retail buildings in the shopping center would have heights of up to approximately 75 feet as measured from the plaza level of the shopping center. In addition, the residential uses would be located in a high-rise building with retail uses below within the northeastern portion of the site. This new combined shopping center/residential building would be 49 stories with a maximum height of 579 feet as measured from the plaza level of the shopping center (or approximately 587 feet above grade). The proposed improvements would promote the future vitality of the shopping center and enhance Century City as a walkable community by providing options to live, play, work and shop in an area that is already an established employment hub.

Ponte Vista Project

Case No. ENV-2005-4516-EIR State Clearinghouse Number: 2005091086

Council District: 15 Wilmington-Harbor City

Project Address: : 26900 S. Western Avenue

Project Description: The Project proposes a Specific Plan (proposed density is approximately 37 units per acre), General Plan Amendment, Zone Change, and Vesting Tentative Tract Map for the subdivision, construction, and operation of a 1,950-unit townhome and condominium development including approximately 10,000 square feet of ancillary retail use to serve the convenience needs of residents. Forty-four percent of the proposed units (850 units) would be reserved for seniors only (age 55 and above). 1,000 of the units of the Project would be multi-family residential units, consisting of stacked flats and/or stacked townhomes. The remaining 100 units of the Project would be attached 3-story townhome units with private garages. The proposed units would have floor areas ranging from approximately 700 to 3,000 square feet.

Approximately 40 percent of the Project's post-development acreage would consist of landscaped common area to include the following: a 2.5-acre central park (with community clubhouse and pool), a two-acre waterscape concourse, a 0.5-acre senior community park, and a publicly accessible six-acre park potentially featuring two little league baseball fields. The Project would also provide an access road from Western Avenue to Mary Star of the Sea High School. The Project site is approximately 61.5 acres. The Project would involve the demolition and removal of all existing improvements on the site, which include 245 residential units, a 2,161-square foot community center, and a 3,454-square foot retail convenience facility which were constructed in approximately 1962 by the U.S. Navy for the purpose of housing and accommodating personnel stationed at the Long Beach Naval Shipyard. The site (formerly known as "San Pedro Housing") was closed in the late 1990s. The Project would require approximately 837,000 cubic yards [cy] of earthwork Grading will be balanced, and no fill material would be imported to or exported from the Project site.

Vesting Tentative Tract No.61553 Available Now!

Case No. ENV-2005-2301-EIR State Clearinghouse Number: 2005111054
 Council District: 3 Canoga Park-Winnetka-Woodland Hills-West Hills
 Project Address: : 22255 Mulholland Drive, Woodland Hills, CA 91364

Project Description: The proposed project is the development of 37 detached single-family homes on a 6.19-acre project site. The project would require a change of zoning from R-1 to RD-6 because the single family homes are configured on two lots as a detached condominium development. Also, because portions of the proposed project would be visible from Mulholland Drive, the applicant is requesting an exception from the viewshed protection and allowable building height provisions set forth in the Mulholland Scenic Parkway Specific Plan. The applicant also requests a Zoning Administrator Determination to allow a retaining wall in excess of 3.5 feet in a required front yard, a Zoning Administrator Adjustment to allow a retaining wall in excess of 8 feet in a required front yard and a Zoning Administrator Adjustment to allow more than one retaining wall on a single lot. The retaining walls do not provide additional viewshed impacts along Mulholland Drive. The resulting project would have less density than permitted by the proposed zoning, it is consistent with the General Plan, and would look like a conventional single-family project. A 40-foot front yard setback would be maintained along Mulholland Drive and a 20-foot front yard setback would be maintained along San Feliciano Drive. The proposed homes would be two-stories,

with a maximum height of 36 feet.

Buckley School Campus Enhancement Plan *Available Now!*

Case No. ENV-2004-7171-EIR State Clearinghouse Number: 2005011055

Council District: 5 Sherman Oaks-Studio City-Toluca
Lake-Cahuenga Pass

Project Address: : 3900 Stansbury Avenue

Project Description:

The Buckley School proposes to enhance its existing campus facilities to address the needs of existing and future school programs, including the provision of adequate teaching space for all educational levels, specialty teaching spaces, and multipurpose spaces for educational gatherings that cannot occur in a standard classroom. The project also provides for the modernization of existing facilities, improved disabled access, and energy efficiency upgrades. Included within the Campus Enhancement Plan are vehicular circulation and queuing improvements, increased parking within a new enclosed parking facility, the demolition of six buildings, construction of five new/replacement buildings, a central plant, and addition to and/or renovation of several existing buildings. Upon completion, a net addition of approximately 69,500 square feet of building area would be provided, resulting in a total of 168,650 square feet of educational facilities within the project site. Project implementation would require various approvals, including but not limited to, Specific Plan Exceptions and Environmental Findings pursuant to the Mulholland Scenic Parkway Specific Plan, a new Conditional Use Permit that among other things would allow an increase in enrollment of up to 80 students for a maximum enrollment of 830 students, Modification of the height regulations, Site Plan Review findings, a Parcel Map to create two legal lots, and Design Review pursuant to the Mulholland Scenic Parkway Specific Plan.

Yucca Street Condo Project *Available Now!*

Case No. ENV-2006-6941-EIR State Clearinghouse Number: 2006101025

Bldv 6200 Project Available Now!

Case No. ENV-2005-7118-EIR State Clearinghouse Number: 2005121038

Council District 13 Hollywood

Project Address: 6200 Hollywood Blvd and multiple addresses

Project Description:

The Proposed Project consists of the demolition of five small structures and construction of a new mixed-use development containing up to 1,042 residential rental units and approximately 175,000 square feet of retail uses, and a total of approximately 2,800 parking spaces would be provided in ground floor and subterranean levels to accommodate the patrons of the retail uses, the occupants of the residential units, and patrons of the Pantages Theater that presently utilize the existing surface parking lots

Hollywood/Garfield Mixed-Use Development Available Now!

Case No. ENV-2004-3814-EIR State Clearinghouse Number: 2004101104

Council District 4 Hollywood

Project Address: 5555 Hollywood Blvd, 1711, 1717, 1723-1723 ¼ North Garfield Place

Project Description:

The proposed project consists of the new construction of a mixed-use development containing 90 multi-family residential units and 6,000 square feet of commercial/retail space. Parking for the proposed project would be contained in two parking levels (one ground level and one subterranean). Required approvals include: tentative tract map; specific plan exceptions; zoning administrator's adjustment; project permit compliance; site plan review. The project site is approximately 1.1 acres and is zoned [Q]R5-2 and R3-1. The project site is located within the boundaries of the Vermont/Western Transit Oriented District Specific Plan.

Wilshire Center Project *Available Now!*

Case No. ENV-2005-8703-EIR State Clearinghouse Number: 2005121142

Council District 10 Wilshire

Project Address: 3150 Wilshire Blvd., Los Angeles, CA 90010

Project Description:

The Proposed Project includes the demolition of approximately 54,000 square feet of existing commercial uses and the construction of a new mixed-use development consisting of residential condominiums and retail space. The Project includes two residential condominium high-rise buildings (Wilshire Tower and Vermont Tower) above a 4-level above grade parking podium and a one-level retail structure. The Wilshire Tower will include 287 units within 18 floors above the podium level (348,000 square feet of floor area) and the Vermont Tower will include 177 units within 10 floors above the podium level (211,000 square feet of floor area). Both residential buildings will include a combined total of 464 residential units built over 4 levels of above ground level parking, approximately 27,000 square feet of commercial retail space and up to 14,000 sf of restaurant area on the ground floor, and 2 levels of subterranean parking. The proposed transit-oriented project is designed to incorporate a mixture of activities that support and encourage pedestrian activity in close proximity to the Wilshire/Vermont MTA Metro Red Line Station.

Herald Examiner Project *Available Now!*

Case No. ENV-2005-4654-EIR State Clearinghouse Number: 2005081146

Council District 9 Central City

Project Address: 1111 S. Broadway; 1108 S. Hill St.; 120 W. 12th St.; Los Angeles, CA 90015

Project Description: This proposed project would involve the rehabilitation of the Herald Examiner Building, a City of Los Angeles Historic-Cultural Monument, and construction of two new mixed-use buildings in Downtown Los Angeles. The Herald Examiner Building, located at 1111 South Broadway, would be rehabilitated in compliance with the Secretary of the Interior's Standards for Rehabilitation to include 20,000 square feet of retail space, 9,000 square feet of indoor amenities, and 39,725 square feet of office space. The existing Press building, located at 1108 South Hill Street adjacent to the Herald Examiner Building, would be

require various approvals, including but not limited to, a Project Permit (pursuant to Century City North Specific Plan), a Vesting Tentative Tract Map and Site Plan Review findings, revision of an existing access covenant and agreement with the City, and Haul Route approval.

2055 Avenue of the Stars Condominiums (on the site of the Former St.Regis Hotel) *Available Now!*

Case No. ENV-2005-4496-EIR State Clearinghouse Number: 2005081042
 Council District 5 West Los Angeles / Century City North Specific Plan

Project Address: 2055 Avenue of the Stars

Project Description: "Vesting Tentative Tract Map, Specific Plan Project Permit, Site Plan Review Findings, Conditional Use Permit (sale or dispensation of alcoholic beverages), Parking Variance (offsite parking), and other applicable administrative permits such as haul route, grading, and building permits to allow the construction of a 147-unit condominium building with associated amenities on a 3.8-acre site in the C2-2-O zone. The Project would be developed in one high-rise residential tower, consisting of approximately 581,000 square feet of Floor Area and up to 50,000 square feet of Floor Area of various amenities described below. The building would be approximately 480 feet in height plus approximately 17 feet of mechanical equipment. The Project would include approximately two acres of landscaped open space. The Project would include various luxury resident amenities, including a 7,000-square-foot restaurant and either: (a) 27,000 square feet of resident-focused specialty uses, such as but not limited to, a shoe repair, salon, art gallery, and sundries shop or (b) a 43,000-square-foot private membership facilities that would only be accessible to residents and a limited number of outside memberships. Onsite residential parking would be provided on several subterranean levels with a minimum of two parking spaces for each condominium unit and one guest parking space for every two condominium units. Ancillary parking would be provided for the non-residential uses at an offsite parking structure, which includes approximately 3,000 parking spaces. At a minimum, all City Code required parking spaces for the restaurant and other non-residential amenities would be available in the offsite parking structure.

Steven S.Wise Middle School

Case No. ENV-2003-4563-EIR State Clearinghouse Number: 2003101055
 Council District 5 & 11 Brentwood-Pacific Palisades
 Project Address: 15900 & 16100 Mulholland Drive

Project Description: Conditional Use Permit and Director's Determination for Design Review Board recommendations and Plan Exception from the Mulholland Scenic Parkway Specific Plan, and other applicable discretionary and administrative permits to authorize the relocation of the existing Stephen S. Wise Middle School from its current temporary location on property owned by the Bel Air Presbyterian Church on Mulholland Drive to a permanent location on the Milken Community High School Site, located at 15900 Mulholland Drive between Sepulveda Boulevard and the San Diego Freeway (State Route 405). The two schools would occupy and share a Consolidated Middle School/High School site. Upon completion of the project, the Stephen S. Wise Middle School would continue to provide a co-educational, day school facility that serves grades seven and eight. The project would provide permanent and upgraded facilities to accommodate the educational needs of up to 240 middle school students on an underutilized portion of the existing High School site. The new Middle School would be up to 18.5 feet in height and would include approximately 30,000 square feet of floor area. Additionally, minor improvements would be made on the High School site, including the enclosure of three existing balconies and the addition of a canopy over existing walkways. The proposed project would also include the conversion of an existing nursery/pre-school site at 16100 Mulholland Drive to athletic fields to serve both the Middle School and High School students. The Athletic Field site was previously used by the Stephen S. Wise Nursery School program, which recently returned to its original, permanent location at the Stephen S. Wise Temple site east of the 405 Freeway.

Sierra Canyon Secondary School (*Broadband Highly Recommended*)
Available Now!

Case No. ENV-2004-0164-EIR State Clearinghouse Number: 20044011102

Council District 12 Chatsworth-Porter Ranch
Project Address: 11023 Lurline Avenue, Chatsworth 91311

Project Description: Vesting Conditional Use Permit to allow development of a 550-student secondary school on a 4.89 (net) acre site in the (T)RE11-1 and A2-1 zones and, pursuant to Los Angeles Municipal Code Section 12.24.F, to provide relief from various height and setback requirements. The project would include a classroom building, athletics center (500 person occupancy), performing arts center (600 seats), administration building and aquatics center (80 person occupancy) totaling 120,542 feet of floor area. Parking would be provided in an at-grade parking level for 236 vehicles with access provided from the extension of Rinaldi Street. The design will use simple building masses to complement site topography with an emphasis on natural materials, colors and textures and an efficient footprint that utilizes the site's sloping

character. The project will be built in up to three phases with initial occupancy by modular classrooms on the upper part of the site and temporary parking on the lower part of the site. The development of the Project is expected to be completed by the year 2010. Demolition of an existing single-family residence will be required and approximately 19,800 cubic yards of material would be excavated from the site

Chase Knolls (Previous DEIR) 57mb

Case No. ENV-2002-1228-EIR State Clearinghouse Number: 2003071049
 Council District 2 Van Nuys - North Sherman Oaks Community Plan Area

Project Address: 13401 Riverside Drive, Sherman Oaks, CA 91423

Project Description: Site Plan Review, Parcel Map and Cultural Heritage Commission Review (including historic preservation contract review) to permit the construction of 141 new dwelling units in five, three-story buildings (117,264 square feet), and to construct common area amenities (including a pool, clubhouse room, and gym). Demolition of certain carport structures and laundry facilities will be required for the construction of the new dwelling unit structures; parking provided by proposed demolished carports will be replaced with surface area parking lots. The complex's open garden courtyards will be preserved

Wilshire - Comstock Project *Available Now!*

Case No. ENV-2003-5313-EIR State Clearinghouse Number: 2004091031

Council District 5 Westwood

Project Address: 10250 Wilshire Boulevard

Project Description: On June 29, 1977, the City of Los Angeles, Department of City Planning, issued a Conditional Negative Declaration (CND) for a Tentative Tract Map involving the subdivision of a 35-unit condominium project at 10250 Wilshire Boulevard (CND-213-77-SUB). The Tentative Tract Map (TTM) was recorded on October 31, 1979 as Tract No. 27025. Conditions of Approval for the development limited the project to 35 units with a minimum of 103 parking spaces. The project applicant proposes to develop the vacant project site with 35 condominium units (and 8 accessory maids rooms) pursuant to the previous TTM approval. The approximate 202,000 square foot high-rise residential building would be 21 stories or approximately 281 feet in

height. 52.8 percent or 13,203 square feet of the existing vacant lot would be developed with the proposed high-rise building. The remaining 47.2 percent or 11,814 square feet of the project site would consist of open space. Parking would be provided on-site for approximately 111 vehicles in a three level subterranean parking structure. Total grading would consist of approximately 38,600 cubic yards of soil. Pursuant to Section 16.50 of the Los Angeles Municipal Code, the project is subject to Design Review Board oversight to ensure that specific design criteria of the Westwood Community Plan is implemented into the design elements of the proposed project (the project is exempt from the Wilshire-Westwood Scenic Corridor Specific Plan as the TTM was approved between July 25, 1972 and June 5, 1980). The recorded map will not be modified. The Environmental Impact Report (EIR) will provide a detailed analysis of Geology and Soils, Transportation/Traffic and other environmental factors deemed to be potentially affected.

Villa Marina Mixed Use Project *Available Now!*

Case No. ENV-2004-3812-EIR State Clearinghouse Number: 2004081198

Council District 11 Palms - Mar Vista - Del Rey
Project Address: 13480, 13490 Maxella Avenue; 4350, 4356, 4358 Lincoln Blvd.

Project Description: General Plan Amendment (from Limited Commercial to General Commercial for the Mixed Use Project site and Add Areas), Zone Change (Mixed Use Project area from M1 to RAS4 and Add Areas from M1 to C4), Tentative Tract Map, Conditional Use Permit, Coastal Development Permit, Site Plan Review and Lot Line Adjustment to allow a mixed-use development consisting of 310 residential condominium units and 9,000 square feet of retail uses. The project involves the demolition of five commercial and restaurant buildings totaling approximately 30,000 square feet. Parking accommodations include a one-level subterranean, second-level podium, and surface level parking totaling 691 spaces. The mixed use project site area is 4.04 acres. Add Areas comprise approximately 5.28 acres and involve a Community Plan Amendment and Zone Change; no physical development is proposed to occur within the Add Areas.

Metropolitan Transportation Authority West Los Angeles Transportation Facility & Sunset Ave. Project *Available Now!*

Case No. State Clearinghouse Number: 2003121036 /

ENV-2004-1407-EIR 2004031139

Council District 10 & 11 Venice / West Adams-Baldwin Hills-Leimert
Community Plan Areas

Project Address: 3475 South La Cienega Blvd / 100 East Sunset Avenue

Project Description: A Draft EIR has been prepared to address the environmental impacts of both the West Los Angeles Transportation Facility and the Sunset Avenue Projects. This decision between Metro and the City of Los Angeles has been made since proposed development of each site is related to the other site. Specifically, while approval decisions regarding the two projects are not necessarily tied together, both projects are related to a relocation of the existing Division 6 transportation facility currently located at the Sunset Avenue site. Upon completion of the West Los Angeles Transportation Facility, a new, larger, state-of-the-art facility for Compressed Natural Gas (CNG) buses proposed along Jefferson Boulevard, Metro has committed to relocate all service lines, employees, and administrative functions performed out of the antiquated Division 6 property in Venice. Completion of the West Los Angeles Transportation Facility and removal of the existing Division 6 facilities would then result in the reasonably foreseeable development of the Sunset Avenue property.

West Los Angeles Transportation Facility - The proposed project consists of a state-of-the-art transportation facility from which to operate a fleet of up to 175 CNG powered buses and to provide improved public transit service in the central and western areas of Los Angeles County. Relocation of existing operations at Division 6 in Venice to this location would allow Metro to expand service from a more centralized location in response to growing ridership. Development of the transportation facility on the 4.66-acre site would provide Metro with expanded maintenance and administrative facilities, CNG fueling facilities, and bus and employee parking. The project would include 53,120 square feet in a primary administration/maintenance building and approximately 18,800 square feet of auxiliary facilities.

Sunset Avenue Project - The proposed project would replace the vacated Division 6 operation with a mix of residential and commercial uses supported by two levels of subterranean parking. Residential uses would occupy several individual structures that would each contain a varying number of dwelling units. Open areas between the individual structures would allow for communal walkways, common space for recreation or garden areas, water features, and landscaping. A maximum of 225 units would be constructed, with a total residential floor area of approximately 270,000 square feet. Residential structures that face Main Street and Pacific Avenue are proposed with building heights that would not exceed 35 feet, while structures in the center of the site and those facing Sunset Avenue and Thornton Place are proposed to be approximately 35 to 56 feet in height. Commercial uses include approximately 10,000 square feet of floor area in a ground floor setting facing Main Street. Commercial and

retail space would be occupied by café, retail, and health club uses. This site is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65912.5 due to detected contaminants from previous use of the property. However, a health risk assessment has determined that these contaminants do not pose a risk to human health.

Mountain Gate *Available Now!*

Case No. 99-3251-SUB/ZC/GPA 2050 Stoney Hill Road
 Council District 11 Brentwood- Pacific Palisades
 Community Plan Area

Project Description: Zone Change, General Plan Amendment and Subdivision application for Vesting Tentative Tract to subdivide 449.5 acres into 32 lots, with 29 single-family home subdivision. Three lots for open space development.

Tower of Wooden Pallets Apartments *Available Now!*

Case No. ENV-2003-0742-EIR State Clearinghouse Number: 2003121098
 Council District 2 Van Nuys-North Sherman Oaks
 Project Address: 15357 W.Magnolia Blvd, Sherman Oaks

Project Description: Site Plan Review for a new 98-unit (original 78 units + 25% density bonus with five units designated as "affordable disabled"), three-story apartment building with 185 subterranean parking stalls in the R3-1 Zone, on a 62,477 sq.ft.lot. The site contains Los Angeles Historic-Cultural Monument No.184, "Tower of Wooden Pallets", a single-family structure, and sheds, all proposed to be demolished (but the monument will not be desclassified). Proposed floor area: 90,825 sq.ft.

Canyon Hills *Available Now!*

Case No. ENV-2002-2481-EIR State Clearinghouse Number: 2002091018
 Council District 2 Sunland-Tujunga-Shadow Hills-Lake View
 Terrace-
 East La Tuna Canyon Community Plan Area

and the Sun Valley - La Tuna Canyon
Community Plan Areas

Project Address: 8000 La Tuna Canyon Road

Project Description: Vesting Tentative Tract Map, Site Plan Review, Project Permit Compliance Review (San Gabriel/Verdugo Mountains Scenic Preservation Specific Plan), General Plan Amendments, Zone Changes and Development Agreement to permit the construction of 280 single-family homes to be clustered on approximately 194 acres of the 887-acre project site. Approximately 211 homes will be constructed on approximately 142 acres north of Interstate 210 (Development Area A). The remaining 69 homes will be constructed on approximately 52 acres south of Interstate 210 (Development Area B). Approximately 693 acres (78 percent) of the project site will be preserved as permanent open space. General Plan Amendments to permit changes in the Sunland-Tujunga Community Plan land use designations on portions of the project site from Minimum Residential, Very Low I Residential, Very Low II Residential and Open Space to Minimum Residential and Low Residential. Zone Changes for portions of the project site from A1-1 Agricultural and RE11-1 Residential Estate to RE9-1-H Residential Estate, RE11-1-H Residential Estate and RE20-1-H Residential Estate. The project also includes an equestrian park on approximately three acres adjacent to La Tuna Canyon Road that will be available for public use. Other permanent open space areas and private recreation facilities will be provided within both Development Areas A and B. All proposed development will be within the portion of the project site located within the Sunland-Tujunga Community Plan Area. The entire portion of the project site located in the Sun Valley Community Plan Area will remain open space. Regional vehicular access to and from the project will be provided by existing on- and off-ramps along Interstate 210. Development Area A will be accessed by a future roadway extension south of the adjoining Duke development site (VTTM 48754) off of La Tuna Canyon Road. Emergency (only) access to and from Development Area A will be provided via Inspiration Way. Development Area B will be served by two access points along La Tuna Canyon Road. Additional entitlements, certifications, agreements, and/or permits may include: Oak Tree Removal/Relocation Permit, B-Permit for necessary street, sewer, storm drain and lighting improvements, Grading Permits, Building Permits, Section 401 Water Quality Certifications from the California Regional Water Quality Control Board, Section 1602 Streambed Alteration Agreement(s) from the California Department of Fish and Game, Section 404 Individual Permit(s) from the U.S. Army Corps of Engineers, Encroachment Permit from Caltrans, and any other necessary discretionary or ministerial permits and approvals required for the construction or operation of the proposed project.

Harvard-Westlake School Middle School Campus Modernization Project

Available Now!

Case No. ENV-2001-3473-EIR State Clearinghouse Number: 2001121016

Council District 5 Bel Air-Beverly Crest Community Plan Area
Project Address: 700, 638 and 474 North Faring Road

Project Description: Conditional Use to permit the utilization of approximately 4 acres directly adjoining the existing site in addition to the existing approximately 11 acre campus site, construction of two new classroom buildings, expansion of two existing buildings, and the demolition of six buildings for a net floor area increase of approximately 85,000 square feet with a total project area of 235,000 square feet. The new and expanded facilities would include a library, classrooms, performing and fine arts facilities, athletic facilities, administrative offices, and a new auditorium that would seat 950, a 250-seat net increase above existing campus facilities. The project will not increase student enrollment above 750 students, staffing needs could result in an increase of up to 12 additional staff members over time. The athletic field would be reconfigured and increased by approximately 1.33 acres to provide for additional practice and game areas with no permanent field-seating or field night-lighting proposed. Class hours would continue to be from 8:00 a.m. to 3:15 p.m. Monday through Friday, and campus hours would continue to be from approximately 6:30 a.m. to 8:00 p.m. to accommodate faculty preparation time, extracurricular activities, and maintenance. The school would also continue to schedule other school-related events throughout the school week and occasionally on the weekend. On-site vehicle circulation will be improved to minimize vehicle queuing on city streets with the addition of a new campus entrance on North Faring Road at Parkwood Drive and expanded student drop-off/loading area. A new parking facility with 71 below grade spaces and 47 on-grade spaces would supplement 72 other surface parking spaces for a total of 190 on-site parking spaces. The applicant also requests deviations from the height and area provisions of the Municipal Code to permit landscaping, hedges and fences/walls at the property lines to exceed eight feet (see LAMC Section 12.22.C.20 (f)), to allow the surface parking area, the proposed parking facility (below- and at-grade), and the security kiosk within the front-yard setback area along North Faring Road (see LAMC Sections 12.07.01.C.1 and 12.21.A.6(a)) and to allow for some building heights to exceed 45 feet to a maximum of 72.5 feet (see LAMC Section 12.21.1).

Oxford Avenue Apartment Project *Available Now!*

Case No. ENV-2003-3648-EIR State Clearinghouse Number: 2003111079

Council District 10

Wilshire Community Plan Area

Project Address: 906-938 Oxford Ave; 3421& 3423 W. San Marino St;
3420 & 3422 James Wood Blvd

Project Description: Demolition of 80-units contained in 8 structures for the development of a 6-story (grade level parking + five levels residential), 94-foot high, 225-unit apartment building with 392 parking spaces on a 1.53 acre lot in the R4-1 and R4-2 zones. The project includes a 35% by-right density bonus due to being located within 1,500 feet of a transit priority arterial and for providing 8 affordable housing units for the disabled (5% of the allowable density). The project includes the following discretionary actions: Site Plan Review Findings and Zone Variance to exceed floor area ratio permitted in the R4-1 zone. Other City actions include: Permit for Excavation and Grading of approximately 30,000 cubic yards of dirt, Haul Route Permit for Exporting excess of 1,000 cubic yards of dirt, and all other Grading, Building, and Construction related permits granted under the authority of the Department of Building and Safety.

REVIEW LOCATIONS: The Final Environmental Impact Report is enclosed if you are on record as having requested a copy and/or have submitted substantive comments on the Draft EIR. The FEIR has been placed at the following locations:

- 1) Pio Pico/Koreatown Library, 694 South Oxford Ave.
- 2) Felipe De Neve Library, 2828 West 6th Street.
- 3) Central Library, 630 W. 5th Street.
- 4) Department of City Planning, 200 N. Spring Street, Room 763 (City Hall).

The FEIR may be purchased on CD-ROM for \$7.50 per copy. To purchase a copy, contact Nicholas Hendricks at (213) 978-1355.

Corbin and Nordhoff Redevelopment Project

Available Now!

Case No. ENV-2002-1230-EIR State Clearinghouse Number: 2002 05
1125

Council District 12 Chatsworth - Porter Ranch Community
Plan Area

Project Description: This Master Environmental Impact Report (MEIR) is intended to assess the probable impacts of the redevelopment of an area undergoing a General Plan Amendment and Zone Change. The General Plan Amendment and Zone Change request was initiated by the owners of the property located at 19601 Nordhoff Street, Los Angeles, California.

A subsequent area with similar zoning and General Plan designation was requested to be reviewed by the City of Los Angeles Department of City Planning. These areas are referred to as the Project Site and Add Area, respectively. The Project Site includes approximately 35.5 acres located at the northeast corner of Nordhoff Street and Corbin Avenue. The Add Area includes of approximately fifteen parcels, totaling approximately fifteen acres, located to the north of the Project Site across Prairie Street, between Corbin Avenue and Shirley Avenue.

The Project at the Project Site consists of a Zone Change from MR2-1, [T][Q]M1-1, and P-1 to C2-1 and a General Plan Amendment from Light Manufacturing to Community Commercial to facilitate the redevelopment of an antiquated industrial building at the Project Site (CPC 2002-7295-PPR-BL).

Palisades Landmark Condominium Project *Available Now!*

Case No.ENV-2000-2696-EIR	17331-17333 Tramonto Drive
Council District 11	Brentwood-Pacific Palisades Community Plan Area

PROJECT DESCRIPTION: Vesting Tentative Tract Map Number 52928, Coastal Development Permit, and Site Plan Review to permit the demolition of 20 apartment units in two buildings, and the construction of 25 three level townhouses (3,000 square feet each), and 57 four level, three-bedroom condominiums (2,400 square feet each) with 205 parking spaces. The project site is approximately 3.98 acres of hillside terrain in the RD2-1 zone. The project will require approximately 100,000 cubic yards of soil export and the import of 75,000 cubic yards of soil for the repair of the Revello Landslide. Twenty-nine non-native trees are proposed to be removed. This project will be subject to the Mello Act Interim Ordinance, pursuant to the Mello Act, Government Code (65590 and 65590.1).

Palazzo Westwood *Available Now!*

Case No.ENV-2000-3212-EIR	1001-1029 Tiverton Avenue, 1020-1070 Glendon Avenue,
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1015-1065 Glendon Avenue

Council District: 5

Westwood Community Plan Area

PROJECT DESCRIPTION: Palazzo Westwood is a proposed 528,490 square-foot mixed-use project in Westwood Village which features 350 residential units and 115,000 square feet of ground floor retail. The residential portion is 413,490 square feet. The project is comprised of three parcels: Parcels A (2.724 acres) and C (0.292 acres) on the east side of Glendon and Parcel B (1.234 acres) on the west side of Glendon. The project has an overall FAR of 2.85. The development will be 65 feet in height, as measured from the highest point of the roof structure or parapet wall to the elevation of the ground surface which is vertically below that point of measurement; the buildings will not exceed 55 feet as measured to the top of the habitable space. The retail/commercial component will consist of a variety of neighborhood-serving shops and services, including uses such as drug stores, markets, clothing stores, home furnishing stores, repair shops and other similar types of retail establishments. One or more restaurants with outdoor dining may also be featured. There will be 1,452 parking spaces provided within three subterranean levels. Glendon Avenue will be narrowed to 36 feet in order to accommodate 17-foot sidewalks. The project site is approximately 4.25 acres in the C4-2D-O zone.

The Project applicant requests the following discretionary approvals:

(1) Amendment to General Plan from the Circulation Element's designation of Tiverton Avenue from a Secondary Highway to a Collector Street; 2) Amendments to Westwood Village Specific Plan: a) Include subsection exempting projects within the Specific Plan area from the Commercial Corner Ordinance; b) Add definition of "mixed-use" project to the Specific Plan; (c) Add definition of "unified development" to the Specific Plan; d) Amend the boundaries of Subarea 2 to include the portion of the Project on the west side of Glendon; e) Reduce the required lot area per residential unit in Subarea 2 from 800 to 400 square feet and limit the number of residential units in Subarea 2 to 350 ; f) Permit commercial uses along Tiverton Avenue in Subarea 2 in conjunction with a mixed use development with limitations including no pedestrian or vehicular access; (g) Permit Floor Area Ratio averaging in Subarea 2; (h) Change the permitted height on lots over one acre in Subarea 2 to be 65 feet (including roofs, roof structures and parapet walls), provided the building shall not exceed 55 feet as measured to the top of the habitable space; (i) Allow unified developments in Subarea 2 to be 65 feet in height without a building setback at 40 feet; and (j) Decrease the number of required bicycle parking spaces for the entire Specific Plan area from one bicycle parking space per five automobile parking spaces to one bicycle parking space per 20 automobile parking spaces; (2) Obtain an exception from the Westwood Village Specific Plan requiring a 15-foot landscape buffer along the Tiverton frontage (the

project will include a 15-foot landscape buffer, but the Applicant requests an exception while the redesignation of Tiverton from a Secondary Highway to a Collector Street is being processed); (3) Conditional Use Permits (CUP) for the sale or dispensing of a full line of alcoholic beverages at two off-site uses (i.e., market or retail drugstore) and three on-site uses (i.e., restaurants); (4) Adjustments from the LAMC to (a) allow a zero side and rear yard requirement for the residential portions of the Project; and (b) allow the space provided pursuant to the open space requirement to be dispersed throughout the Project site; (5) Site Plan Review findings required by the LAMC; (6) Parcel Map (Merger and Resubdivision) for the subsurface vacation of Glendon Avenue.

A Draft EIR dated February 21, 2002, was prepared for this project and circulated for public review between February 21, 2002 and April 8, 2002. The City received numerous comments during this period. As a result, the City determined that a revised Draft EIR providing additional information and details about the Project should be prepared, and the entire Draft EIR recirculated. This Notice of Completion and Availability pertains to the revised Draft EIR. Reviewers are advised that, although part of the administrative record, the previous comments do not require a written response in the final EIR, and that new comments must be submitted for the revised Draft EIR. The City will respond only to those comments submitted in response to this recirculated, revised Draft EIR. CEQA Guidelines Section 15088.5 (a)(f)(1).

Holy Cross Subdivision: Tentative Tract 52539 Available Now!

Case No. 98-0168-PA-ZC-GPA-SUB 15065 Mission Hills Road

Council District 7 Mission Hills/Panorama City/
Sepulveda Community Plan

Project Description: Tentative Tract No. 52539 consists of a 116-lot single-family residential subdivision on a 28.76-acre site at 15065 Mission Hills Road in the Mission Hills community of the City of Los Angeles. The proposed project includes the construction of 113 new single-family units. Two existing single-family units and the YMCA childcare facility would remain on the site on proposed Lot Nos. 93, 115, and 116, respectively. Two existing single-family homes and one small shed would be demolished in order to construct the proposed project. The proposed project will also require the reconfiguration of an existing hospital staff parking lot and the rear northerly retaining wall of the YMCA facility to accommodate the project's primary and secondary (emergency) access. In addition to approval of TT No. 52539, the applicant is also requesting a

General Plan Amendment for the project site from a "Residential- Very Low" to a "Residential-Low" land use designation, as well as a zone change from A2-1 to R1-1.

The project site is located near the northern of portion of the San Fernando Valley, within the Mission Hills Community of the City of Los Angeles. The project site is situated adjacent to the Golden Interstate (I-5) Freeway and approximately one-quarter mile from the San Diego Freeway (SR-405), and just south of the juncture of these two freeways.

2000 Avenue of the Stars Project

Case No.ENV-2001-4027-EIR

2000 Avenue of the Stars

Council District 5

West Los Angeles Community Plan Area

Project Description: Major Project Conditional Use Permit and Project Permit Compliance Review to permit the demolition of 678,822 square feet of commercial space (including the Shubert Theatre) located within two, eight-story buildings, to be replaced with the construction of a 15 story building with 719,924 square-feet of office, 30,527 square-feet of restaurant, 18,318 square-feet of retail, and 10,178 square feet of cultural space for a total of 778,947 net square-feet of development. The Century Plaza Towers, located on the east side of the block at 2029 and 2049 Century Park East, would not be changed as a result of the project. The proposal is to redevelop 9.2 acres of the 14.02 acre site located within the C2-2-O zone. The proposed 15-story structure would have an approximate height of 215 feet above grade at the plaza level on the east side of the building, and 201 feet above grade on Avenue of the Stars. Two of the 15 floors would be located below grade on Avenue of the Stars and above grade from the plaza level. Upon completion, the Project would provide 6,065 code-required parking spaces for all uses on the site including the existing Century Plaza Towers. The existing paved central plaza would be converted to a three-acre landscaped plaza, consisting of a central lawn surrounded by the office towers, restaurants, and retail uses. The following approvals may also be required for the proposed project: Building Permits and Code modifications, Haul Route, Street Improvement Permits, Parking Facility Modification Approval, Reduction of off-street parking spaces, Intersection improvement and possible bus stop relocation, Conditional Use Permit for alcohol service at restaurants, Vesting Tentative Tract Map, Parcel Map or other subdivision, Tree Removal Permits, Conditional Use Permits, Lot Line Adjustment, Public Works Permits and Variances, Federal Aviation Administration (FAA) Notice of Proposed Construction or Alteration, Regional Water Quality Control Board discharge permits, other approvals or permits necessary for the Project.

Motion Picture & Television Fund Retirement Home Supplemental EIR

Case No. 391-84-CUZ/ZV

23450 Calabasas Road

Council District 11

Canoga Park-Woodland Hills-West
Hills Community Plan

Project Description: Conditional Use and Zone Variance to allow construction of 191,500 s.f. of new medical use, with number of licensed beds increasing to 290 from existing 256. Construction of 285,070 s.f. of residential retirement facilities with a net increase of 269 new units. Construction of 60,500 s.f. of new services/administrative buildings, 21,000 s.f. of new activity/recreational facilities. Project also includes 9 acres of landscaped open space.

Hillcrest Christian School & Church West Campus Expansion Plan

Case No. 99-0421-CU-ZV-ZAA

17531 Rinaldi Street

Council District 12

Granada Hills-Knollwood
Community Plan

Project Description: The proposed project includes a proposed three-story, 75,000 square-foot building on a 5.5 acre property in the A1-1K zone, as an expansion of, and adjacent to, and existing 60,000 square-foot church and private school (grades K-12) on a separate parcel east of Shoshone Avenue, to allow a student increase from the currently permitted 800 maximum to 1,200 students and an increase in staff from 70 to 130. A Conditional Use is requested to permit the expanded operations. A Zone Variance is requested to permit 124 additional parking spaces in lieu of the required 286. Zoning Administrators Adjustment to permit a 5-foot parking setback in lieu of the required 25-feet.

Brentwood Project "The Park"

Case No. 98-0334-CUB-CU

11711 San Vicente Blvd.

Council District 11

Brentwood-Pacific Palisades
Community Plan

Project Description: The proposed project includes the demolition of all

existing structures within the project site and vacation of the segment of Gorham Avenue, which transects the site. The project site shall be developed with 54,700 square feet of commercial (retail, restaurant, and office) uses, along with public plazas and an underground parking structure to contain 275 parking spaces. The structure will contain approximately 10,000 sf of restaurant, 2,000 sf of office and 42,700 sf of retail uses, and approximately 4,800 sf of public plaza space. Alternately, depending on market conditions, office uses could occupy as much as 13,300 sf of the project, with a corresponding reduction in retail.

L.A. Sports & Entertainment Center

Case No. 00-3577-SP/SUB

6 city blocks: Pico on the south;
Olympic on the north; Flower on the
east; Cherry on the west.

Council District 9

Central City Community Plan

Project Description: Specific Plan and Subdivision application for development of an entertainment district consisting of hotel, retail/restaurant/entertainment residential, office/sport medicine center, health club/sport club.

EXHIBIT B - 14



Toxic Substances Hydrology Program

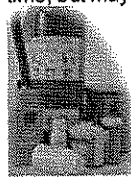
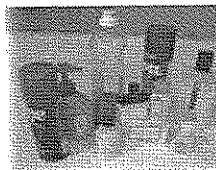
Research Projects - Emerging Contaminants

Emerging Contaminants	Methods Development	Environmental Occurrence	Source Pathways	Transport and Fate	Ecological Effects
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Emerging Contaminants In the Environment

Research is documenting with increasing frequency that many chemical and microbial constituents that have not historically been considered as contaminants are present in the environment on a global scale. These "emerging contaminants" are commonly derived from municipal, agricultural, and industrial wastewater sources and pathways. These newly recognized contaminants represent a shift in traditional thinking as many are produced industrially yet are dispersed to the environment from domestic, commercial, and industrial uses.

"Emerging contaminants" can be broadly defined as any synthetic or naturally occurring chemical or any microorganism that is not commonly monitored in the environment but has the potential to enter the environment and cause known or suspected adverse ecological and/or human health effects. In some cases, release of emerging chemical or microbial contaminants to the environment has likely occurred for a long time, but may not have been recognized until new detection methods were developed. In other cases, synthesis of new chemicals or changes in use and disposal of existing chemicals can create new sources of emerging contaminants.



The major goal of the **Emerging Contaminants Project** is to provide information on these compounds for evaluation of their potential threat to environmental and human health. To accomplish this goal, the research activities of this project are to: (1) develop **analytical methods** to measure chemicals and microorganisms or their genes in a variety of matrices (e.g. water, sediment, waste) down to trace levels, (2) determine the **environmental occurrence** of these potential contaminants, (3) characterize the myriad of **sources and source pathways** that determine contaminant release to the environment, (4) define and quantify processes that determine their **transport and fate** through the environment, and (5) identify potential **ecologic effects** from exposure to these chemicals or microorganisms. Project research on emerging contaminants is being conducted within these five areas. The following links provide more detailed information.

1. [Analytical Methods Development](#)
2. [Environmental Occurrence](#)
3. [Sources and Source Pathways](#)
4. [Transport and Fate](#)
5. [Ecological Effects](#)

[Toxics Home](#)

[About The Program](#)

[Research Projects](#)

[Subsurface Point-Source Watershed-and Regional Scale](#)
[Methods Development](#)

[Crosscutting Topics](#)

[Agricultural Chemicals](#)
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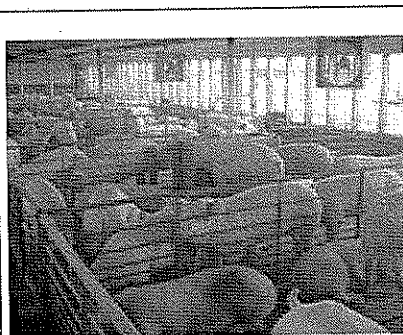
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[Frequently Asked Questions](#)

[Links to Other Sources](#)

Emerging Contaminant Headlines

- [Measuring Antidepressants, Fungicides, and Insecticides in the Environment](#)
- [Detergents in Streams May Just Disappear](#)
- [Emerging Contaminants Targeted in a Reconnaissance of Ground Water and Untreated Drinking-Water Sources](#)
- [Biosolids, Animal Manure, and Earthworms: Is There a Connection?](#)
- [Wastewater Indicators Shown to Degrade in Streams](#)
- [Endocrine Disruption Found in Fish Exposed to Municipal Wastewater](#)
- [Household Chemicals and Drugs Found in Biosolids from Wastewater Treatment Plants](#)
- [Pharmaceuticals Found in Soil Irrigated with Reclaimed Water](#)
- [Are Pharmaceuticals in Your Watershed? Understanding the Fate of Pharmaceuticals and Other Contaminants in Watersheds](#)
- [Book Chapter on Exposure Modeling and Monitoring of Human Pharmaceuticals in the Environment](#)
- [Does NDMA Biodegrade at Ground-Water Recharge Facilities?](#)
- [Glyphosate Found in Wastewater Discharged to Streams](#)
- [Tracing Wastewater - Using Unique Compounds to Identify Sources of Contamination](#)
- [USGS Scientists Contribute to New Book on Pharmaceuticals in the Environment](#)
- [USGS Scientists Develop New Method to Measure Pharmaceuticals in Water](#)
- [Developing Methods to Measure New Contaminants in Aquatic Environments](#)
- [Veterinary Medicines in the Environment](#)
- [Glyphosate Herbicide Found in Many Midwestern Streams, Antibiotics Not Common](#)
- [National Reconnaissance of Pharmaceuticals, Hormones and Other Organic Wastewater Contaminants in U.S. Streams is Making an Impact](#)
- ["National Reconnaissance of Pharmaceuticals, Hormones, and Other Organic Wastewater Contaminants in Streams" Named as One of the Top 100 Science Stories of the Year](#)
- [What's in Our Wastewaters and Where Does it Go?](#)



Emerging contaminants can originate from a variety of animal- and human-waste sources such as this hog production facility

Project Bibliography

Project Photo Gallery

Meetings and Conferences

- USGS and Colorado State University co-sponsor [EmCon2009-2nd International Conference on Occurrence, Fate, Effects, and Analysis of Emerging Contaminants in the Environment](#), Fort Collins, Colorado, August 4-7, 2009
- USGS is co-sponsoring the short course [Environmental Fate and](#)

Effects of Emerging Contaminants at the SETAC North America
29th Annual Meeting, Tampa, Florida, November 16-20, 2008

New Publications

- Waste-indicator and pharmaceutical compounds in landfill-leachate-affected ground water near Elkhart, Indiana, 2000-2002: Buszka, P.M., Yeskis, D.J., Kolpin, D.W., Furlong, E.T., Zaugg, S.D., and Meyer, M.T., 2009, *Bulletin of Environmental Contamination and Toxicology*, doi:10.1007/s00128-009-9702-z (Advanced Web release).
- Biodegradation of 17 β -Estradiol, Estrone and Testosterone in Stream Sediments : Bradley, P.M., Barber, L.B., Chapelle, F.H., Gray, J.L., Kolpin, D.W., and McMahon, P.B., 2009, *Environmental Science and Technology*, doi:10.1021/es802797j (Advanced Web release).
- Comparing wastewater chemicals, indicator bacteria concentrations, and bacterial pathogen genes as fecal pollution indicators: Haack, S.K., Duris, J.W., Fogarty, L.R., Kolpin, D.W., Focazio, M.J., Furlong, E.T., and Meyer, M.T., 2009, *Journal of Environmental Quality*, v. 38, no. 1, p. 248-258, doi:10.2134/jeq2008.0173.
- Wastewater effluent, combined sewer overflows, and other sources of organic compounds to Lake Champlain: Phillips, P.J., and Chalmers, A.T., 2009, *Journal of the American Water Works Association*, v. 45, no. 1, p. 45-57, JAWRA-07-0175-P, doi:10.1111/j.1752-1688.2008.00288.x.
- Occurrence of organic wastewater compounds in the Tinkers Creek watershed and two other tributaries to the Cuyahoga River, Northeast Ohio: Tertuliani, J.S., Alvarez, D.S., Furlong, E.T., Meyer, M.T., Zaugg, S.D., and Koltun, G.F., 2008, *U.S. Geological Survey Scientific Investigations Report 2008-5173*, 60 p.
- Fate of consumer-product chemicals in the subsurface environment--25 years of research on Cape Cod, Massachusetts, USA: Barber, L.B., 2008, *in* Trefry, M.G., ed., *Groundwater Quality 2007--Securing Groundwater Quality in Urban and Industrial Environments: International Association of Hydrological Sciences IAHS Redbook*, IAHS Publ. 324, p. 126-132.
- Subsurface fate and transport of sulfamethoxazole, 4-nonylphenol, and 17 β -estradiol: Barber, L.B., Meyer, M.T., LeBlanc, D.R., Kolpin, D.W., Bradley, P.M., Chapelle, F.H., and Rubio, F., 2008, *in* Trefry, M.G., ed., *Groundwater Quality 2007--Securing Groundwater Quality in Urban and Industrial Environments: International Association of Hydrological Sciences IAHS Redbook*, IAHS Publ. 324, p. 133-139.
- A national reconnaissance of pharmaceuticals and other organic wastewater contaminants in the United States--II. Untreated drinking water sources: Focazio, M.J., Kolpin, D.W., Barnes, K.K., Furlong, E.T., Meyer, M.T., Zaugg, S.D., Barber, L.B., and Thurman, E.M., 2008, *Science of the Total Environment*, v. 402, no. 2-3, p. 201-216, doi:10.1016/j.scitotenv.2008.02.021.
- A national reconnaissance of pharmaceuticals and other organic wastewater contaminants in the United States--I. Groundwater: Barnes, K.K., Kolpin, D.W., Furlong, E.T., Zaugg, S.D., Meyer, M.T., and Barber, L.B., 2008, *Science of the Total Environment*, v.

402, no. 2-3, p. 192-200, doi:10.1016/j.scitotenv.2008.04.028.

Select Information on Emerging Contaminant Research Outside the Toxic Substances Hydrology Program

- [Endocrine Disruptor Research](#), Contaminant Biology Program, USGS
- [Pharmaceuticals and Personal Care Products \(PPCPs\)](#), U.S. Environmental Protection Agency
- [Pharmaceuticals and Personal Care Products \(PPCPs\) as Environmental Pollutants](#), National Exposure Research Laboratory, U.S. Environmental Protection Agency
- [Pharmaceuticals in the Environment, Information for Assessing Risk \(PEIAR\) Project](#), National Oceanic and Atmospheric Administration (NOAA)
- [Antibiotic/Antimicrobial Resistance](#), Centers for Disease Control and Prevention
- [Materials of Emerging Regulatory Interest Team \(MERIT\)](#), Emerging Contaminants Directorate, Department of Defense (The official DoD source for emerging contaminants information)
- [EU-Project Poseidon](#), Assessment of Technologies for the Removal of Pharmaceuticals and Personal Care Products in Sewage and Drinking Water Facilities to Improve the Indirect Potable Water Reuse, European Union
- [Environmental Risk Assessment of Veterinary Medicines in Sludge \(ERAVMIS\)](#), International Office for Water

More Information

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EXHIBIT B - 15

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Ranking potential impacts of priority and emerging pollutants in urban wastewater through life cycle impact assessment

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September 2008. Available online 31 October 2008.

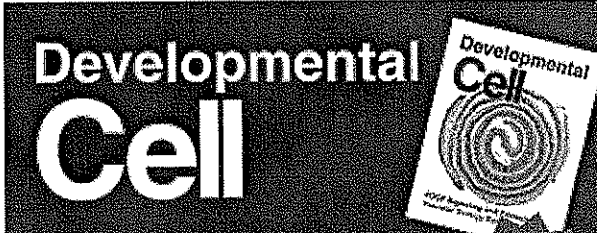
Abstract

Life cycle impact assessment (LCIA), a feature of the Life cycle

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assessment (LCA) methodology, is used in this work outside the LCA framework, as a means to quantify the potential environmental impacts on ecotoxicity and human toxicity of wastewater containing priority and emerging pollutants. In order to do this, so-called characterisation factors are obtained for 98 frequently detected pollutants, using two characterisation models, EDIP97 and USES-LCA. The applicability of this methodology is shown in a case study in which wastewater influent and effluent samples from a Spanish wastewater treatment plant located in the Mediterranean coast were analysed. Characterisation factors were applied to the average concentration of each pollutant, obtaining impact scores for different scenarios: discharging wastewater to aquatic recipient, and using it for crop irrigation. The results show that treated wastewater involves a substantially lower environmental impact when compared to the influent, and pharmaceuticals and personal care products (PPCPs) are very important contributors to toxicity in this wastewater. Ciprofloxacin, fluoxetine, and nicotine constitute the main PPCPs of concern in this case study, while 2,3,7,8-TCDD, Nickel, and hexachlorobenzene are the priority pollutants with highest contribution. Nevertheless, it must be stressed that the new characterisation factors are based on very limited data, especially with regard to toxicology, and therefore they must be seen as a first screening to be improved in the future when more and higher quality data is available.






Keywords: Human toxicity; Ecotoxicity; Pharmaceuticals and personal care products (PPCPs); Life cycle impact assessment; EDIP97; USES-LCA

Article Outline

1. Introduction
 2. Materials and methods
 - 2.1. Calculation of wastewater potential impact
 - 2.2. Target pollutants
 - 2.3. Characterisation models
 - 2.3.1. EDIP97
 - 2.3.2. USES-LCA
 - 2.4. Substance-specific data used in the models
 - 2.5. Experimental work
 - 2.5.1. Wastewater sampling
 - 2.5.2. Chemicals and reagents
 - 2.5.3. Sample preparation
 - 2.5.4. Analysis
 3. Results and discussion
 - 3.1. LCIA results
 - 3.2. Discussion
 4. Conclusions and outlook
- Acknowledgements
Appendix A. Supplementary material
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EXHIBIT B - 16

Health Publications

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Nitromusk and polycyclic musk compounds as long-term inhibitors of cellular xenobiotic defense systems mediated by multidrug transporters

Environmental Health Perspectives , Jan, 2005 by Till Luckenbach, David Epel

Synthetic musk compounds, widely used as fragrances in consumer products, have been detected in human tissue and, surprisingly, in aquatic organisms such as fish and mollusks. Although their persistence and potential to bioaccumulate are of concern, the toxicity and environmental risks of these chemicals are generally regarded as low. Here, however, we show that nitromusks and polycyclic musks inhibit the activity of multidrug efflux transporters responsible for multixenobiotic resistance (MXR) in gills of the marine mussel *Mytilus californianus*. The [IC.sub.10] (concentration that inhibits 10%) values for the different classes of musks were in the range of 0.09-0.39 [micro]M, and [IC.sub.50] values were 0.74-2.56 [micro]M. The immediate consequence of inhibition of efflux transporters is that normally excluded xenobiotics will now be able to enter the cell. Remarkably, the inhibitory effects of a brief 2-hr exposure to musks were only partially reversed after a 24- to 48-hr recovery period in clean seawater. This unexpected consequence of synthetic musks--a long-term loss of efflux transport activity--will result in continued accumulation of normally excluded toxicants even after direct exposure to the musk has ended. These findings also point to the need to determine whether other environmental chemicals have similar long-term effects on these transporters. The results are relevant to human health because they raise the possibility that exposure to common xenobiotics and pharmaceuticals could cause similar long-term inhibition of these transporters and lead to increased exposure to normally excluded toxicants. Key words: chemosensitizers, fragrances, MDR, multidrug resistance, multixenobiotic resistance, MXR, *Mytilus californianus*, nitromusks, polycyclic musks. doi: 10.1289/ehp.7301 available via <http://dx.doi.org/>[Online 30 September 2004]

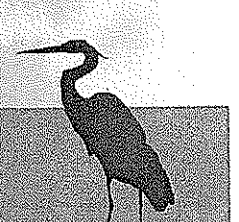
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EXHIBIT B - 17



PEEIR



Pacific Estuarine Ecosystem Indicator Research Consortium

Reproductive Impairment of a Salt Marsh Fish as an Indicator of Pollutant Effects

Issue

Organisms living in salt marshes are often exposed to environmental stressors derived from urban, industrial or agricultural activities, and these exposures may be continual, seasonal, or even just over a single tidal cycle. Resident marsh organisms have not been used for management of wetlands, and thus the health of endemic organisms in wetlands is largely unknown. Exposure of organisms to chemical stressors can be through sediment and water, as well as food exposure routes. Organisms living within the marsh channels and plains that integrate exposures and effects of contaminants are excellent indicators for determining the impacts of contaminants on resident species, without the extrapolations inherent in toxicity testing and other common methods currently in use.

Approach and Rationale

Our approach has been to establish a direct link between contaminants and reproductive impairment using a ubiquitous resident fish. In order to test the broad applicability of this approach, we tested this in five California marshes over 600km of coastline. Integrating biological responses of exposure to contaminants at the level of reproduction provides a direct link to predicting population level effects of stressors. ([Link to Modeling: Value Added](#))

Findings and Impact

The longjaw mudsucker, *Gillichthys mirabilis*, is a gobiid fish that is common to salt marshes in California. It is an extremely hardy species that occurs even at contaminated sites. *Gillichthys* spends its entire juvenile and adult life within the same marsh, and typically lives within a 30-50 m home range. They establish mud burrows in the banks of channels within the marsh, and this is also where reproduction occurs. Reproductive impairment was a sensitive indicator of habitat condition in the salt marshes studied, and classic reproductive impairment, as well as endocrine disruption, were observed.

- Males can be distinguished from females based on jaw length (Figure 1), enabling identification of sex without sacrificing fish, which is critical for studies of endocrine disruption.
- Males and immature fish from more contaminated sites showed the abnormal endocrine disruption response of choriogenins (or egg coat proteins) circulating in their plasma based on the use of a standardized antibody response. This response is considered normal only in sexually developing females. ([Link to Fish Endocrine Disruption](#))
- Fish from contaminated sites showed an increased incidence of ovotestes (also known as intersex) where both ovarian and testicular tissues were present. ([Link to Fish Endocrine Disruption](#))
- The ovaries from fish from contaminated sites showed both an increased incidence of tumors and an increased incidence of apoptosis or programmed cell death, a cellular response to toxic insult in which damaged cells are removed from the tissue in an attempt minimize the incidence of tumor formation. ([Link to Fish Apoptosis](#))



A research partnership between **University of California, Davis, Bodega Marine Laboratory** and **University of California, Santa Barbara**

Funded by **U.S. EPA Science To Achieve Results (STAR) EAGLE Program** Grant No. R82867601



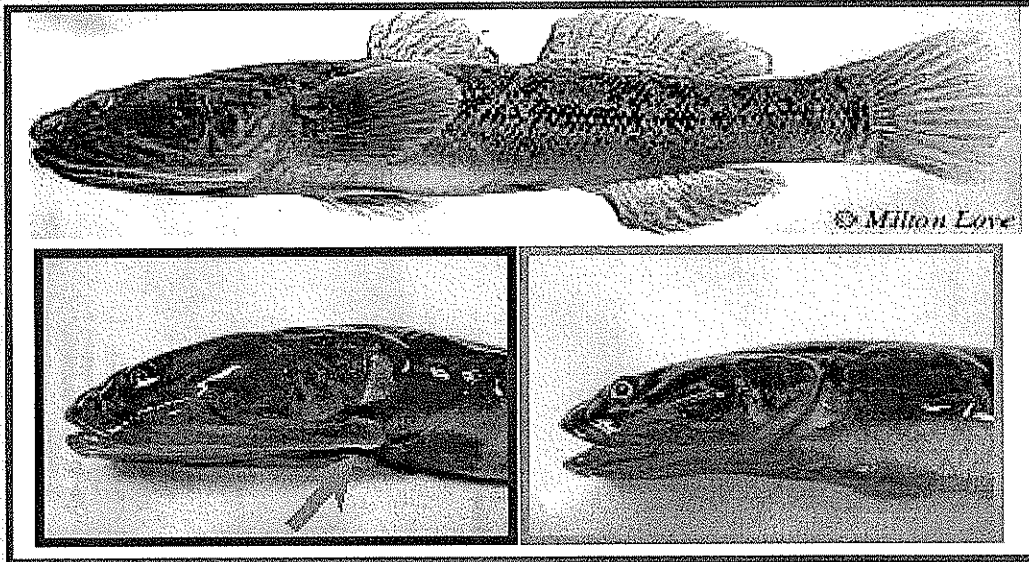


Figure 1. Adult *Gillichthys mirabilis* (top). Males (left) can be distinguished from females (right) by their longer jaw (red arrow).

Findings and Impact, cont.

- Suites of indicators can be integrated using multivariate statistics to characterize the percentage of fish in a marsh with impaired condition. ([Link to Fish Integrated Indicators](#))
- We propose that this approach can be used in a standard portfolio of indicators to identify "at risk" wetlands and to assess their overall condition. This may be most valuable for marsh restoration and mitigation, as well as for selected Total Maximum Daily Load (TMDL) applications.

Applications

- Reproductive impairment in the mudsucker is a valuable tool for assessing the health of salt marshes, and their highly limited home range provides a means for establishing a map of fish health at specific stations within a marsh. ([Link to Fish Integrated Indicators](#))
- The assessment of endocrine disruption in mudsuckers is rapid, and sampling can occur in the field or the laboratory. In addition, individuals can be repeatedly sampled in order to assess temporal responses. ([Link to Fish Endocrine Disruption](#))

- The contaminants responsible for endocrine disruption, as well as reproductive impairment, can be investigated once the biological responses within a marsh are established. ([Link to Fish Endocrine Disruption](#))
- This general approach has been validated at several sites in California but its applicability for issues relating to specific contaminant stressors or restoration actions may require refinement of the overall approach.

Publications

Anderson, S.L., Cherr, G.N., Morgan, S.G., Vines, C.A., Higashi, R.M., Bennett, W.A., Rose, W.L., Brooks, A., and Nisbet, R.M. In press. Integrating contaminant responses in indicator saltmarsh species. *Marine Environmental Research*.

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EXHIBIT B - 18

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1: Aquat Toxicol. 2006 May 10;77(3):241-9. Epub 2006 Feb 14.

ELSEVIER Links

Evaluation of relationships between reproductive metrics, gender and vitellogenin expression in demersal flatfish collected near the municipal wastewater outfall of Orange County, California, USA.

Ann Rempel M, Reyes J, Steinert S, Hwang W, Armstrong J, Sakamoto K, Kelley K, Schlenk D.

Environmental Toxicology Program, University of California, Riverside, CA

Estrogenic activity in fish has primarily been evaluated using vitellogenin expression in male and juvenile animals. Although the response to estrogens in field and laboratory studies, the relevance of the response to high-dose effects, particularly in the field, is less than clear. Previous evaluations of vtg within flatfish species collected near the Orange County Sanitation District (OCSD) outfall and stations as far as 7.7 km down current indicated bioavailable estrogens within demersal flatfish populations. In order to evaluate the persistence of estrogenic activity and relationships to reproduction and development, fish were sampled in the winter and summer of 2003 and 2004 at the outfall and a reference location. Vtg, plasma estradiol (E2) concentrations, gonadosomatic indices (GSI), sperm DNA damage, development, and gender ratios were measured in English Sole (*Pleuronectes vetulus*) and Hornyhead Turbot (*Pleuronichthys verticalis*). Variable levels of vtg were continually observed in the plasma samples of fish collected at both locations. Vtg expression and plasma E2 levels were significantly correlated in females. A positive relationship was demonstrated between plasma E2 levels and sperm DNA damage. Rather than an expected feminization of populations, a trend toward masculinization was observed particularly at the OCSD outfall, as indicated by gender ratios and significantly higher GSI in males versus females. These results are consistent with previous studies showing vtg expression in male flatfish, but no alteration in overall flatfish abundance at the sampled sites.

PMID: 16483676 [PubMed - indexed for MEDLINE]

Site-specific effects of 17beta-estradiol in hornyhead turbot (*Pleuronichthys verticalis*) collected from a wastewater outfall and reference location.
Environ Res. 2009 Mar 13; . Epub 2009 Mar 13.

hornyhead turbot Res. 2009] cultures of fish : Toxicol. 2006]

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Seasonal evaluation of reproductive status and exposure to environmental estrog [Environ Toxicol. 2007]

Review Vitellogenin as a biomarker of exposure to estrogenic compounds in aquatic inve [Environ Int. 2008]

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EXHIBIT B - 19

Environmental Monitoring and Assessment of Environmental Estrogens in Marine

Abstract

Unregulated organic compounds (aka Pharmaceuticals and the active ingredients in personal care products) have recently been detected in surface and drinking waters throughout the United States. The most biologically potent compounds in this group of compounds are the estrogenic steroids and other estrogen mimicking compounds that target the endocrine systems of fish and wildlife. Little is known about the concentrations or the effects of these compounds on marine fisheries in the United States. Preliminary studies from our laboratories in flatfish collected from Southern California have indicated potential endocrine disruption, as male fish were shown to have equivalent concentrations of blood egg yolk protein as those observed in female fish. The specific aims of this proposal are to identify the concentrations of likely active compounds, as well as potential uncharacterized compounds using a combined analytical chemistry and bioassay approach. The latter method will be used to guide analytical studies toward the identification of causative compounds. The ultimate goal is to target causative compounds and initiate a monitoring program for California which will be the first of its kind in the United States for the presence of these compounds in sediments surrounding marine wastewater treatment outfalls.

EXHIBIT B - 20

HTP Special Study 2009-10

Characterization of the Environmental Endocrine Disruption Effects on Male Estrogen Levels and Testicular Estrogen-producing Genes in Hornyhead Turbot from the CLAEMD Outfall Monitoring Program Study Area

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&

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Environmental Monitoring Division
City of Los Angeles
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Dec 2008

BACKGROUND AND RATIONALE

It is well documented that many California coastal environments are contaminated, such as along industrialized or developed shorelines, in ports and marinas, and in regions around outfalls of publicly-owned treatment works (POTWs), among others. However, it is poorly understood to what extent are existing contaminants –many with continuing inflows into the environment– impacting the biota. In the Southern California Bight (SCB), over one billion gallons of treated wastewater (effluent) are released each day into coastal waters. Such effluents are known to contain contaminants classified as endocrine-disrupting compounds (EDCs). The Endocrine Disruptor Screening and Testing Advisory Committee (EDSTAC) of the US EPA defined an EDC as an “*exogenous chemical substance or mixture that alters the structure or function(s) of the endocrine system and causes adverse effects at the level of the organism, its progeny, populations, or subpopulations of organisms, based on scientific principles, data, weight-of-evidence, and the precautionary principle*” (EDSTAC, 1998). Putative or demonstrated EDCs include (but are not limited to) organochlorine pesticides, polychlorinated biphenyls (PCBs), surfactants, plasticizers, polycyclic aromatic hydrocarbons (PAHs), DDT and metabolites, active steroid hormones and their mimics, and a large variety of pharmaceuticals.

The vertebrate endocrine system is highly conserved, and this holds particularly true for steroidal systems. For example, the primary ovarian steroid in humans, 17 β -estradiol (E2) is the same primary ovarian steroid hormone in fish (Lintelmann et al., 2003). E2, estrone (E1), as well as the pharmaceutical 17 α -ethinylestradiol (EE2), are the most potent forms of estrogens, active in animals at <1 ng/L environmental concentrations (Purdom et al., 1994; Tyler et al., 2005; Khanal et al., 2006). Humans (as well as domestic animals, livestock, etc.) excrete E2, E1, and EE2 (if it is being taken) via urine on a daily basis, and pregnant women can excrete E2 at levels as high as 5 mg/day (Duguet et al., 2004). Studies worldwide have demonstrated that these steroids are present in treated wastewater, surface waters and sediments (both freshwater and seawater environments), ground water, and even drinking water, often at concentrations with the potential to cause reproductive effects, particularly in male vertebrates (Koplin et al., 2002; Matthiessen, 2003; Johnson and Williams, 2004; Campbell et al., 2006; Khanal et al., 2006). Effects in fish exposed to estrogens include the development of intersex (fish expressing sexual characteristics of both sexes, such as ovo-testis), altered gamete production, and reduced reproductive success (e.g., above papers and Rodgers-Gray et al., 2001; Jobling et al., 2006). New data are emerging from studies in the SCB indicating that these steroids are present in our local marine environments. However, it is also important to consider the potential that other (non-steroidal) EDCs can also have important reproductive effects, as will be discussed further below.

The hornyhead turbot (HT), *Pleuronichthys verticalis*, is a flatfish species that serves as a model organism in ocean monitoring efforts conducted by southern California environmental monitoring agencies, including the City of Los Angeles' Environmental Monitoring Division (see CLAEMD, 2007). This species is believed to have high site fidelity and it maintains a focused diet of benthic tube-dwelling polychaetes and clam siphons (Allen, 1982; Cooper, 1997; Gibb 1995). HT typically reside at depths of <100 m, but are found at depths ranging from 10 – 200 m (Allen, 1982). Since the outfalls of ocean-discharging southern California POTWs are located at average depths of 60 m in soft-bottom habitats, HT are often abundant in these areas. This species, therefore, represents a particularly good opportunity to study and understand exposure and effects of environmental EDCs (endocrine disruption) due to wastewater discharge.

A significant number of known EDCs have lipophilic properties, which means they are most likely to be bound to particles which then settle and accumulate in the benthos. This can then facilitate EDC accumulation in the membranes and tissues of benthic animals. Vertebrate animals at high risk for

EDC accumulation and effects are flatfish, particularly those with diets specializing in sediment-dwelling invertebrates, as for the HT.

Prior research in collaboration with CLAEMD (HTP Special Study between 2005-2008; Sea Grant Project #CE-17, 2006-2008) determined that **male** hornyhead turbot from Santa Monica Bay exhibit extraordinary plasma concentrations of ('female') E2, with levels as high or higher than that of reproductive females (300-1000 pg/ml). In males of other local fish species tested (including English sole, Pacific sanddab, longfin sanddab, Dover sole), E2 concentrations are all <50 pg/ml, typical of vertebrate males generally. Comparisons of HT males from the HTP outfall area and CLAEMD reference sites in Santa Monica Bay inconsistently point to outfall-related effects, with significantly increased E2 in males from the outfall site observed in some studies, but not in others. These differences may relate to differences in oceanic conditions (especially currents) between studies, as well as to apparent widespread impacts in Santa Monica Bay. All Santa Monica Bay HT males measured to date (from various CLAEMD study sites) have consistently exhibited 2-4 times greater E2 concentrations as compared with HT males from the Orange County coastline, suggesting that Santa Monica Bay is relatively more impacted in terms of this putative endocrine disruption effect in the fish (Reyes, 2006; Hagstrom, 2008; Petschauer, 2008; and unpublished).

In Orange County, the OCSO outfall is located in a more open oceanic environment and handles a relatively smaller human population (200 MGD from ~3 million residents). Santa Monica Bay, in contrast, is a more enclosed oceanic environment, impacted by the larger volume (~340 MGD) HTP outfall and a larger service population (>4 million residents), in addition to possible impacts from JWPCP-LACSD given predominant up-coast currents off of Palos Verdes.

Potential Mechanisms Underlying Effects

Studies are beginning to emerge indicating that EDCs in the environment can alter endogenous gonadal steroid production in fish and wildlife (e.g., Hayes et al., 2002, 2003; Henson and Chedrese, 2004; Arukwe, 2008; Gracia et al., 2008). Thus, in addition to possible accumulation of estrogen from the environment, other EDCs may act directly on the gonad's steroidogenic machinery, potentially activating E2 production. Our preliminary work has pointed to the latter possibility, that the high E2 phenotype in male HT from Santa Monica Bay may be related to altered steroidogenic enzyme gene expression in the testis.

Steroidogenesis is the process by which steroids are synthesized via progressive modifications from the precursor, cholesterol (see Figure 1). The majority of steroid hormones are synthesized in the gonads and adrenal (=interrenal in fishes) tissue. The synthesis of all steroid hormones begins with the conversion of cholesterol into pregnenolone by **P450_{scc}** (side chain cleavage enzyme). The P450_{scc} enzyme is localized to the inner mitochondrial membrane, and as a result, the cholesterol molecule must first be transported across the membrane. Steroidogenesis acute-regulatory protein (**StAR**) plays an essential role in regulating steroidogenesis by allowing for the initial translocation of cholesterol through the inner aqueous mitochondrial membrane (Tsujiyama and Hurley, 2000). StAR has been referred to as the most important global regulator of steroidogenesis – its activation is a vital rate-limiting step in steroidogenesis (Bauer et al., 2000; Stocco, 1999; 2003). StAR is highly expressed in ovary, testis, and interrenal of fish, with low levels of expression in other non-steroidogenic tissues (Young, 2005). StAR and P450_{scc} are potential targets of environmental EDCs (Arukwe, 2008), as alteration in their expression will have important effects on the overall rate of steroid production in a given steroidogenic tissue, like testis.

Our most recent findings indicate that HT males exhibiting elevated plasma E2 concentrations show expression of steroidogenic enzymes involved in E2 synthesis within their testis, including StAR, P450arom and 17 β -HSD-1 (P450scc has not yet been tested). Importantly, preliminary experiments indicate that the expression of each specific mRNA in testis was positively correlated with plasma E2 concentrations. These findings point to the possibility that elevated concentrations of E2 in male HT could be due to environmental endocrine disruption causing aberrant testicular E2 production.

Other than the very limited studies cited above, little is known to date about the potential environmental disruption of steroidogenic genes in animals, both aquatic and terrestrial (Arukwe, 2008; Zhou et al., 2008). No work to date has been reported in California, let alone from the SCB. Studies are strongly warranted, given the known presence of multiple contaminants in the SCB, and the observed testicular expression of estrogen-producing enzymes and elevated E2 levels in male HT, particularly individuals from Santa Monica Bay.

This Special Study is being proposed in order to address an essential issue requiring resolution: can the extraordinary E2 phenotype in male HT be unequivocally connected to effect of an impaired environment in Santa Monica Bay? Thus, if HT are well isolated from exposures to putative acting environmental factors (EDCs), to what extent do they exhibit a typical male phenotype? Further, do depurated fish exhibit an amelioration of the endocrine-disrupted condition?

STUDY AIMS AND METHODOLOGY

This Special Study will test whether elevated concentrations of E2 in male HT from the HTP study area are positively correlated with testicular expression of steroidogenic enzyme genes (P450arom, P450scc, 17 β -HSD-1, StAR), and whether separation of the fish from the environment (either experimentally or by sampling at remote field sites) will be correlated with reduced testis steroidogenic enzyme expression and E2 concentrations.

The **specific aims** are as follows:

1. To sample HT males from HTP 5-Mile outfall and Santa Monica Bay reference sites (yielding fish with varying E2 concentrations) and measure plasma concentrations of E2, E1 and T, and testicular expression of P450arom, P450scc, 17 β -HSD-1 and StAR. Correlation analyses between hormonal concentrations and testicular mRNA expression will be carried out to characterize relationships between changes in gonadal enzyme expression and steroid levels among individuals. Comparisons between field sites will test for outfall-associated effects.
2. To collect HT from the HTP 5-Mile outfall site (to obtain fish with elevated E2 levels) and rear them in synthetic seawater (lacking contaminants) in a laboratory setting for 4 or 8 weeks, followed by hormone and enzyme expression measurements as above. Potential differences will be evaluated between field-sampled animals (from Specific Aim 1) and the laboratory reared animals before and after "depuration" (isolation).

Studies under Aim #1. HT will be collected by otter trawl at the HTP 5-Mile outfall (site Z2) and at CLAEMD reference site C1 off-shore of Malibu. Trawls will target 30 fish per site, with roughly half

of the caught fish expected to be males. All fish will be measured for body length (mm) and weight (g), bled using a syringe needle at the caudal vein, and dissected to ascertain sex. Gonad (testicular) and hepatic (only for potential use) tissues will be removed and weighed to the nearest 0.1 g, in order to calculate gonadosomatic index (GSI) and hepatosomatic index (HSI) (indicative of reproductive status and fuel storage/metabolic status, respectively; Evans and Claiborne, 2006]. Tissues will then be placed into RNA-Later™ buffer (Invitrogen, Inc., Carlsbad, CA) to protect them from RNase degradation, until qPCR analyses are carried out, as described below (see Specific Methods). Blood plasma will be stored at -80°C until measurement of concentrations of E2, E1 and T, as described below (see Specific Methods). Although the hypothesis of the present study centers on potential aberrant testicular steroidogenic enzyme mRNA expression, samples from the females (ovary, liver, plasma) will be saved alongside male samples for potential subsequent measurements.

Studies under Aim #2. During the same trawls as above, 40 additional fish will be caught from site Z2, blood sampled (time-0), placed into on-board live wells. The fish will then be transported to the laboratory and placed into aquaria with cooled (16 °C) re-circulated synthetic seawater (Instant Ocean™) for 6 weeks, with 50% water replacements occurring every 3rd day during the experimental period, similar to published “depuration” protocols (e.g., Hano et al., 2007). Twenty fish will be sampled at week-4, and then 20 again at week-8, with roughly half of the individuals expected to be male. Fish will be blood sampled and their gonad (testicular) and hepatic tissues will be removed and weighed (as above, calculation of GSI and HSI) and then placed into RNA-Later™ buffer until qPCR analyses are carried out (Specific Methods). Blood plasma will be stored at -80°C until measurement of E2, E1 and T concentrations (Specific Methods).

Specific Methods

Radioimmunoassay (RIA). The concentration(s) of E1, E2 and T in HT plasma will be determined using RIAs validated and routinely used in the laboratory for this species (Reyes, 2006; Petschauer, 2008; Kelley et al., 2001). Standards and specific antiserum are obtained from Diagnostic Systems Laboratory, Inc (Beckman-Coulter, Inc., Webster, TX). Intra-assay variabilities for these assays range from CV= 6.9-8.9%, and inter-assay variabilities range from CV = 7.5-11.2%.

Real-time quantitative PCR (qPCR) with SYBR green. Total RNA will be extracted from the testicular tissue samples using TriZol reagent (Invitrogen), quantified by spectrophotometry, and treated with DNase I to avoid genomic DNA contamination. First-strand cDNA will be reverse-transcribed from 1 µg of total RNA using Superscript II RNase H⁻ reverse transcriptase (Invitrogen). Gene-specific primers for StAR, P450arom and 17β-HSD-1 have previously been designed and validated for real-time qPCR assays (Hagstrom, 2008; Hamilton, 2008). QPCR assays will be performed on a MX3000P qPCR system (Stratagene, La Jolla, CA) using a commercially available SYBR green mix (AB Gene, Rockford, IL). A cDNA pool containing 5 µL of cDNA from each sample from the far-field-sampled fish will be used as the ‘calibrator’ cDNA, for calculations of relative mRNA expression using the 2^{-ΔΔCt} method (Livak and Schmittgren, 2001). Mastermixes for P450arom, P450scc, 17β-HSD-1, StAR, and GAPDH (=normalizer) containing SYBR green, forward primer, and reverse primer, will be used, and each gene, normalizer (GAPDH) and calibrator PCR amplification will be run in triplicate, in addition to no-template controls and no-RT controls.

Data Analysis. Mean ± SEM values of each measured parameter, including for testicular enzyme mRNA and plasma hormones, will be compared among the various reference groups, the HTP outfall group, and experimentally-depurated groups, by ANOVA analyses using SigmaStat v.3.3 software

(SSPS Inc., Chicago IL). For the gene expression data, mean fold differences (relative to the calibrator) will be calculated for each group (Livak and Schmittgren, 2001). The reference site within Santa Monica Bay, or some other appropriate reference site, will be used to produce the calibrator cDNA pool. To assess the potential relationships between the gonadal mRNA expression for each enzyme and the plasma concentrations of each hormone (E1, E2, and T), correlation analyses will also be carried out (SigmaStat v.3.3 software).

DELIVERABLES

- 1) Electronic versions of the data generated by these studies
- 2) Summary tables and/or graphs
- 3) Report providing a summary of the findings and methods used
- 4) Professional conference presentations of the data, with CLAEMD recognition, authorship
- 5) Submittal of scientific articles for peer-reviewed publication, with CLAEMD authorship

ESTIMATED BUDGET

Task	Explanation	Est. #	Cost
Plasma hormone concentration analysis	Anticipated sample measurements Estimated #: 3 hormone measurements*/fish x 95 male samples (90 in Aim-1, 60 in Aim-2, 135 in Aim-3) =285 samples. [*E2, E1, T] \$35/sample (includes reagents, supplies, labor)	285	\$9,975
Gonadal gene expression analysis	Testicular steroidogenic gene expression analysis [qPCR for StAR, 17 β -HSD-1, P450 _{arom}] 95 samples, \$95/sample	95	\$9,025
Other Project Support Expenses	Additional required supplies (field & sample collection, prep., laboratory), data analysis, report preparation; student assistant salary		\$3,300
Total			\$22,300

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EXHIBIT B - 21

Pharmaceuticals and Personal Care Products in the Environment: Agents of Subtle Change?

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During the last three decades, the impact of chemical pollution has focused almost exclusively on the conventional "priority" pollutants, especially those acutely toxic/carcinogenic pesticides and industrial intermediates displaying persistence in the environment. This spectrum of chemicals, however, is only one piece of the larger puzzle in "holistic" risk assessment. Another diverse group of bioactive chemicals receiving comparatively little attention as potential environmental pollutants includes the pharmaceuticals and active ingredients in personal care products (in this review collectively termed PPCPs), both human and veterinary, including not just prescription drugs and biologics, but also diagnostic agents, "nutraceuticals," fragrances, sun-screen agents, and numerous others. These compounds and their bioactive metabolites can be continually introduced to the aquatic environment as complex mixtures via a number of routes but primarily by both untreated and treated sewage. Aquatic pollution is particularly troublesome because aquatic organisms are captive to continual life-cycle, multigenerational exposure. The possibility for continual but undetectable or unnoticed effects on aquatic organisms is particularly worrisome because effects could accumulate so slowly that major change goes undetected until the cumulative level of these effects finally cascades to irreversible change—change that would otherwise be attributed to natural adaptation or ecologic succession. As opposed to the conventional, persistent priority pollutants, PPCPs need not be persistent if they are continually introduced to surface waters, even at low parts-per-trillion/parts-per-billion concentrations (ng-µg/L). Even though some PPCPs are extremely persistent and introduced to the environment in very high quantities and perhaps have already gained ubiquity worldwide, others could act as if they were persistent, simply because their continual infusion into the aquatic environment serves to sustain perpetual life-cycle exposures for aquatic organisms. This review attempts to synthesize the literature on environmental origin, distribution/occurrence, and effects and to catalyze a more focused discussion in the environmental science community. *Key words:* aquatic, drugs, ecologic health, ecologic risk assessment, emerging risk, pharmaceuticals, pollution, sewage. — *Environ Health Perspect* 107(suppl 6):907-938 (1999). <http://ehpnet1.niehs.nih.gov/docs/1999/suppl-6/907-938daughton/abstract.html>

Summary

Risks associated with previously unknown, unrecognized, unanticipated, or unsuspected chemical pollutants in the environment have long been a major concern of environmental scientists. The importance of identifying such emerging risks is reflected in one of the top five goals of the Strategic Plan 2000 for the U.S. Environmental Protection Agency's (U.S. EPA) Office of Research and Development. Early identification and investigation of potential environmental pollution issues before they worsen are critical for protecting ecologic and human health. It is also important to rule out issues that could be of concern but prove otherwise, so that limited resources can be redirected. Ecosystem change is effected by human activities primarily via three routes: habitat fragmentation, alteration of community structure (e.g., via nonindigenous species), and chemical pollution. The scope of the former two is highly delineated and obvious compared with the latter. During the last three decades, the impact of chemical pollution has focused almost exclusively on the conventional "priority" pollutants. This

group of chemicals, however, is only one piece of the larger puzzle.

One large class of chemicals receiving comparatively little attention comprises the pharmaceuticals and active ingredients in personal care products (PPCPs), which are used in large amounts throughout the world; quantities of many are on par with agrochemicals. Escalating introduction to the marketplace of new pharmaceuticals is adding exponentially to the already large array of chemical classes, each with distinct modes of biochemical action, many of which are poorly understood. In contrast to agrochemicals, most of these products are disposed or discharged into the environment on a continual basis via domestic/industrial sewage systems and wet-weather runoff. The bioactive ingredients are first subjected to metabolism by the dosed user; the excreted metabolites and unaltered parent compounds can then be subjected to further transformations in sewage treatment facilities. The literature shows, however, that many of these compounds survive biodegradation, eventually being discharged into receiving waters; metabolic conjugates can even be converted back to their free parent forms. Many

of these PPCPs and their metabolites are ubiquitous and display persistence in, and bioconcentration from, surface waters on par with those of the widely recognized organochlorine pollutants. Additionally, by way of continual infusion into the aquatic environment, those PPCPs that might have low persistence can display the same exposure potential as truly persistent pollutants since their transformation/removal rates can be compensated by their replacement rates.

Although certain biochemical actions of many drugs in humans have been elucidated, these actions are not necessarily always the ones responsible for the purported physiologic target effects. Sometimes the known pathways of action may have nothing to do with the actual desired effect, as the actual mechanism remains totally unknown. Understanding of the complex biochemical signaling pathways is currently too limited to design drugs that act only via targeted routes, and even then, if their activity can be limited to a single type of receptor, the tissue distribution of the receptor may not be fully known. Unpredicted and unknown side effects are often the norm. The possible actions and biochemical ramifications on nontarget aquatic biota are even less understood; many are totally unknown. The few that are known to elicit subtle but dramatic effects on aquatic life at very low concentrations, however, may point to an ill-defined vulnerability in aquatic ecosystems. A major concern is not necessarily acute effects to

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nontarget species (effects amenable to monitoring once they are understood), but rather the manifestation of perhaps imperceptible effects that can accumulate over time to ultimately yield truly profound changes—those whose causes would be obscured by time and that would not be distinguishable from natural events. The specter of subtle, cumulative effects could reduce the usefulness of current toxicity-directed screening methods in testing waste effluents for toxicologic end points due to PPCPs. Subtle effects, from low concentrations of bioactive PPCPs, whose continual expression over long periods of time in certain nontarget populations, could lead to cumulative, insidious, adverse impacts that would otherwise be attributed to natural change/adaptation or ecologic succession—any “signal” would be lost among the noise. Current comprehensive environmental risk assessments and epidemiologic studies do not factor in exposures/body burdens from PPCPs and therefore may be flawed by over simplicity.

It is useful to note that the data reported and evaluated in this review reflect the diverse and uneven nature of the PPCP literature published for source/origin, occurrence, distribution, transport, transformation, ecologic exposure and effects, risk assessment, and test strategies. The comprehensiveness of the published literature in each of these areas and across the broad spectrum of PPCP classes is very unequal. This review therefore does not present an exhaustive and rounded view of this emerging topic but rather summarizes most of the significant papers in an integrated, comprehensive manner, and thereby elucidates many of the questions that still need to be addressed by the environmental science community. This review aims to catalyze a discussion on the potential importance of PPCPs in the environment and presents recommendations for focusing further research (Table 1).

Introduction

For the purposes of this discussion, pharmaceutical (and veterinary and illicit) drugs (and the ingredients in cosmetics, food supplements, and other personal care products), together with their respective metabolites and transformation products, will collectively be referred to as pharmaceuticals and personal care products. PPCPs are continually infused into the environment via sewage treatment facilities and wet weather runoff. In many instances, untreated sewage is discharged into receiving waters (e.g., flood overload events, domestic “straight-piping,” or sewage waters lacking municipal treatment). In the United States alone, possibly more than a million homes do not have sewage systems but instead rely on direct discharge of raw sewage into streams by straight-piping or by outhouses not

connected to leach fields (1). A number of Canadian cities are reported to discharge 3.25 billion liters per day (over 1 trillion liters per year) of essentially untreated sewage into surface waters and the ocean (2). Raw/treated sewage is also disposed of from some locales in the deep ocean where it may possibly remix with upper waters.

We hope that this overview of PPCPs in the environment will *a)* catalyze a concerted effort among environmental chemists and ecotoxicologists to survey sewage treatment effluents, surface waters/groundwaters, and potable water for the presence of PPCPs and their bioactive transformation products and to determine their origins; *b)* elucidate the spectrum of possible physiologic effects of PPCPs on nontarget species, especially those that are aquatic; and *c)* promote discussion of whether this is an environmental issue deserving further investigation. We believe that a scientific debate on this topic is warranted given the evidence that has been accumulating over the last two decades on the occurrence of various pharmaceuticals in sewage effluent and in both surface waters and groundwaters. The big unknown is whether the combined low concentrations from each of the numerous PPCPs and their transformation products have any significance with respect to ecologic function, while recognizing that immediate effects could escape detection if they are subtle and that long-term cumulative consequences could be insidious. Another question is whether the pharmaceuticals remaining in water used for domestic purposes poses long-term risks for human health after lifetime ingestion via potable waters multiple times a day of very low, sub-therapeutic doses of numerous pharmaceuticals; this issue, however, is not addressed in this review.

The hypothesis is further complicated by the fact that while the concentration of individual drugs in the aquatic environment could be low (sub-parts per billion or sub-nanomolar, often referred to as micropollutants), the presence of numerous drugs sharing a specific mode of action could lead to significant effects through additive exposures. It is also significant that drugs, unlike pesticides, have not been subjected to the same scrutiny regarding possible adverse environmental effects. They have therefore enjoyed several decades of unrestricted discharge to the environment, mainly via sewage treatment works. This is surprising especially since certain pharmaceuticals are designed to modulate endocrine and immune systems and cellular signal transduction and as such (as opposed to pesticides and other industrial chemicals already undergoing scrutiny as endocrine disruptors) have obvious potential as endocrine disruptors in the environment. Exposure to PPCPs in the environment,

especially for aquatic organisms, may differ from that of pesticides and other industrial chemicals in one significant respect—exposures may be of a more chronic nature because PPCPs are constantly infused into the environment wherever humans live or visit, whereas pesticide fluxes are more sporadic and have greater spatial heterogeneity. It is quite apparent that little information exists from which to construct comprehensive risk assessments for the vast majority of PPCPs having the potential to enter the environment.

Although little is known of the occurrence and effects of pharmaceuticals in the environment, more data exist for antibiotics than for any other therapeutic class. This is a result of their extensive use in both human therapy and animal husbandry, their more easily detected effects end points (e.g., via microbial and immunoassays), and their greater chances of introduction into the environment, not just by sewage treatment plants, but also by run-off and groundwater contamination, especially from confined animal feeding operations (CAFOs). The literature on antibiotics is much more developed because of the obvious issues of direct effects on native microbiota (and consequent alteration of microbial community structure) and development of resistance in potential human pathogens. Because of the considerably larger literature on antibiotics, this review only touches on the issue; for the same reason, this discussion only touches on steroidal drugs (those purposefully designed to modulate endocrine systems).

For the purposes of this document, pharmaceuticals will refer to nonbiologic drugs (i.e., those that do not comprise proteinaceous or nucleotide material). The number of biologics approved by the U.S. Food and Drug Administration (FDA) is growing, and their fate in the environment is unknown. This overview covers only a subset of the commercially available classes of pharmaceuticals and active ingredients in personal care products. The subset of classes discussed in this review comprises the primary classes for which the limited data on environmental occurrence and effects on nontarget species can be found, in a highly fragmented, disjointed, and disparate literature.

Pharmaceutical drugs are chemicals used for diagnosis, treatment (cure/mitigation), alteration, or prevention of disease, health condition, or structure/function of the human body. The definition is extended to veterinary pharmaceuticals and can also be applied to illicit (recreational) drugs. It also must be noted that the active ingredient in a drug may or may not be the actual formulated parent compound. For example, prodrugs such as the esters of clofibrate acid, a metabolite of certain lipid regulators, are converted from pharmacologically inactive parent

EXHIBIT C - 1

4.4 UTILITIES

WATER RESOURCES

EXISTING CONDITIONS

The City of Los Angeles (City) obtains its water supply primarily from three sources, namely, the local groundwater basins, the Los Angeles Aqueducts (LAA) and purchases from the Metropolitan Water District of Southern California (MWD). Additional water supply comes from recycling wastewater for reuse. Approximately 85 percent of the City's current water supply comes from imported sources. These sources are snowmelt and groundwater from the eastern Sierra Nevada, purchased water from the Northern California, through the State Water Project, and the Colorado River through the Colorado River Aqueduct. The remainder of the City's water supply comes from local wells and recycled water. For the fiscal year 1995-1996, the LAA delivered 463,300 acre-feet (AF), while the local groundwater basins supplied 77,300 AF. Supplemental purchases from MWD accounted for 66,200 AF. Additionally, 2,000 AF of recycled water was delivered during this fiscal year. **Figure 4.4-1** illustrates the contribution of these sources to the City's water supply for fiscal year 1995-1996.

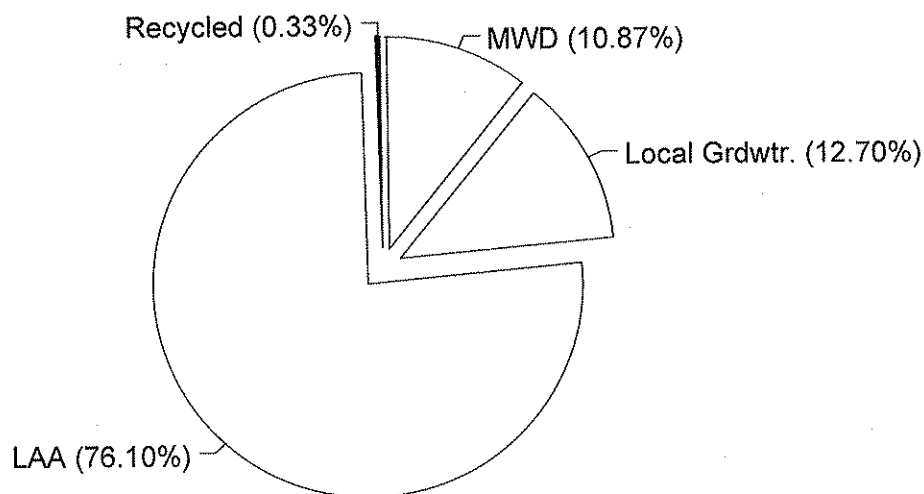


Figure 4.4-1 Water Sources for Fiscal Year 1995-1996

EXHIBIT C - 2

DATE: December 02, 2008 16:51:56 PST

FOR IMMEDIATE RELEASE

LADWP CUSTOMERS CUT WATER USE, BUT MORE CONSERVATION IS NEEDED

Single-family Water Use Down 7% So Far This Year -- Governmental use down 11.4%

LOS ANGELES (December 1, 2008) -- Despite record temperatures and no rainfall during the month of October, Los Angeles residents continued cutting back on their water use last month according to the most recent data available from the Los Angeles Department of Water and Power, making October the 15th consecutive month of reduced water use for single family residential customers. So far this year, residents living in single-family homes have cut their water use by 7% over the prior year. In addition, October 2008 water use in single-family homes was the lowest recorded since 2002 - a significant achievement considering that there was no rainfall for the month and L.A. had the highest recorded average high temperature of 85.4 degrees for an October since 1906 and our population has grown of 6% since 2002.

Other customer categories also saw significant declines in water use. Government customers have cut water use by 11.4% so far this year. The commercial sector also saw a decline of 5.4% while residents of multi-family apartments cut their use by 4.3%. Overall use in the city is down 5.1% for the year. Only industrial customers have used more water than the prior year with their use up almost 22%.

"Angelenos are getting the picture and we are clearly heading in the right direction, but we must remain vigilant and do even more to reduce our water use. We remain in a drought and as the rainy season approaches, we cannot be lulled into a false sense of security. Our water supplies have been cut and each of us must do our part to cut our own use even further," said Mayor Antonio Villaraigosa. "I have faith that we will reach our goal of 10% with just a little more effort by doing simple things like turning off sprinklers when it rains, cutting outdoor watering to just one or two days during the winter and fixing all leaks around the house and yard.

The positive trend in water conservation reverses an alarming increase in water use seen in the months prior to the Mayor's call for conservation on June 16, 2007. At that time, water use spiked in April and May, by 19.3% and 20.7% respectively, for the months prior to the call to conserve.

The Mayor cited numerous reasons for the drop, including increased awareness of the municipal Water Conservation Ordinance that was strengthened in August allowing members of the LADWP Water Conservation Team to cite persons or businesses who violate the city's Prohibited Water Use Ordinance. Since September when the team began enforcement, 1,388 complaints have been investigated, resulting in 558 citations being issued for such prohibitions as watering between 9 a.m. and 4 p.m., watering down hard surfaces like driveways and sidewalks, allowing excess water to flow into the street and other violations.


The City has also placed a much greater emphasis on conserving water at city-owned facilities. LADWP personnel have met with the City's major departments to educate them about ways to save water and is tracking the water use of all City departments against an established baseline. The LADWP has also audited over 300 city facilities, identifying ways to save additional water in the future through the installation of low-flow and waterless urinals, toilets and faucet aerators.

Both residents and visitors of Los Angeles are also learning of the city's water challenges through different means. Many restaurant patrons now see LADWP table tent cards reminding them that they must first ask for a glass of water before being served one. Automatic serving of water is prohibited under the Water Ordinance. The department supplied nearly 1,000 hotels and motels with towel rack hangers asking patrons to reuse linens. Soon, the LADWP water conservation message will also be seen in signage on the department vehicles that service every part of the city.

"Water conservation is here to stay, whether the rains come or not," said David Nahai, CEO and general manager of the LADWP. "There are no more rivers to tap or aqueducts to build from hundreds of miles away. The way we're going to meet our needs in the future is through conservation and recycling. We will never let up in our efforts to communicate this important fact to our customers."

In May, the Mayor and Nahai announced a far-reaching 20-year water strategy for Los Angeles to meet 100% of new water demand that included a six-fold increase in water recycling, including expansion of the "purple pipe" system (distributing water for irrigation and industrial uses) and development of new treatment facilities to replenish groundwater with treated and purified wastewater.

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EXHIBIT C - 3



Office of the Governor

ARNOLD SCHWARZENEGGER
THE PEOPLE'S GOVERNOR

PRESS RELEASE

02/27/2009 GAAS:079:09 FOR IMMEDIATE RELEASE

Gov. Schwarzenegger Takes Action to Address California's Water Shortage

Proclaims State of Emergency, Directs Government to Utilize Resources, Help People

To combat California's third consecutive year of drought, Governor Arnold Schwarzenegger today proclaimed a state of emergency and ordered immediate action to manage the crisis. In the proclamation, the Governor uses his authority to direct all state government agencies to utilize their resources, implement a state emergency plan and provide assistance for people, communities and businesses impacted by the drought.

"Even with the recent rainfall, California faces its third consecutive year of drought and we must prepare for the worst - a fourth, fifth or even sixth year of drought," Governor Schwarzenegger said. "Last year we experienced the driest spring and summer on record and storage in the state's reservoir system is near historic lows. This drought is having a devastating impact on our people, our communities, our economy and our environment - making today's action absolutely necessary. This is a crisis, just as severe as an earthquake or raging wildfire, and we must treat it with the same urgency by upgrading California's water infrastructure to ensure a clean and reliable water supply for our growing state."

The Governor's order directs various state departments to engage in activity to provide assistance to people and communities impacted by the drought. The proclamation:

- Requests that all urban water users immediately increase their water conservation activities in an effort to reduce their individual water use by 20 percent
- Directs the Department of Water Resources (DWR) to expedite water transfers and related efforts by water users and suppliers
- Directs DWR to offer technical assistance to agricultural water suppliers and agricultural water users, including information on managing water supplies to minimize economic impacts and implementing efficient water management practices
- Directs DWR to implement short-term efforts to protect water quality or water supply, such as the installation of temporary barriers in the Delta or temporary water supply connections
- Directs the Labor and Workforce Development Agency to assist the labor market, including job training and financial assistance
- Directs DWR to join with other appropriate agencies to launch a statewide water conservation campaign calling for all Californians to immediately decrease their water use
- Directs state agencies to immediately implement a water use reduction plan and take immediate water conservation actions and requests that federal and local agencies also implement water use reduction plans for facilities within their control

In particular, the order directs that by March 30, 2009, DWR shall provide an updated report on the state's drought conditions and water availability. According to the proclamation, if the emergency conditions have not been sufficiently mitigated, the Governor will consider additional steps. These could include the institution of mandatory water rationing and mandatory reductions in water use; reoperation of major reservoirs in the state to minimize impacts of the drought; additional regulatory relief or permit streamlining as allowed under the Emergency Services Act; and other actions necessary to prevent, remedy or mitigate the effects of the extreme drought conditions.

DWR and California's Department of Food and Agriculture will also recommend, within 30 days, measures to

reduce the economic impacts of the drought, including but not limited to water transfers, through-Delta emergency transfers, water conservation measures, efficient irrigation practices, and improvements to the California Irrigation Management Information System.

Last week, DWR announced that California's severe drought had prevented it from increasing its State Water Project (SWP) delivery allocations for the first time since 2001. This year's allocation as of February is at just 15 percent of SWP contractor's requests. This is only the second time in SWP history that the February allocation has been this low.

The drought conditions and water restrictions are causing additional devastating economic and business losses. Agricultural revenue losses exceed \$300 million to date and could exceed \$2 billion in the coming season, with a total economic loss of nearly \$3 billion in 2009.

Full text of proclamation:

**A PROCLAMATION
BY THE GOVERNOR OF THE STATE OF CALIFORNIA**

WHEREAS the State of California is now in its third consecutive year of drought; and

WHEREAS in each year of the current drought, annual rainfall and the water content in the Sierra snowpack have been significantly below the amounts needed to fill California's reservoir system; and

WHEREAS the rainfall and snowpack deficits in each year of the current drought have put California further and further behind in meeting its essential water needs; and

WHEREAS statewide, 2008 was the driest spring and summer on record, with rainfall 76 percent below average; and

WHEREAS the Sacramento and San Joaquin River systems, which provide much of the state's reservoir inflow, were classified as Critically Dry for the 2008 water year; and

WHEREAS in the second year of this continuous drought, on June 4, 2008, I issued an Executive Order proclaiming a statewide drought, and I ordered my administration to begin taking action to address the water shortage; and

WHEREAS because emergency conditions existed in the Central Valley in the second year of the drought, I issued an Emergency Proclamation on June 12, 2008, finding that conditions of extreme peril to the safety of persons and property existed in the counties of Sacramento, San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and Kern caused by severe drought conditions; and I ordered my administration to take emergency action to assist the Central Valley; and

WHEREAS the drought conditions and water delivery limitations identified in my prior Executive Order and Emergency Proclamation still exist, and have become worse in this third year of drought, creating emergency conditions not just in the Central Valley, but throughout the State of California, as the adverse environmental, economic, and social impacts of the drought cause widespread harm to people, businesses, property, communities, wildlife and recreation; and

WHEREAS despite the recent rain and snow, the three year cumulative water deficit is so large there is only a 15 percent chance that California will replenish its water supply this year; and

WHEREAS in the time since the state's last major drought in 1991, California added 9 million new residents, experienced a significant increase in the planting of permanent, high-value crops not subject to fallowing, and was subjected to new biological opinions that reduced the flexibility of water operations throughout the year; and

WHEREAS because there is no way to know when the drought will end, further urgent action is needed to address the water shortage and protect the people and property in California; and

WHEREAS rainfall levels statewide for the 2008-2009 water year are 24 percent below average as of the February 1, 2009 measurement; and

WHEREAS the second snow pack survey of the 2009 winter season indicated that snow pack water content is 39 percent below normal; and

WHEREAS as of February 23, 2009, storage in the state's reservoir system is at a historic low, with Lake Oroville 70 percent below capacity, Shasta Lake 66 percent below capacity, Folsom Lake 72 percent below capacity, and San Luis Reservoir 64 percent below capacity; and

WHEREAS low water levels in the state's reservoir system have significantly reduced the ability to generate hydropower, including a 62 percent reduction in hydropower generation at Lake Oroville from October 1, 2008 to January 31, 2009; and

WHEREAS a biological opinion issued by the United States Fish and Wildlife Service on December 15, 2008, imposed a 30 percent restriction on water deliveries from the State Water Project and the Central Valley Project to protect Delta Smelt; and

WHEREAS State Water Project water allocations have now been reduced to 15 percent of requested deliveries, matching 1991 as the lowest water allocation year in State Water Project history, and Central Valley Project water allocations for agricultural users have now been reduced to zero; and

WHEREAS the lack of water has forced California farmers to abandon or leave unplanted more than 100,000 acres of agricultural land; and

WHEREAS California farmers provide nearly half of the fresh fruits, nuts and vegetables consumed by Americans, and the crop losses caused by the drought will increase food prices, which will further adversely impact families and economies throughout California and beyond our borders; and

WHEREAS agricultural revenue losses exceed \$300 million to date and could exceed \$2 billion in the coming season, with a total economic loss of nearly \$3 billion in 2009; and

WHEREAS it is expected that State Water Project and Central Valley Project water delivery reductions will cause more than 80,000 lost jobs; and

WHEREAS the income and job losses will adversely impact entire communities and diverse sectors of the economy supported by those jobs and income, including the housing market and commercial business; and

WHEREAS these conditions are causing a loss of livelihood for many thousands of people, an inability to provide for families, and increased harm to the communities that depend on them; and

WHEREAS this loss of income and jobs will increase the number of defaults, foreclosures and bankruptcies, and will cause a loss of businesses and property at a time when Californians are already struggling with a nationwide and worldwide economic downturn; and

WHEREAS the Central Valley town of Mendota, as one example, already reports an unemployment rate of more than 40 percent and lines of a thousand or more for food distribution; and

WHEREAS when jobs, property and businesses are lost, some families will move away from their communities, causing further harm to local economies, lower enrollments in local schools and reduced funding for schools; and

WHEREAS at least 18 local water agencies throughout the state have already implemented mandatory water conservation measures, and 57 agencies have implemented other water conservation programs or restrictions on water deliveries, with many agencies considering additional rationing and water supply reductions in 2009; and

WHEREAS the lack of water has forced local communities to draw water from their emergency water reserves, putting communities at risk of further catastrophe if emergency reserves are depleted or cut off; and

WHEREAS the state recently endured one of its worst wildfire seasons in history and the continuing drought conditions increase the risk of devastating fires and reduced water supplies for fire suppression; and

WHEREAS on February 26, 2009, the United States Department of Agriculture and the United States Department of Interior created a Federal Drought Action Team to assist California to minimize the social, economic, and environmental impacts of the current drought; and

WHEREAS the circumstances of the severe drought conditions, by reason of their magnitude, are beyond the control of the services, personnel, equipment and facilities of any single county, city and county, or city and require the combined forces of a mutual aid region or regions to combat; and

WHEREAS under the provisions of section 8558(b) of the California Government Code, I find that conditions of extreme peril to the safety of persons and property exist in California caused by the current and continuing severe drought conditions and water delivery restrictions.

NOW, THEREFORE, I, ARNOLD SCHWARZENEGGER, Governor of the State of California, in accordance with the authority vested in me by the California Constitution and the California Emergency Services Act, and in particular California Government Code sections 8625 and 8571, HEREBY PROCLAIM A STATE OF EMERGENCY to exist in California.

IT IS HEREBY ORDERED that all agencies of the state government utilize and employ state personnel, equipment and facilities for the performance of any and all activities consistent with the direction of the California Emergency Management Agency (CalEMA) and the State Emergency Plan.

I FURTHER DIRECT THAT:

1. The California Department of Water Resources (DWR) shall, in partnership with other appropriate agencies, launch a statewide water conservation campaign calling for all Californians to immediately decrease their water use.
2. DWR shall implement the relevant mitigation measures identified in the Environmental Water Account Environmental Impact Report, Environmental Impact Statement, Supplement, and Addendums for the water transfers made through the 2009 Drought Water Bank. In addition, the California Air Resources Board shall, in cooperation with DWR and other agencies, expedite permitting and development of mitigation measures related to air quality impacts which may result from groundwater substitution transfers.
3. DWR and the State Water Resources Control Board (SWRCB) shall expedite the processing of water transfers and related efforts by water users and suppliers that cannot participate in the 2009 Drought Water Bank, provided the water users and suppliers can demonstrate that the transfer will not injure other legal users of water or cause unreasonable effects on fish and wildlife.
4. The SWRCB shall expedite the processing and consideration of the request by DWR for approval of the consolidation of the places of use and points of diversion for the State Water Project and federal Central Valley Project to allow flexibility among the projects and to facilitate water transfers and exchanges.
5. DWR shall implement short-term efforts to protect water quality or water supply, such as the installation of temporary barriers in the Delta or temporary water supply connections.
6. The SWRCB shall expedite the processing and consideration of requests by DWR to address water quality standards in the Delta to help preserve cold water pools in upstream reservoirs for salmon preservation and water supply.
7. To the extent allowed by applicable law, state agencies within my administration shall prioritize and streamline permitting and regulatory compliance actions for desalination, water conservation and recycling projects that provide drought relief.
8. The Department of General Services shall, in cooperation with other state agencies, immediately implement a water use reduction plan for all state agencies and facilities. The plan shall include immediate water conservation actions and retrofit programs for state facilities. A moratorium shall be placed on all new landscaping projects at

state facilities and on state highways and roads except for those that use water efficient irrigation, drought tolerant plants or non-irrigated erosion control.

9. As a condition to receiving state drought financial assistance or water transfers provided in response to this emergency, urban water suppliers in the state shall be required to implement a water shortage contingency analysis, as required by California Water Code section 10632. DWR shall offer workshops and technical assistance to any agency that has not yet prepared or implemented the water shortage contingency analysis required by California law.

10. DWR shall offer technical assistance to agricultural water suppliers and agricultural water users, including information on managing water supplies to minimize economic impacts, implementing efficient water management practices, and using technology such as the California Irrigation Management Information System (CIMIS) to get the greatest benefit from available water supplies.

11. The Department of Public Health shall evaluate the adequacy of emergency interconnections among the state's public water systems, and provide technical assistance and continued financial assistance from existing resources to improve or add interconnections.

12. DWR shall continue to monitor the state's groundwater conditions, and shall collect groundwater-level data and other relevant information from water agencies, counties, and cities. It is requested that water agencies, counties and cities cooperate with DWR by providing the information needed to comply with this Proclamation.

13. DWR and the Department of Food and Agriculture shall recommend, within 30 days from the date of this Proclamation, measures to reduce the economic impacts of the drought, including but not limited to, water transfers, through-Delta emergency transfers, water conservation measures, efficient irrigation practices, and improvements to CIMIS.

14. The Department of Boating and Waterways shall recommend, within 30 days from the date of this Proclamation, and in cooperation with the Department of Parks and Recreation, measures to reduce the impacts of the drought conditions to water-based recreation, including but not limited to, the relocation or extension of boat ramps and assistance to marina owners.

15. The Labor and Workforce Development Agency shall recommend, within 30 days from the date of this Proclamation, measures to address the impact of the drought conditions on California's labor market, including but not limited to, identifying impacted areas, providing one-stop service, assisting employers and workers facing layoffs, and providing job training and financial assistance.

16. DWR and the Department of Food and Agriculture shall be the lead agencies in working with the Federal Drought Action Team to coordinate federal and state drought response activities.

17. The emergency exemptions in Public Resources Code sections 21080(b)(3), 21080(b)(4) and 21172, and in California Code of Regulations, title 14, section 15269(c), shall apply to all actions or efforts consistent with this Proclamation that are taken to mitigate or respond to this emergency. In addition, Water Code section 13247 is suspended to allow expedited responses to this emergency that are consistent with this Proclamation. The Secretary for the California Environmental Protection Agency and the Secretary for the California Natural Resources Agency shall determine which efforts fall within these exemptions and suspension, ensuring that these exemptions and suspension serve the purposes of this Proclamation while protecting the public and the environment. The Secretaries shall maintain on their web sites a list of the actions taken in reliance on these exemptions and suspension.

18. By March 30, 2009, DWR shall provide me with an updated report on the state's drought conditions and water availability. If the emergency conditions have not been sufficiently mitigated, I will consider issuing additional orders, which may include orders pertaining to the following:

- (a) institution of mandatory water rationing and mandatory reductions in water use;
- (b) reoperation of major reservoirs in the state to minimize impacts of the drought;
- (c) additional regulatory relief or permit streamlining as allowed under the Emergency Services Act; and
- (d) other actions necessary to prevent, remedy or mitigate the effects of the extreme drought conditions.

I FURTHER REQUEST THAT:

19. All urban water users immediately increase their water conservation activities in an effort to reduce their individual water use by 20 percent.

20. All agricultural water suppliers and agricultural water users continue to implement, and seek additional opportunities to immediately implement, appropriate efficient water management practices in order to minimize economic impacts to agriculture and make the best use of available water supplies.

21. Federal and local agencies also implement water use reduction plans for facilities within their control, including immediate water conservation efforts.

I FURTHER DIRECT that as soon as hereafter possible, this proclamation be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this proclamation.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 27th day of February, 2009.

ARNOLD SCHWARZENEGGER
Governor of California

ATTEST:
DEBRA BOWEN
Secretary of State

EXHIBIT C - 4

City of Los Angeles

Industrial, Economic, and Administrative
Survey of the Los Angeles Department of
Water and Power

February 5, 2009

Private and Confidential

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Prepared for: Office of the
Controller
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www.paconsulting.com

Version: FINAL Strategic and
Operational Assessment

i. Consider implementing storage capabilities along the Los Angeles Aqueduct to compensate for reduced rights during droughts

As noted in the 2002 Survey, there are limited opportunities along the aqueduct for constructing surface storage which can be reasonably expected to be permitted. Although significant groundwater storage opportunities exist near the aqueduct in the Antelope Valley, it would require construction of new facilities, involving a lengthy permitting process and property acquisition.

The current approach is focused on obtaining an interconnection between the California and LA Aqueducts. An agreement was executed in 2004 between LADWP, the Department of Water Resources (DWR), the Metropolitan Water District (MWD), and Antelope Valley East Kern Water Agency (AVEK) authorizing this interconnection. The design which includes a pumping station is currently being reviewed by DWR. This interconnection would expand the opportunities for storage in the Central Valley and Antelope Valley using existing facilities and participation in already-developed water banks, such as Semi-Tropic.

While not directly responding to the 2002 recommendation, we believe this is a more prudent approach and will provide storage much more quickly than the alternative of constructing LADWP-owned facilities.

Relevance of 2002 Recommendations: Highly Relevant

Progress Versus 2002 Recommendations: Some Progress

ii. Ensure that MWD's analysis of future supplies realistically considers the likelihood that projects will actually be implemented

The Department is actively involved in MWD's efforts to update its Integrated Resource Plan (IRP) and is working with MWD on region-wide assessments of water demand, current water resource availability, and future opportunities for enhancing local water resources currently being made. These will assist in projecting LA's need for water from MWD. Over the past few years, LADWP teamed with other MWD member agencies to work effectively with MWD to maintain and enhance water supply reliability.

However, since this recommendation was made, a number of changes have occurred in the water supply arena for MWD. The most significant is the extended drought affecting both Colorado River and State Water Project (SWP) supplies. In addition, the recent Wanger decision limiting Delta exports to protect the Delta smelt has further impacted MWD's imported water supply.

LADWP is supporting MWD's strategy for dealing with the SWP issues. The short-term strategy is to influence Judge Wanger by providing him with information in December (2008), the timeframe DWR is expected to discuss with him the biological opinion on the Delta smelt and how DWR intends to respond to it.

DWR's strategy involves implementing barriers in the Old and New Rivers in the Delta to limit the number of smelt that are sucked into the SWP and Central Valley Project (CVP) pumps. DWR is pursuing this strategy through the Bay Delta Conservation Plan, and is currently

particularly with regard to water quality and water conservation. The water function needs an integrated, farsighted approach to its communication with the public that is clearly linked to its quality, resources, planning, and business functions.

As part of the strategic planning process, a regular annual professional survey, divided into sub-regions, is needed to provide the foundation for future planning, priorities, and changes in public policy. Survey questions should help in the design of the Annual Water Quality Report (AWQR), provide guidance on capital investment priorities, identify service deficiencies, including responses to complaints, and needs for additional public information and activities. The AWQR and the regular utility water bill are the primary written communications to the customers. The survey can be used to redesign the water bill to provide meaningful information on the customer's water use and conservation activities.

Public information programs for the current drought conservation activities, particularly in cooperation with MWD, should be continued and supplemented with DWP activities on issues of critical concern to the City. Consistency between DWP's activities and those of its neighbors as well as MWD should be a continuing goal.

iv. Recommendations

- Develop an expedited schedule (as part of a LADWP long-term strategy and budget) for SDWA compliance with surface water treatment rule
- Develop a distribution water quality strategy to reflect varying source waters, and impacts of SDWA compliance
- Evaluate and implement as appropriate a technical assistance program for owners of private residential water systems that impact water quality including: evaluation of devices, in-system chemical treatment, and other techniques to reduce complaints that result from deteriorating private systems
- Institute a regular annual customer survey that is statistically reliable and comparable, reflects differences in the service areas, and incorporates reliability, water quality, cost, customer service, and public attitudes. A model starting point would be the program conducted by EBMUD, (March 2008 East Bay Municipal Utility District Residential Customer Opinion Survey 2008, prepared by EBMUD and EMC Research Inc.)
- Develop and implement a comprehensive public/consumer information program that satisfies the objectives of the current "Annual Water Quality Report", provides user friendly information and interaction via a creative website, and is linked with other ongoing activities to achieve water conservation and other DWP objectives. The Report should maximize access while at the same time complying with EPA's rules. This report should not be a stand-alone, but integrated with the annual customer survey, and other ongoing public outreach particularly related to conservation.

b. WATER SUPPLY

i. Description

Benchmarking LADWP's water supply against external performance is even more problematic than water quality. The best benchmarks are KPIs that measure internal progress toward a goal. Examples would be achievement of the California Conservation

Councils 14 Best Management Practices that are identified in the 2005 Urban Water Management Plan (being updated for 2010) or the progress in increasing the volume of water recycled for various non-potable uses.

LADWP's water demand was 650,000 acre feet in 2007, only 50,000 acre feet above the 1970 demand despite a population increase of over a million people. Most California urban utilities have similarly controlled the impact of growth through a variety of water conservation practices and reduction of unaccounted for water. LA's historical water supply, from the eastern Sierra has dropped from 63% to 34% of the City's water sources, requiring increased reliance on MWD. At the same time, MWD's allocation from the State Water Project has decreased dramatically due to a judicial interpretation of the Endangered Species Act resulting in the allocation of water for fisheries purposes.

Today's supply reliability is ensured by a combination of water storage, above and below ground, transfers of water during drought periods, and Colorado River and other supplies. Most utilities include a benchmark based on the frequency and magnitude of drought related demand reduction. California drought demand reduction targets range from 10 to 25%. The current drought, approaching its third year, could very well generate higher demand reduction amounts approaching the 50% experienced by some utilities in 1977.

In the Strategic Assessment, the subject of Recycled Water and Comprehensive Water Planning was ranked as the highest priority Water System issue. The composite reliability of the integrated use of sources of supply available to LADWP should be modeled. Probabilities of precipitation runoff for each of the sources, available storage, delivery capacity, and energy/cost variables could be designed into a model that would allow LADWP to choose the most effective long-term water supply strategies, make annual comparisons as circumstances change and adjust strategies accordingly.

ii. Benchmarks / Companies

Comparisons of a calculated reliability with other utilities are not as important as past performance of supply during times of drought. For instance, suppose an adjacent utility is imposing mandatory restrictions and financial penalties for exceeding prescribed limits of use, while another utility chooses not to impose similar limits and/or purchase additional supplies. Then, even though basic supply conditions might be similar, reliability becomes a matter of policy with regard to water rates, and controlling the impacts of reduced water use. California's urban water systems have become increasingly integrated through the major regional, state, and federal supply systems. As time goes on, it is likely that statewide demand management strategies will be increasingly standardized. Therefore the 2008 Survey focuses on assessments of public attitudes toward water use as a way to compare LADWP's performance and customer priorities with other utilities.

The 10-City Residential Benchmarking Survey by RKS Online Survey of 200 customers per city, March 2008, indicates the following:

- Providing a reliable supply of water: the average response was 85% favorable, while LADWP was 83%
- Encouraging water conservation: the average response was 54%, and LADWP was 41%, the best utility was Dallas at 64%

On this note, approval and "buy-in" from the Mayor, City Council and Office of the Chief Legislative Analyst (CLA) is required before a position can be communicated publicly. Due to the nature of the process, the Department cannot lobby and express its opinion without formal approval, which delays the legislative process. In a highly competitive and fast moving environment, the impact of this delay can be significant (in particular, vis-à-vis the State's IOUs). The combination of streamlining processes and increasing personal relations with various stakeholders is critical.

f. OTHER GOVERNMENTAL ENTITIES

i. Metropolitan Water District (MWD)

Description

MWD is LADWP's most important and essential water support service. As the reliability of LA's traditional water sources, Owens Valley and San Fernando Valley groundwater is increasingly challenged, MWD makes up the difference to assure water availability even in drought periods. As a special district, MWD can act rapidly on behalf of its member's interests and provides subsidies for local projects, technical support, assistance to such agencies as DWR that operates the State Water Project. MWD engages in regional integrated resources planning and associated policy making that affects rates and charges paid by the Department.

Findings

The importance of MWD's activities to the future of LADWP cannot be overstated. It is in LADWP's interest to actively support MWD, participate in its activities, and increase its advocacy particularly with regard to MWD's assurance of long term water supply reliability through water transfers and regional conservation practices. LADWP is in a position to influence MWD and that influence is directly proportional to the staff level efforts that are made in support of MWD. There appears to be a difference of opinion between the various responsible parties (MWD delegates, Commissioners, GM, and staff) on long-term water policy.

A clear, comprehensive, and cohesive set of policies and positions must be articulated and fully-supported at all levels of the City, and most especially LADWP. In this most critical drought in the State's modern history, solidarity of Southern California water users is essential. LA should team with MWD and its member agencies and use its enormous statewide influence to further the already stated policies regarding the SWP and other state water supply issues.

ii. Southern California Public Power Authority (SCPPA)

Description

The Southern California Public Power Authority (SCPPA) is a joint powers agency comprising eleven municipal utilities and one irrigation district. SCPPA's members consist of the municipal utilities of Anaheim, Azusa, Banning, Burbank, Cerritos, Colton, Glendale, Los Angeles, Pasadena, Riverside, Vernon, and the Imperial Irrigation District. Together they deliver electricity to over two million customers in the southern California basin, spanning an area of 7,000 square miles, and with a total population that exceeds five million. Formed in 1980, SCPPA was created for the purpose of providing joint financing, construction and operation of transmission and generation projects.

EXHIBIT C - 5

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Low snowpack may mean a third dry year for California

Statewide the snow's water content is 61% of the average figure for this point in the season. Another La Niña may be developing, an expert says. Conservation is strongly urged.

By Bettina Boxall
January 30, 2009

The all-important Sierra Nevada snowpack remains well below normal, signaling that California may be headed for a third consecutive dry year.

Bat Removal in Southern California

Abolish Pest Control offers pest and bird control services to residential and commercial customers in Los Angeles, Santa...
www.abolishpestcontrol.com

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When state workers took the second snow measurement of the winter Thursday, they found that statewide the snow's water content was 61% of the average, over many years, for this point in the season. The figure was even lower in the northern Sierra, which feeds the state's biggest reservoirs.

There are still two months left for winter precipitation to catch up. But state officials say it is increasingly unlikely California will get enough to break the drought that is draining reservoirs and prompting increasingly urgent calls for conservation.

Senior state meteorologist Elissa Lynn said La Niña conditions, which led to an exceptionally dry spring last year, may be redeveloping.

"There's not a lot of indications the rest of the year will be normal, and even if it were, we'd still wind up below average for the northern Sierra," she said.

Water storage in California's major reservoirs is about 60% of average for this date, while statewide precipitation is 70% of the norm.

The picture is brightest in the southern Sierra -- an important source of water for Los Angeles -- where precipitation is almost normal. But even there, snowpack -- measured as the snow's water content -- is 68% of average.

Lynn said that overall, hydrological conditions are about the same in the state as they were during the last major drought, from 1987 to 1992.

Court-ordered, environmental restrictions on pumping from the Sacramento-San Joaquin River Delta are adding to water supply worries.

"It's imperative for Californians to conserve water immediately at home and in their businesses," state water resources director Lester Snow said in a statement.

Southern California water managers have warned there is an increasing chance that rationing will be imposed this summer.

bettina.boxall@latimes.com

EXHIBIT C - 6

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Chapter 4 California Water Today

About this Chapter

Chapter 4 California Water Today describes California's diverse communities and environment and the impediments that challenge us in meeting all our water demands. Meanwhile, we are witnessing the effects of climate change—on hydrology (snowpack, river flows), storm intensity, temperature, winds, and sea levels. This chapter discusses how California's policy-makers and water communities are finding ways to integrate planning and water management, promote stewardship and sustainable practices, build partnerships, enact legislation, and secure funding. Finally, this chapter explains the many facets of California's water rights, usage, and allocation.

- A State of Diversity
- Land Use and Development Patterns
- Water Conditions
- Challenges
- Responses and Opportunities

A State of Diversity

California is often recognized as a land of extremes and diversity in cultures, ecosystems, geography, and water resources. However, "variable" would be a more accurate term to describe its water resources. Precipitation, which is the primary source of California's water supplies, varies from place to place, season to season, and year to year. Although most of the state's snow and rain fall in the mountains in the north and eastern parts of the state, most of its water is used in the valleys and coastal plains. In addition, the state's ecosystem, agricultural, and urban water users have variable needs for the quantity, quality, timing, and place of use. The water system faces both the threat of too little water to meet needs during droughts and too much water during floods.

Given this variability, California's large (State/federal) and small (local/regional) projects and programs work together to make water available at the right places and times and to move floodwaters. In the past, this system has allowed California to meet most of its agricultural and urban water management objectives and flood management objectives in most years (Figure 4-1 Map of California with major rivers and facilities).

PLACEHOLDER Figure 4-1 Map of California with major rivers and facilities

Generally, during a single dry year or two, surface water and groundwater storage can supply most water deliveries, but also can result in critically low water reserves. Often, ecosystems and agriculture face more significant reductions in available water than the urban areas. Greater reliance on groundwater during dry years results in high costs for many users. At the same time, water users who have already increased efficiency may find it more challenging to achieve additional water use reductions during droughts. Longer droughts can also create numerous problems, including extreme fire danger, economic harm to urban and rural communities, loss of crops, and the potential for species collapse and degraded water quality in some regions.

The 2007-2008 drought significantly damaged California's economy. Agricultural crops were plowed under, housing and business projects were delayed, and regional water authorities

instituted mandatory water rationing of reliable water supplies. Due to California's water shortages, thousands of jobs were lost and construction projects were on hold because some water supplies could not be guaranteed. In addition, drought conditions created a situation of extreme fire danger, compounding the damage caused by the worst fire season in the state's history.

Californians also face the risk of extensive property damage and loss of life when too much water overwhelms the system's capacity and floods cities and farmlands.

As we develop and improve water delivery systems, we must also preserve and protect our watersheds and maintain healthy ecosystems. We rely on our watersheds, or drainage basins, to provide clean and adequate surface water and groundwater. Their health is essential to California's resources and economic future. California's public agencies must manage these public trust resources for generations to come.

[two-page spread of Watershed, Ecosystem, Climate and Industry, People, Social Setting with figure]

Watersheds, Ecosystem, Hydrology

A thousand miles separate California's northwest and southeast corners, making it the third largest state in the nation. Its diverse ecosystems, geography, and hydrology are unmatched by any state. Within California and not far from each other are the highest (Mount Whitney) and lowest (Death Valley) points in the contiguous United States. Annual rainfall ranges from more than 140 inches in northwestern California to less than 4 inches in the southeastern part (DWR 2003 Bulletin 118).

Precipitation in California varies widely—from place to place, from season to season, and from year to year. Wet years can bring the threat of floods; drought years put pressure on available supplies. Most precipitation and runoff occur in the northern part of the state. Snowmelt and rain falling in the mountains flow into creeks, streams, and rivers. As flows make their way into the valleys, much of the water percolates into the ground. Surface water and groundwater are inextricably linked in the hydrologic cycle. The vast majority of California's accessible groundwater is stored in alluvial groundwater basins which cover nearly 40 percent of the geographic area of the state (DWR 2003 Bulletin 118). Groundwater supplies contribute water used for beneficial purposes.

California's ecosystems, from mountain watersheds to coastal beaches to inland deserts, have been called the state's natural infrastructure, supporting its population and economic growth. Healthy watersheds support healthy riparian and wetland habitat. Diverse landforms preserve unusual species like giant redwoods and provide homes for hundreds of species of birds, mammals, and reptiles. The state's varied environment supports an estimated 5,000 native flora species—more than one-third are unique to California—and 1,000 introduced species.

Since the 1800s, California's ecosystems have experienced aquatic and riparian habitat degradation and declines in freshwater biodiversity. Hydraulic mining and gold extraction in the 1800s, dam construction and operation, pollution, flood control, urbanization, and introduction of non-native species have all contributed to a decline in the state's watersheds, wetlands, and the health of its ecosystems. Flows on many rivers and streams currently do not resemble natural hydrographs—a contributing factor to impaired ecosystem function as evidenced by the reduction and destruction of native species and habitats, adverse impacts on commercial fisheries, and degraded water quality.

At the heart of our state is the Sacramento-San Joaquin River Delta (the Delta). It is an ecosystem, a water supply, and a place that is indispensable to modern California. But today, it is in crisis: its ecosystem is declining, with many fish populations at record lows; water supplies from the Delta are not reliable; poor Delta water quality makes it difficult and expensive to meet drinking water standards; and Delta levee failures threaten agricultural, urban, and environmental uses.

Economy and Population

California has the largest and most diverse economy in the nation with a gross state product of more than a trillion dollars, 13.5 percent of the United States total. Worldwide, it ranks among the top 10 economies. California's economy is highly diversified—a mix of long-established industries such as agriculture and mineral extraction and emerging industries such as biotechnology, telecommunications, and computer technology.

California's unique geography and Mediterranean climate have allowed the state to become one of the most productive agricultural regions in the world. The Sierra Nevada that lines the eastern edge of the state captures and stores winter precipitation for summer irrigation in the Central Valley. This water, combined with the Mediterranean climate, permits the growing of a great number of crops. California produces over 250 different crops and leads the nation in production of 75 commodities. California is the sole producer of 12 different commodities including almonds, artichokes, dates, figs, raisins, kiwifruit, olives, persimmons, pistachios, prunes, and walnuts. Most of this production would not be possible without irrigation.

California's natural beauty has helped make California the No. 1 travel destination in the United States. In addition to world-renowned beaches and rivers, the state's wetlands and wildlife refuges provide bird-watching and hunting activities that contribute hundreds of millions of dollars annually to the state's economy. (Figure 4-2 Share of state employment and output in 2006).

PLACEHOLDER Figure 4-2 Share of state employment and output in 2006

soi: pie charts in LAO 2006. Economy

Since Water Plan Update 2005, California's economy has been on a roller coaster. In mid-2006, median home prices hit an all-time high (LAO 2006). In 2007, the real estate bubble began to collapse. Home sales dropped, inventories rose, and the time needed to sell a home lengthened. The median price of existing single-family homes sold in July 2008 was 40-percent below that of July 2007. The beleaguered housing market resulted in a 0.5-percent drop in employment statewide. from July 2007 to July 2008, (DOF Sep 2008). [update through mid-2009]

Nonetheless, California's population continues to grow. It increased from 30 million in 1990 to 36.7 million in 2005, and is estimated to reach 59.5 million by 2050. (Figure 4-3 California population 1960-2050)

PLACEHOLDER Figure 4-3 California population, 1960-2050

[Update projections of population trends—how much and where]

Land Use and Development Patterns

California State government has typically played a limited or indirect role in land use planning (see Box 4-1). State law require State policies, to the extent they exist for land use, to be expressed and “enforced” through local general plans and land use regulations. Local land use planning and decisions to provide housing and jobs for a projected population of nearly 60 million people by 2050—an increase of nearly xx million from 2009—will determine the rate and level of water use.

Box 4-1 Land Use Jurisdiction

Cities and counties have the primary jurisdiction over land use and planning and regulation. Their authority derives from the State and its constitutional powers to regulate land use to protect the public health, safety, and welfare. Also, several statutes specifically authorize the preparation of local general plans and specific plans. The Governor’s Office of Planning and Research provides advisory guidance in the preparation of the State’s General Plan Guidelines that assist local governments in land use planning and management.

State and regional agencies play a limited role in local land use planning and regulation, for example:

- The California Coastal Commission regulates land use planning and development in the coastal zone, together with local agencies (cities and counties).
- The California Energy Commission has exclusive permitting authority for thermal powerplants 50 megawatts or greater and serves as a lead agency under the California Environmental Quality Act for projects within its jurisdiction.
- Three regional land use agencies have regulatory responsibilities: San Francisco Bay Conservation and Development Commission, the Coastal Commission and the Tahoe Regional Planning Agency. The regional Delta Protection Agency does not have permitting or regulatory authority.
- Regional Councils of Government (COGs) serve as metropolitan planning organizations for federal transportation planning and funding purposes although they differ from region to region in organization and regional effectiveness; COGs prepare regional growth plans to meet regional housing and transportation demand.

Local planning varies in quality throughout the state. Land use patterns are changing in many regions from a post-World War II supply of single-family homes in suburban locations relying primarily on the automobile for transportation (referred to as traditional land use pattern). Private and public investment has supported this pattern of development which often encourages conversion of agricultural and open space lands to urban uses. Local government and private sector decisions on the placement of offices, industrial sites, and retail centers were driven by a combination of workforce availability and State tax policy, which reinforce this pattern of development.

A different model is emerging—one that is city-centered, transit dependent, and relies more heavily on mixed use development. Recent investment and State policies are tilting local land use development decisions toward this model, which can better sustain land and resource uses. The model is being implemented in projects throughout the state. Landscaping, watershed management, and floodplains are playing key roles in this transition.

The draft report of the Land Use Subcommittee of the Climate Action Team (LUSCAT 2008) to the California Air Resources Board recognizes that traditional land use patterns consume more water and increase surface runoff relative to more compact and sustainable development. The LUSCAT report recommends that agricultural production be directed toward areas with good soils, mild climate, and available water. When prime and productive farmlands are converted to urban development, agriculture may be displaced to other locations, which could impact water and other resource uses.

Traditional large-lot urban development landscaped with non-indigenous plants creates high water demand for landscaping. As urban development occurs in hotter regions of the state, this pattern of land use and landscaping is projected to increase water use to about 80 percent of total residential water demand. More compact, mixed use urban development reduces landscaping-related water demand by minimizing front and back yards and their associated landscape water demands.

Watershed management used by land use planners is a broad-based method for resolving a specific water issue by linking land use and water resources within a drainage basin (see watershed management in Volume 2 Resource Management Strategies). Although it comprises a relatively small portion of most watersheds, impervious surfaces such as roads, buildings and parking lots result in more rapid and larger amounts of surface runoff. This change in runoff can alter streamflow and watershed hydrology, reduce groundwater recharge, increase stream sedimentation, and increase the need for infrastructure to control storm runoff. Integrating ecosystem functions as part of the rural and urban development can avoid conflicts with water resources. (see land use planning and management, recharge area protection, and urban runoff management in Volume 2 Resource Management Strategies.)

When urban development is located on floodplains, not only are the functions of the floodplain diminished but people and structures are at risk. At the same time climate change may worsen the state's flood risk by producing higher peak flows and a shift toward more intense winter precipitation. Among other effects, climate change will impact our levee system. More than a half-million Californians live behind levees now, with populations continuing to grow. Across the nation and the world, we have seen levee protection fail. Traditional urban development may expose larger numbers of people and structures to flood hazards. By focusing development in established urban areas and avoiding more development on the floodplains, risk can be reduced (see flood risk management in Volume 2 Resource Management Strategies)

Water Conditions

A survey of California's water scene yields an assortment of existing crises. For example, the Sacramento-San Joaquin River Delta (the Delta), the hub of the state's water supply and delivery system and a crossroads of other critical infrastructure, faces serious ecosystem problems and substantial seismic risk that threaten water supply reliability and quality. Many groundwater basins suffer from overdraft and pollution. The Colorado River, an important source of water for Southern California, is weathering a historic drought that has again brought into question the hydrology used for the allocation of water among the seven states that share it. Throughout California, flood risk grows as levees age and more people live and work in floodplains.

The exact conditions of future climate change remain uncertain, but there is no doubt that we are already seeing climate change effects. Analysis of paleoclimatic data (such as tree-ring reconstructions of streamflow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the West, including a pattern of recurring and

extended droughts. The average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose 7 inches along California's coast. A disturbing pattern has also emerged in flood patterns. During the last 50 years, peak natural flows have increased on many of the state's rivers. At the other extreme, many Southern California cities have experienced their lowest recorded annual precipitation twice within the past decade. In a span of only two years, Los Angeles experienced both its driest and wettest years on record.

Environmental Water

California has lost more than 90 percent of the wetlands and riparian forests that existed before the Gold Rush. Successful restoration of aquatic, riparian, and floodplain species and communities ordinarily depends upon at least partial restoration of physical processes that are driven by water. These processes include the flooding of floodplains, the natural patterns of erosion and deposition of sediment, the balance between infiltrated water and runoff, and substantial seasonal variation in stream flow. Another huge barrier to ecosystem restoration displacement of native species by exotics—results largely from the diminution of these same physical processes.

As an example, nearly all California waterways are controlled to reduce the natural seasonal variation in flow. Larger rivers are impounded to capture water from winter runoff and spring snowmelt and release it in the dry season. Many naturally intermittent streams have become perennial, often from receipt of urban wastewater discharges or from use as supply and drainage conveyances for irrigation water. The Sacramento-San Joaquin Delta (the Delta) has become more like a year-round freshwater lake than a seasonally brackish estuary. In each case, native species have declined or disappeared. Exotics have become prevalent, often because they are better able to use the greater or more stable summer moisture and flow levels than the drought-adapted natives. (See ecosystem restoration in Volume 2 Resource Management Strategies.)

Droughts change the geographic distribution of hydrologic conditions across the Western landscape. Arid conditions occupied as little as 15 percent of the western United States landscape in 1983 and swelled to as much as 51 percent during the 2002 drought.

The distinction between surface water and groundwater is sometimes difficult to determine. If groundwater levels are above water levels in adjacent streams, the groundwater system will discharge water to the stream, increasing the flow in the stream. When groundwater levels are lower, however, water will leave the stream to recharge the groundwater system. This decreases flow in streams. When groundwater is near the surface it creates wetlands and other similar habitat. Proper stewardship of groundwater is needed to avoid water quality degradation and land subsidence.

Inadequate Streamflows

Although a considerable amount of water is dedicated to maintenance and restoration of aquatic and riparian ecosystems, environmental needs are not always met. Recent studies of the streamflow requirements of aquatic life, mainly represented by salmon, reveal that flows in many California rivers and streams sometimes fall below minimum desirable levels.

These minimum flow levels are called objectives in the scenarios of Chapter 5 Managing an Uncertain Future. Objectives for the major rivers, estuaries, and wetlands of northern and central California are tabulated in Chapter 5, along with the amount of water needed to meet each of them.

Restoration of adequate instream flows, as well as the floodplain functions that depend on flow, is the statewide priority for the California Department of Fish and Game. Thus, DFG looked beyond the list of major water bodies to identify 21 additional streams (Box 4-2 DFG Streamflow Recommendations Developed in 2008) for which flow objectives needed to be established to assure the continued viability of their fish and wildlife resources. DFG developed objectives for those streams and submitted them as flow recommendations to the State Water Resources Control Board (State Water Board) in May 2008. Flows in all 21 streams are believed to fall short of the objectives in at least some seasons and years.

PLACEHOLDER Box 4-2 DFG Streamflow Recommendations Developed in 2008

DFG also developed a list of 22 other streams regarded by State and federal fish and wildlife agencies as high in priority for future instream flow studies (Box 4-3 High-priority List of Streams for Future Instream Flow Studies Developed by DFG). That list was submitted to the State Water Board in August 2008. Again, flows in those streams are thought to be insufficient. The combined list of 43 streams represents a broad cross-section of smaller perennial watercourses in the various regions of the state.

PLACEHOLDER BOX 4-3 High-priority List of Streams for Future Instream Flow Studies Developed by DFG

[Box to be completed]

Water Supply, Uses, Quality

Over the past 50 years, Californians have been able to meet water demands primarily through an extensive network of water storage and conveyance facilities, groundwater development, and more recently, by improving water efficiency.

One of the most significant challenges of the 21st century is adapting California's water management system to climate change. Climate change is already affecting California's water resources. Warmer temperatures, altered patterns of precipitation and runoff, and rising sea levels are increasingly compromising our ability to effectively manage water supplies, floods, and other natural resources.

Significant water supply and water quality challenges persist on the local and regional scale. Although some regions have made great strides in water conservation and efficiency, the state's water consumption has grown along with its population. Many communities in the state are reaching the limits of their supply.

Determining the impacts of climate change, drought, and contaminants that vary throughout the state requires that data about our environment be collected and analyzed in a consistent and comprehensive way. Analysis of past records, current conditions, and trends can help provide a forecast for weather, climate, supply, and flooding variables. Unfortunately, sensors and gauges that measure this information, both offshore and over land, are currently inadequate. California needs better data and analytical tools to produce useful and more integrated information on water quality, environmental objectives, economic and equity issues, surface water and groundwater interaction, and flood protection.

[Update water balance portfolios 1998-2005] Data to be presented in table or figures
--

Water Supply—Surface Water and Groundwater

In California, winter precipitation and spring snowmelt are captured in surface water reservoirs to provide both flood protection and water supply to the state. Reservoir storage also factors into drought assessment

The state's largest surface "reservoir" is the Sierra Nevada snowpack. Climate change will have a critical impact on California water management with a projected reduction in this snowpack. Snowmelt provides an annual average of 15 million acre-feet of water, slowly released from about April to July each year. Much of the state's water infrastructure was designed to capture the slow spring runoff and deliver it during the drier summer and fall months. Based upon historical data and hydroclimatological modeling, the Department of Water Resources (DWR) projects that by 2050 the Sierra snowpack will experience at least a 25 percent reduction from its historical average. The total snowpack also will be reduced by the warmer storms expected to come with climate change that will result in less snowfall at lower elevations. This snowpack loss poses a monumental threat to water supply reliability.

External factors also affect the availability of surface water. Diversions from the Sacramento-San Joaquin River Delta for the State Water Project (SWP) and federal Central Valley Project (CVP) are now greatly restricted due to various factors including federal court actions to protect fish species. This is resulting in initial SWP deliveries of only 15 percent in 2009, the second lowest in the history of the project. The total water year 2008 deliveries for the CVP are estimated at 5.7 million acre-feet. Historically, the CVP supplies annually about 7 million acre-feet of water for agriculture, cities, and the environment.

Future deliveries of SWP water are subject to several areas of uncertainty:

- the recent and significant decline in pelagic organisms in the Delta (open-water fish such as delta smelt and striped bass);
- climate change and sea level rise; and
- the vulnerability of Delta levees to failure due to floods and earthquakes.

During droughts, California has historically depended upon its groundwater. However, many aquifers are contaminated, requiring remediation if they are to be used as water banks. Moreover, groundwater resources will not be immune to climate change; in fact, historical patterns of groundwater recharge may change considerably. Because droughts may be exacerbated by climate change, more efficient groundwater basin management will be necessary to avoid additional overdraft and to take advantage of opportunities to store water underground and eliminate existing overdraft.

In some areas, use of groundwater resources is threatened by high rates of extraction and inadequate recharge, or by contamination of aquifers as a result of land use practices (Box 4-4 Groundwater Overdraft). Management of groundwater resources is more complex than management of surface water resources because groundwater is not visible.

Box 4-4 Groundwater Overdraft

Overdraft is the condition of a groundwater basin in which the amount of water withdrawn by pumping over the long term exceeds the amount of water that recharges the basin. Overdraft is characterized by groundwater levels that decline over a period of years and never fully recover, even in wet years. Overdraft can lead to increased extraction costs, land subsidence, water quality degradation, and environmental impacts. A comprehensive assessment of overdraft in California's groundwater basins has not been conducted since 1980 (DWR 1980). It is estimated that overdraft is between 1 million and 2 million acre-feet annually (DWR 2003 Bulletin 118), but the estimate is only tentative with no current corroborating data.

In some cases the term overdraft has been incorrectly used to describe a short-term decline in groundwater in storage during a drought, or to describe a one-year decline of groundwater in storage. A one-year decrease of the amount of groundwater in storage is an annual change in storage and does not constitute overdraft. During a drought the aquifer is being used as a reservoir, and water is being withdrawn with the expectation that the aquifer will be recharged during a wet season to follow.

Small water systems and private well owners have historically experienced most of the water shortage emergencies during droughts. The majority of drought-related problems experienced by small systems or private well owners result from dependence on unreliable water sources, commonly groundwater in fractured rock or small coastal terrace groundwater basins. Historically, at-risk geographic areas include the foothills of the Sierra Nevada and Coast Ranges, inland Southern California, and the North and Central Coast regions. Most small systems and private wells are located in lightly populated rural areas where opportunities for interconnections with another system, water transfers, or emergency relief are difficult.

Water Use

In 2000, California cities and suburbs used about 8.7 million acre-feet (maf) of water. Californians have increased urban water use efficiency over the past few decades. In some regions of the state, an increase in population has not resulted in a proportionate increase in urban water use.

But California is feeling the effects of dry years in 2007 and 2008 and possibly into 2009. This reduced water supply, combined with a growing population, court-ordered reduction in pumping and regulations to protect Delta fish species, has significantly curtailed water supply availability.

Meanwhile, the state's population growth and greater awareness of environmental water requirements has increased the pressure on California agriculture to use water more efficiently and to make more water available for urban and environmental uses.

California is one of the most productive agricultural regions in the world. Most of its production would not be possible without irrigation. In an average year, California agriculture irrigates 9.6 million acres using roughly 34 million acre-feet of the 43 million acre-feet of water diverted from surface waters or pumped from groundwater.

Reducing agricultural water use is difficult for several reasons. First, California's agricultural water use, when considered on a broad regional scale, is generally very efficient. Individual fields and farms in some regions may have low efficiencies, but water that is not used on one farm or

field is often used on a nearby farm or field. Second, for most crops, production and yield is directly related to crop water use. A decrease in applied water will often directly decrease yield. The key management strategy is to improve water use efficiency without decreasing yield.

In 2008, Governor Schwarzenegger declared a statewide drought and directed State agencies to develop an aggressive conservation plan to reduce per capita urban water use by 20 percent statewide by 2020. Conservation, he said, is one of the key ways to provide water for Californians and to protect and improve the Delta ecosystem.

Water Quality

Changes in temperature and precipitation patterns caused by climate change will affect water quality. Higher water temperatures reduce dissolved oxygen levels, which can have an adverse effect on aquatic life. Where river and lake levels fall, there will be less water for dilution of pollutants. Increased frequency and intensity of rainfall will produce more pollution and sedimentation due to runoff. In addition, more frequent and intense rainfall may overwhelm pollution control facilities that have been designed to handle sewage and storm water runoff under assumptions anchored in historical rainfall patterns.

Changes in the timing of river flows may affect water quality and beneficial uses in many different ways. At one extreme, flood peaks may cause more erosion, resulting in more turbidity and concentrated pulses of pathogens, nutrients, and other pollutants. This will challenge water treatment plant operations to produce safe drinking water. Flooding can also threaten the integrity of water works infrastructure. At the other extreme, lower summer and fall flows may provide less dilution of contaminants. These changes in streamflow timing may require new approaches to manage discharge permitting and nonpoint source pollution. Warmer water will distress many fish species and could require additional cold water reservoir releases. Higher water temperatures will also accelerate certain biological and chemical processes, increasing the growth of algae and microorganisms and the depletion of dissolved oxygen, and worsen the various impacts to water treatment processes. An increase in the frequency and intensity of wildfires will also have a deleterious effect on watersheds, vegetation, runoff, and, in the end, water quality.

Drought periods underscore the inseparability of water supply and water quality. Over-pumping groundwater basins to augment water supplies reduces long-term available water supply, increases pumping costs, and in some areas degrades groundwater quality. In many areas surface water and groundwater are impaired by natural and human-made contaminants that can threaten human health, degrade the natural environment, increase water treatment costs, and effectively reduce the available water supply.

Project Operation and Reoperation

California depends on vast statewide water management systems to provide clean and reliable water supplies, protect lives and property from floods, withstand drought, and sustain environmental values. These water management systems include physical facilities and their operational policies and regulations. Facilities include over 1,200 State, federal, and local reservoirs, as well as canals, treatment plants, and levees. Systems are often interconnected. The operation of one system can depend on the smooth operation of another. The successful operation of the complete system can be vulnerable if any parts fail.

System reoperation is the addition or removal of a structural element or a change in a non-structural element. It is an important element of integrating California's water and flood management systems. California's water resources system includes both physical elements (such

as reservoirs, aquifers, rivers, pumping plants, and canals) and non-physical elements (such as operating rules, land use practices, and environmental regulations). System reoperation provides an opportunity to optimize the operation of other structural and non-structural elements. The key to system reoperation is having a way to integrate and connect individual system elements to illustrate how changes in use of one element can be balanced by changes in the use of other elements. The largest challenge to system reoperation is that all of these elements are owned and operated by independent groups.

Water Governance

Many State agencies are involved in California water management. For example, DWR focuses on water delivery, water supply and flood planning, and infrastructure development. The State Water Boards manage water rights and water quality through regulation. Federal agencies also play a role in California water supply, quality, and flood control. DWR formally recognized the multiple levels of water-related interests and mandates by establishing the Water Plan's Steering Committee, composed of 21 State agencies, and collaborating with federal and other non-State agencies. See more discussion of this cooperation in Chapters 1 Introduction and 3 Companion State Plans.

California Constitution

The California Constitution explicitly prohibits the waste and unreasonable use of the state's water (Art. X, sec 2).

Federal Land Management

The national forests in California were established under the Organic Act of 1897, which states that a primary purpose of the national forests is to "secure favorable flows of water." Of California's 37-plus million acres of forest land, the federal government owns more than 62 percent:

- U.S. Forest Service, 20,166,000 acres (53.7 percent)
- U.S. Bureau of Land Management, 1,650,000 acres (4.4 percent)
- National Park Service, 1,287,000 acres (3.4 percent)
- Other federal entities, 231,000 acres (0.6 percent)

Environmental issues related to resource management on national forests are addressed under the National Environmental Policy Act. (see forest management in Volume 3, Resource Management Strategies)

[Present text regarding federal government management of California lands—Forest Service, Park Service, BLM, etc.]

The U.S. Bureau of Land Management administers more than 15 million acres of public lands in California, about 15 percent of the state's total acreage. Among these lands are 10.66 million acres of National Conservation Area and 3.7 million acres of Wilderness. (see Figure 4-4)

PLACEHOLDER Figure 4-4 U.S. Bureau of Land Management's National Landscape Conservation System on California lands (and other federally managed lands)

Develop text about new federal programs on water management. See also forest management resource management strategy for info

Tribal Water Management

More information will be provided regarding statewide tribal information, etc.

The California Native American Heritage Commission lists 166 tribes in California. Their water needs are as varied as the state's diverse water community. Some lack clean affordable water. Some need water for fisheries, wildlife, agriculture and other cultural practices associated with Tribal lands. See information on Tribes and Tribal water issues in Volume 4 the Reference Guide.

Flood Management

Traditionally, flood management practices focused on reducing flooding and susceptibility to flood damage largely through the physical measures intended to store floodwaters, increase the conveyance capacity of channels, and separate rivers from adjacent populations. In recent years, flood managers have recognized the potential for natural watershed functions and worked to integrate these two methods. Integrated flood management is a comprehensive approach to flood management that considers land and water resources at a watershed scale within the context of integrated regional water management, which aims to maximize the benefits of floodplains, minimize the loss of life and damage to property from flooding, and recognize the benefits to ecosystems from periodic flooding. Integrated flood management does not rely on a single approach to flood management, but instead uses various techniques, including traditional (or structural) flood protection projects, non-structural measures (such as land use practices), and reliance on natural watershed functions, to create an integrated flood management system.

For the purposes of federal flood insurance, the Federal Emergency Management Agency (FEMA) has traditionally used the "100 year" flood event, which refers to the level of floodflows expected at least once in a 100-year period. As California's hydrology changes, what is currently considered a "100-year" flood may strike more often, leaving many communities at greater risk. Moreover, as climate change alters predicted peak flows and precipitation levels, the assumption of "stationarity," which is used in flood-related statistical analyses like the "100-year" flood, becomes dubious. Planners need to factor a new level of safety into the design, operation, and regulation of flood control facilities—such as dams, floodways, bypasses, and levees—as well as the design of local sanitary sewers and storm drains.

Challenges

Californians continue to face a variety of water challenges, and State, federal, and regional agencies and Tribal groups are meeting those challenges by responding in varied ways: convening task forces and advisory committees, establishing partnerships and integrated regional water management programs, creating water bonds and water management systems, conducting research and issuing reports, and promulgating legislation, regulation, and more. (For further discussion, see the Response section that follows.)

The biggest challenge for California water resources management remains making sure that water is in the right place at the right time. This challenge is at its greatest during dry years: when water for the environment is curtailed sharply, less water is available from rainfall for agriculture and greater reliance on groundwater results in higher costs for many users. In the mean time, those who have already increased water use efficiency may find it more challenging to achieve additional water use reductions.

The quality of California water is of particular and growing concern. Various water management actions potentially have water quality impacts. These include transfers, water use efficiency, water recycling, conjunctive use of aquifers, storage and conveyance, Delta operations, crop

idling, and hydroelectric power. Degraded water quality can limit, or make very expensive, some water supply uses or options because the water must be pretreated. Furthermore, water managers increasingly recognize that the water quality of various water supplies needs to be matched with its eventual use and potential treatment.

Ongoing Statewide Concerns

Challenges persist for California water management at statewide, regional, and local levels. Significant statewide challenges that require improved water management are summarized here; a section on specific regional and local challenges follows.

Dry-year period (drought)

California is facing the most significant water crisis in its history. After experiencing two years of drought and the driest spring (2008) in recorded history, water reserves are extremely low. Drought conditions in the Colorado River Basin and a Sierra snowpack that is now dangerously unreliable due to global climate change are leaving many communities throughout California facing mandatory restrictions on water use and/or rising water bills. If the drought continues into next year, the results could be catastrophic for our economy. (Table 4-1 Precipitation at selected locations, July 1 to June 30)

PLACEHOLDER Table 4-1 Precipitation at selected locations, July 1 to June 30

[above table from California Drought, An Update April 2008 Table 1, Page 3]

The water shortage is affecting the state's economy, slowing down development projects and forcing growers to fallow land. For example, farmers in northern San Diego County are stumping avocado trees and pulling out citrus trees due to water shortages. The Westland Water District reports that one-third of the farmland is being fallowed this year, at a loss of at least 500 jobs. The California Department of Food and Agriculture reports that the drought caused a \$260 million loss to the state's agricultural industry this year.

Drought facts:

- For the Northern Sierra, this spring and summer were the driest on record since 1921. In addition, 2007 and 2008 made up the ninth driest two-year period in 88 years of record keeping for the Northern Sierra.
- Statewide precipitation for the six-month period February through July 2008 was 45 percent of average – the fourth driest of 114 years on record.
- State reservoir capacities are at severe lows, with Folsom at 31 percent, Shasta at 34 percent and San Luis at 13 percent.
- By the end of this water year (September 30), Lake Oroville will reach its lowest carryover storage since the drought of 1977.
- With the Delta ecosystem near collapse, court-ordered restrictions on water deliveries from the Delta (2008) have reduced supplies from the state's two largest water systems by 20 to 30 percent.

On June 4, 2008, Governor Schwarzenegger, in recognition of deteriorating statewide water supply conditions, issued an Executive Order declaring a statewide drought. In so doing, he emphasized the urgent need for action to mitigate the impact of drought, including extreme fire danger due to dry conditions, economic harm to urban and rural communities, loss of crops and the potential to degrade water quality in some regions.

California's drought periods could be extended and worsened by climate change. Warming temperatures and changes in rainfall and runoff patterns may exacerbate the frequency and intensity of droughts. Regions that rely heavily upon surface water (rivers, streams, and lakes) could be particularly affected as runoff becomes more variable and more demand is placed on groundwater. Combined with urbanization expanding into wildlands, climate change could further stress the state's forests, making them more vulnerable to pests and disease and changes in species composition. Along with drier soils, forests may experience more frequent and intense fires, resulting in changes in vegetation, and eventually a reduction in the water supply and storage capacity of a healthy forest.

Reservoir Conditions

In December 2008, state reservoirs stood at about 75 percent of average for this time of year. Folsom stands at 45 percent of capacity, with boats being pulled, Shasta 48 percent of capacity, and Lake Oroville, the SWP's reservoir is at 46 percent of capacity. By the end of 2008, Lake Oroville will reach its lowest carryover storage since the drought of 1977. Reservoirs are projected to fall to about 70 percent of the statewide average by the end of the water year. [Update as needed] (http://www.water.ca.gov/drought/docs/120108current_conditions.pdf)

Colorado River Supplies

Prior to 2003, California's annual use of Colorado River water ranged from 4.5 million to 5.2 million acre-feet. Since then, Arizona began full use of its basic apportionment, and Nevada approached full use of its entitlement and surplus allocation. Therefore, California has had to reduce its dependence on Colorado River water to 4.4 million acre-feet in normal years.

The Colorado River Basin has just experienced a record eight-year drought resulting in current reservoir storage throughout the river system reduced to just over 50 percent of total storage capacity.

Floods and Flooding

The need for flood management improvements is more critical now than ever before. Over the years, major storms and flooding have taken many lives, caused significant property losses, and resulted in extensive damage to public infrastructure. However, a combination of recent factors has put public safety and the financial stability of State government at risk. California's flood protection system, comprised of aging infrastructure with major design deficiencies, has been further weakened by deferred maintenance. Escalating development in floodplains has increased the potential for flood damage to homes, businesses, and communities.

Every region of the state faces flood risks. The Central Valley is a floodplain that historically was inundated at regular intervals. Coastal streams can overflow their banks during winter storms. Southern California is vulnerable to infrequent but devastating flooding. Development on alluvial fans faces unpredictable and changing paths of floodflows. Water supplies and our economy are threatened when Delta islands flood, and every part of California is exposed to the financial liability when levees of the Central Valley flood management system fail.

California's population growth presents a major challenge to the State's flood management system. In the Central Valley alone, much of the new development is occurring in areas that are susceptible to flooding. In some cases, land use decisions are based on poor or outdated information regarding the severity of the flood threat. Many flood maps being used by public agencies are decades old and do not reflect the most accurate information regarding potential flooding.

Catastrophic flooding within the Central Valley could equal or exceed the economic, social, and environmental damage caused by Hurricane Katrina in 2005. More than a half-million people live behind levees in California now, with populations continuing to grow. Further, State government liability in the aftermath of *Paterno v. State of California*, which held the state liable for flood-related damages caused by a levee failure, worsens the financial consequences of flooding.

Due to lack of funding and environmental concerns, both the State and local agencies in all regions of California have found it increasingly difficult to carry out adequate maintenance programs using established methods. Environmental regulations require that local and State agencies develop new approaches for to deal with the backlog of maintenance activities. Time-consuming environmental permitting processes can delay prompt maintenance of critical public safety infrastructure.

Climate change may worsen the state's flood risk by producing higher peak flows and a shift toward more intense winter precipitation. Rising snowlines caused by climate change will allow more of the Sierra Nevada watersheds to contribute to peak storm runoff. High-frequency flood events (e.g., 10-year floods) in particular may increase with a changing climate. Along with changes in the amount of the snowpack and accelerated snowmelt, scientists project greater storm intensity, resulting in more direct runoff and flooding, which is exacerbated in urban areas by impervious land surfaces such as asphalt and concrete. Changes in watershed vegetation and soil moisture conditions will likewise change runoff and recharge patterns. As streamflows and velocities change, erosion patterns will also change, altering channel shapes and depths, possibly increasing sedimentation behind dams, and affecting habitat and water quality. With potential increases in the frequency and intensity of wildland fires due to climate change, there is in turn a potential for more floods following fire, which increases sediment loads and water quality.

Environment/Ecosystem

Reliable water supplies and resilient flood protection require ecosystem stewardship and sustainability to be a primary goal and fundamental activity for water resources management. Building adaptive capacity and system sustainability requires water and flood management projects to incorporate restoration and maintenance of biological diversity and natural ecosystem processes.¹ Water supply and flood management systems are significantly more sustainable and economical when they preserve, enhance, and restore ecosystem functions. Planning and designing for ecosystem functions will help maintain resilient systems that can recover from severe natural disruptions and, in fact, allow quicker recovery with lower economic costs. Moreover, by reducing existing, non-climate stressors on the environment, ecosystems will have more capacity to adapt to new stressors and uncertainties brought by climate change.

Climate Change

California lies within multiple climate zones. Therefore, each region of the state will experience unique impacts from climate change. For some regions, improving watershed health will be an important concern. Other areas will be affected by saltwater intrusion. In particular, regions that depend heavily on water imports from other regions will need vigilant strategies to cope with greater uncertainty in their future supply. Because economic and environmental effects depend on

¹ *Adaptive Capacity* is the ability of systems, organizations, and individuals to (1) adjust to actual or potential adverse changes and events, (2) take advantage of existing and emerging opportunities that support essential functions or relationships, and/or (3) cope with adverse consequences, mitigate damages, and recover from system failures. It is an indicator of how well a system could or would adjust and/or recover to external changes or large perturbations (e.g., severe floods or droughts).

Resilience: Improve the capacity of resources and natural systems to return to prior conditions after disturbance.

location, adaptation strategies must be regionally suited. (Figure 4-5 Climate Change effects in California)

The impact of climate change on hydrology and water resources management will be significant. The trends of the last century will likely intensify in this century. While the existing system has some capacity to cope with climate variability, extreme weather events, increased droughts and floods, and scarcity of water in some parts of the state will stretch that capacity to meet future needs. The water management community has invested in, and now depends upon, a system that relied on historical hydrology as a guide to the future for water supply and flood protection. However, this historical hydrology may have limited utility as a future planning tool.

Climate change may also impact water demand. Warmer temperatures may increase evapotranspiration rates and extend growing seasons, thereby increasing the amount of water that is needed for the irrigation of certain crops, urban landscaping, and environmental needs. Warmer temperatures will also increase evaporation from surface reservoirs. Reduced soil moisture and surface flow will disproportionately affect the environment and other water users that rely only on annual rainfall such as agriculture, livestock grazing on non-irrigated rangeland, and recreation.

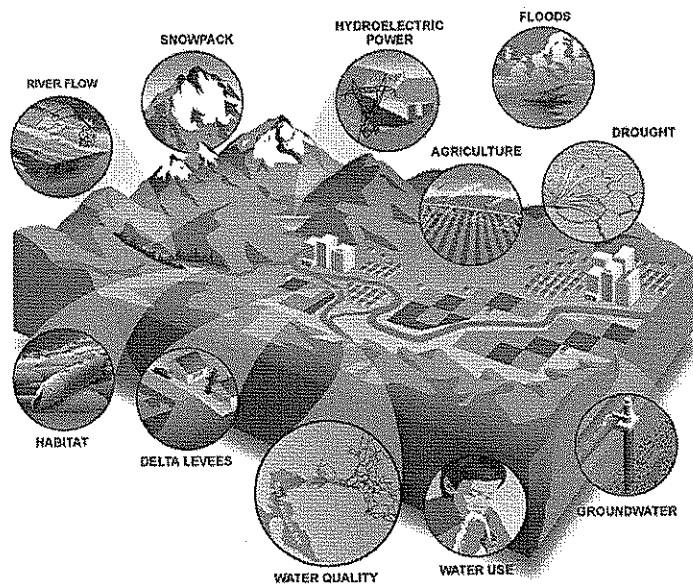


Figure 4-5 Climate Change effects in California

Caption: Climate change is already impacting California's water resources. In the future, warmer temperatures, different patterns of precipitation and runoff, and rising sea levels will profoundly affect the ability to manage water supplies and other natural resources. Adapting California's water management systems to climate change presents one of the most significant challenges for this century. (DWR graphic from <http://www.water.ca.gov/climatechange/>)

Sea Level Rise

Of the many impacts of climate change, sea level rise presents the most challenging problem for which to plan because of the great uncertainty around ice sheet dynamics, as well as the potentially large impacts. Sea level rise also depends on local and regional factors such as land movement and atmospheric conditions. Much of the Sacramento-San Joaquin Delta, the hub of

California's State and federal water projects, consists of islands that are below sea level and protected by levees. Rising sea levels will increase pressure on fragile levees and will pose a significant threat to water quality. Local and regional investments in water and flood management infrastructure, as well as wetland and aquatic restoration projects, are also vulnerable to rising seas.

Recent peer-reviewed studies estimate a rise of between 7 and 55 inches by 2100 along California's coast. The implications of a 7-inch rise are dramatically different from a rise at the high end of the range. However, even a rise at the lower end of this range poses an increased risk of storm surge and flooding for California's coastal residents and infrastructure, including many of the state's wastewater treatment plants. Moreover, for Californians living in the Delta, or the millions who rely on drinking water or agriculture irrigated by Delta exports, the most critical impact of rising seas may be additional pressure on an already vulnerable levee system, which protects numerous islands that are currently below sea level and sinking. Catastrophic levee failures have great potential to inundate Delta communities and interrupt water supplies throughout the state.

Even without levee failures, Delta water supplies and aquatic habitat will be affected due to saltwater intrusion. An increase in the penetration of seawater into the Delta will further degrade drinking and agricultural water quality and alter ecosystem conditions. With the current water management system, more freshwater releases from upstream reservoirs will be required to repel the sea to maintain salinity levels for municipal, industrial, and agricultural uses. Alternatively, changes in upstream and in-Delta diversions, exports from the Delta, and conveyance through or around the Delta may be needed. Sea level rise may also affect drinking water supplies for coastal communities due to the intrusion of seawater into overdrafted coastal aquifers.

Water and Energy

Water and energy are two resources that are inherently linked, especially in California. Although water generates approximately 33 percent of the state's electricity, according to the California Energy Commission (CEC), water-related energy use in California consumes approximately 20 percent of the state's electricity, and 30 percent of the state's non-power plant natural gas (i.e. natural gas not used in turn to produce electricity). Water-related energy use includes pumping, treating, and distributing potable water, groundwater pumping, desalination, heating and cooling processes, pressurization, and the collection, treatment, recycling, and discharge of wastewater. Some water systems are net energy producers, for example, the federal CVP as well as San Francisco's Hetch Hetchy and the Los Angeles Aqueduct water systems. Others are net energy consumers, for example, Metropolitan Water District's Colorado River Aqueduct and the SWP. In fact, the SWP is the single largest user of electricity in the state, although the project produces about half of the energy it consumes.

Climate change may reduce the reliability of California's hydroelectric operations, which, according to the California Climate Action Registry and the California Air Resources Board, is the state's largest source of greenhouse gas emission-free energy. Changes in the timing of inflows to reservoirs may exceed generation capacity, forcing water releases over spillways and resulting in lost hydropower. Higher snow elevation, decreased snowpack, and early melting may result in less water available for power generation during hot summer months when energy demand is highest. The impact is compounded overall by the anticipated increased energy consumption due to higher temperatures and greater water demands in summer when less water is available. These conditions may in turn force greater dependency on fossil fuel generation that produces greenhouse gases.

See: federal energy report <http://www.sandia.gov/energy-water/docs/121-RptToCongress-EWwEIAcomments-FINAL.pdf>

Contamination of Surface Water and Groundwater

Water bodies may be impaired from various sources. For example, discharges from municipal and industrial facilities can impact water bodies, but compared to other sources, pollution from these point source discharges have been largely controlled. Discharges from agricultural lands, including irrigation return flow, flows from tile drains, and stormwater runoff, can affect water quality by transporting pollutants, including pesticides, sediment, nutrients, salts, pathogens, and heavy metals, from cultivated fields into surface waters. Groundwater, in turn, has been affected by pesticide, nitrate, and salt contamination. Stormwater flows over urban landscapes, as well as dry-weather flows from urban areas, also constitute a significant source of pollutants that contribute to water quality degradation in the State. These flows carry pollutants downstream, which often end up on the beaches and in coastal waters. (*State Water Boards Strategic Plan Update 09-02-08*)

Delta Vulnerabilities

The evidence is overwhelming: The Delta ecosystem is in deep trouble and the problems are increasing. Invasive species, water pumping facilities, and urban and agricultural pollution are degrading water quality and threatening multiple fish species with extinction. Encroaching urban development in the Delta is reducing wildlife habitat today and foreclosing opportunities to improve the ecosystem—and the Delta water conveyance system—in the future. The levee system has eliminated the dynamic land-water interfaces crucial for aquatic and riparian plants and animals.

The California Delta is the heart of our state, at once a water supply, an ecosystem, and a place that is indispensable to modern California. Improving the Delta ecosystem is a legally required condition of improving the water delivery system for Californians.

Overall, climate change will exacerbate many of the Delta's most difficult challenges. The seasonal mismatch between the demand for and availability of water will widen. The conditions under which the ecosystem will need to be managed will become more uncertain.

Deferred Maintenance and Aging Infrastructure

California's facilities require costly maintenance and rehabilitation as they age. In addition, they face many challenges: meeting the needs of a growing population and changing water use patterns, withstanding catastrophic natural events like earthquakes and floods, and adapting to the changes that accompany global climate change. Bottlenecks develop when physical and operational changes of existing water management systems do not keep pace with changes in capacity, regulations, and new environmental data.

Aging facilities risk public safety, water supply reliability, and water quality. The SWP is more than 30 years old; the federal CVP is more than 50 years old. Some local facilities were constructed nearly 100 years ago. Current infrastructure disrepair, outages, and failures and the degradation of local water delivery systems are in part the result of years of underinvestment in preventive maintenance, repair, and rehabilitation. The Public Policy Institute of California estimated the state's water supply and wastewater treatment systems maintenance backlog to be about \$40 billion (Dowall and Whittington 2003).

Current water resources infrastructure is already strained to meet existing, competing objectives for water supply, flood management, environmental protection, water quality, hydropower, and

recreation. In a changing climate, the conflicts between competing interests will be even greater as supplies become less reliable. As prediction of climate change impacts will never be perfect, flexibility must be a fundamental tactic, especially with respect to water system operations. The improved performance of existing water infrastructure cannot be achieved by any single agency, and will require the explicit cooperation of many.

Levees

DWR's document "Flood Warnings: Responding to California's Flood Crisis," submitted to the Legislature in January 2005 identified major deficiencies and challenges to the flood control system in the California Central Valley. Other levee concerns included:

- A magnitude 6.5 earthquake in the Sacramento Delta region would likely result in a catastrophic levee failure that threatens the drinking water supply for 24 million citizens in California.
- A majority of California's agriculture industry is dependent on water from the Sacramento Delta and a catastrophic levee failure would result in cessation of pumping capacity for as much as 18 months, causing \$30 billion to \$40 billion in economic damage to the state.
- A catastrophic levee failure would threaten tens of thousands of homes and major transportation corridors.
- A catastrophic levee failure would result in significant environmental impacts including the permanent loss of critical habitat for endangered species around the Sacramento Delta.

The urgency became more pronounced as the world watched the Katrina disaster hit New Orleans in August 2005.

Following revelations and other findings, Governor Schwarzenegger in 2006 declared a State of Emergency for California's Levee System.

The U.S. Army Corps of Engineers, in cooperation with the California Department of Water Resources, has identified 24 critical erosion sites on project levees in the Sacramento and San Joaquin River Flood Control systems that need repair before a catastrophic levee failure occurs.

Catastrophic Events and Emergency Response

The Sacramento-San Joaquin River Delta faces extraordinary risks in both the near term and the long term. Earthquakes, river floods, "sunny-day" levee failures, and continuing subsidence and sea level rise all pose substantial risks to people, property, and infrastructure. Yet emergency response is divided among many different entities—at least 14 fire districts and 14 sheriff and police departments. During high water, many islands direct their own flood fights, although some uniformity is provided by DWR. U.S. Army Corps of Engineers have oversight authority only for those levees that meet its standards.

Traveling Delta roads to repair levees can be difficult, especially during high water when response crews must cross bridges or use auto ferries. Island living presents challenges for individual family emergency plans when children attend schools on islands separate from their homes.

Effective emergency preparedness and other actions are needed to reduce risks to people, property, and state interests in the Delta. (*Delta Vision Strategic Plan and S&T report*)

In other areas of the state, catastrophic failure of dams could expose people and property to severe and swift flooding. Dams are designed and constructed to meet stringent safety standards and are subject to periodic inspection by DWR's Division of Dam Safety and evacuation procedures are incorporated into hazard mitigation plans of local jurisdictions. Maintenance of these structures is needed to maintain their integrity and periodic review of potential structural risks associated with catastrophic events (such as earthquakes and floods) are needed to assure that these structures can withstand future threats.

Data Gathering and Sharing

A growing population, our stressed ecosystems, and California's economic future and its reliance on agriculture, industry, and technology all compete for the state's limited water resources. At the same time, uncertainty in climate change, energy sectors, and other drivers of future change require that we develop effective management strategies based on better science and technology. Data analysis, modeling, and other scientific tools are required to create and improve strategies that can maximize water availability and water quality.

Government reports have concluded that a key role for science and technology is to expand options for management and use of our water resources. Scientists and managers must employ a systems approach to fresh water withdrawals, use, and disposal that considers physical, chemical, biological, social, behavioral, and cultural aspects. Water law, economic incentives, public awareness, public education, and sensitivity to differences in value systems are cornerstones of effective water resource management. These require greater analytical data and tools than are now available to water managers (OSTP 2007).

Disadvantaged Communities

Californians from disadvantaged, small, and underrepresented communities continue to face economic and environmental inequities with respect to water supply, participation in water policy and management decisions, and access to State funding for water projects. All Californians do not have equal opportunity or equal access to State planning processes, programs, and funding for water allocation, improving water quality, and determining how to mitigate potential adverse impacts to communities associated with proposed water programs and projects. (See Volume 4 Reference Guide article "Environmental Justice in California Government.")

Most water, wastewater, and flood projects are not developed for these communities; yet they can impact them. Even projects that convey "general" public benefit may not benefit environmental justice or disadvantaged communities proportionally. For example, conservation programs that are heavily dependent upon toilet and washing machine rebates will have greater penetration in middle and upper class communities than they will on poorer communities that purchase less frequently and cannot afford the initial outlay for the fixture.

Funding

At a time when flood control maintenance and improvement efforts should be increased, investment in flood management has instead been reduced at local government levels. Local governments in California have been severely restricted by two constitutional amendments regarding the use of property tax or benefit assessments to generate revenue (Propositions 13 and 218). The federal government also reduced the maximum that it would pay for the cost of new flood management projects, from 75 percent to 65 percent of the total project cost.

While recent bond measures like Propositions 84 and 1E will provide a down payment for improving California's water and flood systems, climate change presents an ongoing risk that

requires a long-term commitment of funding that is properly matched to anticipated expenditures, beneficiaries, and responsible parties.

Regional and Local Challenges

Text to summarize regional challenges are discussed in chapters Volume 3 Regional Reports.

Responses and Opportunities

Stewardship and Sustaining Natural Resources

California water resource management is placing more emphasis on integrated water management. Update 2005 promoted integrated regional water management to ensure sustainable water uses with and emphasis on environmental stewardship. Proposition 84 (see discussion in Statewide and Interregional) authorized the appropriation of \$1 billion to DWR to foster regional water management. Grants are awarded for projects that provide more than one benefit. Among those benefits can be water conservation and water use efficiency; creation and enhancement of wetlands and the acquisition, protection, and restoration of open space and watershed lands; watershed protection and management; and ecosystem and fisheries restoration and protection.

This Water Plan reflects climate change adaptation strategies of “Managing an Uncertain Future.” (DWR 2008) Strategy 5 calls for enhancing and sustaining ecosystems.

DWR Watershed and Resource Restoration Programs

The DWR Watershed Program works with locally led stewardship efforts to integrate the needs of communities, urban and rural, with resource management that sustains watershed ecology. The program strives to inform and educate people about their watersheds and the benefits and values that those watersheds provide. DWR’s watershed program promotes managing water resources to protect, restore, and enhance the natural and human environments in California. DWR uses an investment strategy to guide its watershed programs. (See Box 4-5)

PLACEHOLDER Box 4-5 Investing in Watersheds

The California Watershed Indicators Council was formed to begin developing a framework for assessing the health of watersheds throughout the state.

Conservation: 20 percent Reduction by 2020

On February 28, 2008, Governor Schwarzenegger wrote to the leadership of the California State Senate outlining key elements of a comprehensive solution to problems in the Sacramento-San Joaquin Delta. The first element on the Governor's list was “a plan to achieve a 20 percent reduction in per capita water use statewide by 2020.”

In March 2008, the 20x2020 Agency Team was convened to develop a plan to meet the goal set by the Governor. The team established a new Web site to help keep the public informed on its progress and upcoming opportunities for public interaction, http://www.swrcb.ca.gov/water_issues/hot_topics/20x2020/index.shtml.

DWR is aggressively moving forward with water conservation programs to help meet that goal. Some of the department’s conservation efforts include:

- Encouraging widespread implementation of cost-effective conservation programs by urban and agricultural water suppliers.
- Helping water agencies develop water shortage contingency plans so they are prepared for future dry conditions or supply interruptions.
- Implementing programs to conserve water in landscaping and helping irrigation districts, farmers, and managers of large urban landscapes stretch their available water by providing daily information on plant water needs.

According to the California Energy Commission, end use of water is the most energy intensive portion of the water use cycle in California. Measures to increase water use efficiency and reuse will reduce electricity demand from the water sector which in turn reduces greenhouse gas emissions.

Regional/Local Planning and Management

Water managers have learned that even though imported supplies will continue to be important, they cannot be relied on to satisfy growing water demands. In the 1980s concerns for protecting the environment were manifested in strong new laws and regulations. These regulations affected the ability of interregional water projects to deliver water. The resulting uncertainty also contributed to hesitancy to invest in additional facilities for these interbasin systems and forced water agencies to make difficult decisions about how to provide a reliable water supply.

Local and regional agencies are looking more intensely at local water management options such as water conservation and recycling measures and groundwater storage. Water managers are learning that planning for sustainable water use must address multiple resource objectives—water use efficiency, water quality protection, and environmental stewardship—and consider broad needs—economic growth, environmental quality, and social equity.

Throughout California, stakeholders are working together to develop regional and watershed programs that cover multiple jurisdictions and provide multiple resource benefits. In several regions, agencies formed partnerships to combine capabilities and share costs. Integrated regional water management has taken a foothold and is on the rise. (See Box 4-6 Examples of Ongoing Regional Water Planning Efforts.)

PLACEHOLDER Box 4-6 Examples of Ongoing Regional Water Planning Efforts

Coordination of Water and Land Use Planning

Several recently adopted and ongoing General Plan updates (e.g., Marin County, Solano County) have included local Climate Action Plans that establish local policies to reduce GHG emissions and adapt to the potential effects of climate change. The areas of local government influence and authority for reducing GHG emissions include community energy use, waste reduction and recycling, water and wastewater systems, transportation, and site and building design.

Local land use planning and water supply are coordinated through a patchwork of existing state laws and policies. Regional water wholesalers such as Metropolitan Water District and San Diego County Water Authority base their water supply plans on regional growth projections developed by regional planning agencies. The effectiveness of existing programs and regulations in steering development towards areas with existing reliable water supplies, and away from areas where new water supplies must be developed, has not been comprehensively assessed.

Urban Water Management Plans (UWMPs) must be prepared by large water purveyors (3,000 acre-feet/year or 300 customers), must evaluate water supplies and demands over a 20-year period, and must be updated every 5 years (Water Code Sec. 10610 et seq.).

Senate Bills 610 and 221 (statutes of 2001) were enacted to improve the coordination between land use planning and development and available long-term water supplies. These laws require assessment and verification, respectively, of water supply reliability prior to approval of specified large land use projects. SB 610 applies during the CEQA process, and SB 221 applies to subdivision approvals. Both laws require a demonstration of sufficient reliable 20-year water supplies to serve both the proposed project and other water users relying on the same water supplies, during normal, single dry, and multiple dry years. They require the water agencies responsible for water resource planning to work with the local land use agencies that often have little control over water supplies. Increased coordination, particularly at a regional level, such as occurred within the SANDAG region in 2003-2004 in conjunction with the San Diego County Water Authority (SDCWA), demonstrates the advantages and benefits of proactive growth management planning and water supply planning to support projected long-term regional population growth.

Integrated Regional Water Management and Planning

Integrated Regional Water Management (IRWM) provides a critical framework for actions to address the uncertainties presented by climate change, as well as other risks to California's water future. IRWM is a collaborative process that evaluates water resources management over an entire watershed or region, determines current and future water demands for many diverse uses, and then produces a comprehensive, adaptive plan for sustainable water uses in that region. Moreover, if appropriately developed and implemented, IRWM plans - in combination with other regional planning efforts for transportation and land use - can serve as the basis for broader community and regional plans for climate change adaptation beyond water resources.

Water agencies in many regions are successfully employing a mix of resource management strategies with State and federal incentives. Experience is showing that these regional efforts can better resolve regional needs, especially when paired with statewide water management systems. Regional water management options can reduce physical and economic risks and provide regional control over water supplies. More is being done to meet water demands with water conservation, reoperation of facilities, water recycling, groundwater storage and management, transfer programs, and, in limited cases, regional or local surface storage reservoirs. (See Volume 2 Resource Management Strategies for further discussion of regional management options.) Overall, this increased focus on integrated regional water management solves water management problems more efficiently, considers other resource issues, and enjoys broader public support.

With integrated regional water management, regions have been able to take advantage of opportunities that are not always available to individual water suppliers: reduce dependence on imported water and make better use of local supplies; enhance use of groundwater with greater ability to limit groundwater overdraft; increase supply reliability and security; and improve water quality. The extent to which regions have carried these out has been driven by considerations like economics, environment, engineering, and institutional feasibility. (See Box 4-7 Complementary Management Approaches: IRWM and Watershed Management)

PLACEHOLDER Box 4-7 Complementary Management Approaches: IRWM and Watershed Management

PLACEHOLDER Box 4-8 New Laws Support Integrated Regional Water Management

On September 30, 2008, Governor Schwarzenegger signed SBxx 1 (also denoted as SBx2 1 or SB2x 1). (http://www.leginfo.ca.gov/pub/07-08/bill/sen/sb_0001-0050/sbx2_1_bill_20080930_chaptered.pdf)

SBx2 1 contains replacement language for the Integrated Regional Water Planning Act of 2002 (California Water Code Section 10530 et seq) as well as the first appropriations for the IRWM grant program from Propositions 84 and 1E (see under Propositions and Bonds). The new Water Code language now known as the Integrated Regional Water Management Planning Act clarifies what an IRWM plan should address and also contains guidance to DWR as to the contents of guidelines for the IRWM grant program. The new language also broadens the definition of a regional water management group to include other persons who may be necessary for the development and implementation of a plan that meets requirements of Water Code Section 1040 and 10541.

The new IRWM Planning Act language includes seven things all IRWM plans shall do:

1. Protection and improvement of water supply reliability, including identification of feasible agricultural and urban water use efficiency strategies.
2. Identification and consideration of the drinking water quality of communities within the area of the plan.
3. Protection and improvement of water quality within the area of the plan, consistent with the relevant basin plan.
4. Identification of any significant threats to groundwater resources from overdrafting.
5. Protection, restoration, and improvement of stewardship of aquatic, riparian, and watershed resources within the region.
6. Protection of groundwater resources from contamination.
7. Identification and consideration of the water-related needs of disadvantaged communities in the area within the boundaries of the plan.

Among the contents of DWR guidelines requirements in the new planning act are:

- IRWM plans to be developed in a collaborative process;
- IRWM plans include consideration of the resource management strategies contained in the California Water Plan 2005 update and all subsequent updates;
- Evaluation of adaptability to climate change of water management systems; and
- IRWM plans include a public process that provides outreach and opportunity for participation in plan development and implementation of the plan by listed applicable stakeholders.

Integrated Flood Planning and Management

Integrated flood management is an approach to deal with flood risk that recognizes the:

- interconnection of flood management actions within broader water resources management and land use planning,
- value of coordinating across geographic and agency boundaries.

- need to evaluate opportunities and potential impacts from a system perspective,
- opportunity for multiple uses of floodplains, and
- importance of environmental stewardship and sustainability.

Statewide and Interregional Planning and Response

We have learned that solutions to California's water management issues are best planned and carried out on a regional basis. However, the State has led collaborative efforts to find solutions to water issues having broad public benefits such as protecting and restoring the Delta, Salton Sea, Lake Tahoe, and Mono Lake. Statewide and interregional responses to water resource emergencies and management needs are summarized in this section, including programs, task forces, reports, water bonds, legislation, and federal programs. (See Box 4-9 Recent Statewide and Interregional Responses to Challenges.)

PLACEHOLDER Box 4-9 Recent Statewide and Interregional Responses to Challenges

Recent Legislation and Litigation

California's water rights system incorporates riparian doctrine, prior appropriation doctrine, ground water use, and pueblo rights². The state's water law is contained in the California Water Code at www.leginfo.ca.gov. For information on water litigation and legislation since 2005, go to Volume 4 the Reference Guide.

Drought Response

In June 2008, the Governor declared a statewide drought, directing State agencies and departments to take immediate action to address the serious drought conditions and water delivery reductions. He also issued a Central Valley State of Emergency Proclamation for nine Central Valley counties (Sacramento, San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and Kern) to address urgent water needs. DWR and the U.S. Bureau of Reclamation held workshops, "Preparing for Action," for urban water suppliers in October 2008 to help them better prepare for a drought.

In response to dry conditions in 2007, when Southern California communities experienced their driest year on record and when the Colorado River Basin continued in a period of unprecedented dryness, DWR published "California Drought: An Update" (April 2008). The purpose of this report was to update an earlier DWR report on drought published in 2000, with special emphasis on advanced drought-related research. The report features contributed articles from climate scientists whose research covers a wide range of drought, climate change, and variability topics. It also provides updates on hydrologic conditions and selected resource management subjects since publication of the 2000 report.

2009 Drought Water Bank

To help facilitate the exchange of water throughout the state, DWR established the 2009 Drought Water Bank. Through the program, DWR purchases water from willing sellers primarily from water suppliers upstream of the Sacramento-San Joaquin Delta. This water is transferred using

² *Pueblo right*. A water right possessed by a municipality which, as a successor of a Spanish or Mexican pueblo, is entitled to the beneficial uses of all needed, naturally occurring surface water and groundwater of the original pueblo watershed. Pueblo rights are paramount to all other claims.

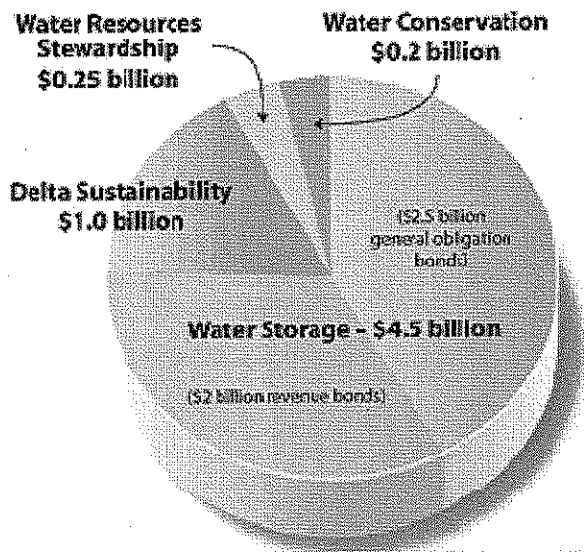
SWP or CVP facilities to water suppliers that are at risk of experiencing water shortages in 2009 due to drought conditions and require supplemental water supplies to meet anticipated demands.

Governor's Strategic Growth Plan

The Strategic Growth Plan (SGP), designed to restore and maintain California's roads, schools, ports, and water supply, was launched in January 2006. Governor Schwarzenegger proposed investing and leveraging billions of dollars in the state's infrastructure over the next 20 years to maintain California's economic strength and high quality of life.

The proposed **Strategic Growth Council** will coordinate the activities of State agencies to promote environmental sustainability, economic prosperity, and quality of life for all residents of California. The council will perform the following tasks:

- Coordinate the activities of State agencies to best improve air and water quality, improve natural resource protection, increase the availability of affordable housing, improve transportation, meet the goals of AB 32 California Global Warming Solutions Act of 2006 (see separate entry), and encourage sustainable land use.
- Recommend policies to the Legislature and the State agencies that will encourage the development of sustainable communities consistent with the intent of Proposition 84. Manage and award grants and loans of funds provided in Proposition 84 to support planning and sustainable communities.
- Collect, manage, and provide data and information to local governments that will assist local governments in developing and planning sustainable communities.
- Enhance Flood Control and Expand California's Water Management and Delivery System.
- Conservation and Water Management.
- Increase water conservation to support of Delta remediation.
- Reduce urban water use statewide by 20 percent per capita as called for by the Governor.
- Delegate DWR to work with the Agricultural Water Management Council and the California Urban Water Conservation Council to develop strategies for implementing water conservation actions.



Substantial investments in water management activities are needed to support a vital economy, a healthy environment, and a reliable water supply. The SGP proposes \$5.95 billion as follows to ensure reliable water supplies and cope with climate change effects:

- Water Storage - \$4.5 billion (\$2.5 billion general obligation bonds and \$2.0 billion revenue bonds)
- Delta Sustainability - \$1.0 billion (general obligation bonds)
- Water Resources Stewardship - \$250 million (general obligation bonds)
- Water Conservation - \$200 million (general obligation bonds)

(<http://gov.ca.gov/index.php?/issue/sgp-backpage/sgp-flood-water>)

AB 32 – California Global Warming Solutions Act of 2006

California is the 12th largest emitter of carbon in the world despite leading the nation in energy efficiency and environmental protection standards. For this reason, on September 27, 2006, Governor Schwarzenegger signed Assembly Bill 32, the California Global Warming Solutions Act of 2006, that mandated a reduction of greenhouse gas (GHG) emissions to 1990 levels by 2020. The California Air Resources Board is the lead agency for implementing AB 32 and was directed to develop a scoping plan to outline the State's strategy to achieve the 2020 GHG emissions limit. The board approved the Scoping Plan in December 2008.

The AB 32 Scoping Plan was developed in coordination with the Climate Action Team (CAT). The CAT included a multi-agency water-energy subgroup that developed GHG mitigation strategies for energy consumption related to water use. The Scoping Plan proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce the state's dependence on oil and diversify energy sources, save energy, create new jobs, and enhance public health. The measures in the Scoping Plan will be developed over 2009 and 2010 and be in place by 2012.

The Scoping Plan includes six approaches to achieving a reduction in the energy intensity of water uses and water and wastewater management systems:

- 1) water use efficiency,
- 2) water recycling,
- 3) urban water reuse,
- 4) co-locating renewable generation projects and existing water system infrastructure,
- 5) implementing energy efficiency and cost-effectiveness at local and regional water infrastructure projects, and

- 6) establishing a public goods charge for funding investments in water efficiency and other integrated regional water management strategies that will lead to greenhouse gas reductions.

These actions may also have the co-benefit of improving water quality and water supply reliability.

Sea Level Rise

In November 2008 the Governor issued an executive order (EO S-13-08) to enhance the state's management of climate impacts from sea level rise, increased temperatures, shifting precipitation, and extreme weather events. Among other benefits, the executive order was meant to provide consistency and clarity to State agencies on how to address sea level rise in current planning efforts, thereby reducing the time and resources unnecessarily spent on developing different policies using different scientific information.

The order contained four key actions:

- Initiate California's first statewide climate change adaptation strategy that will assess the state's expected climate change impacts, identify where California is most vulnerable, and recommend climate adaptation policies by early 2009;
- Request the National Academy of Science establish an expert panel to report on sea level rise impacts in California to guide state planning and development efforts;
- Issue interim guidance to State agencies to plan for sea level rise in designated coastal and floodplain areas for new projects; and
- Initiate a report on critical existing and planned infrastructure projects vulnerable to sea level rise.

State Water Resources Control Board (California Water Boards)

The California Water Boards adopted their Strategic Plan Update 2008-2012 on September 2, 2008. It includes environmental, planning, and organizational priorities.

The Water Boards' Strategic Plan considers climate change and other drivers that effect future change. Most of the actions in this strategic plan will be carried out in a watershed framework. A watershed approach is hydrologically focused, recognizes the degree to which groundwater and surface water bodies are connected physically, recognizes the linkages between water quantity and water quality, and requires a comprehensive, long-term approach to water resources management that takes system interactions into account. This kind of approach is expected to develop and maintain healthy watersheds, or drainage basins, that provide clean and adequate surface water and groundwater and support healthy riparian and wetland habitat. The strategic plan notes that the success of a watershed approach depends on the integration of State, federal, and local programs, particularly on local land use decisions.

Delta Planning and the Delta Vision

State government is involved in four major planning efforts to evaluate the Delta ecosystem and water supply issues and to recommend strategies and actions for their improvement—Bay Delta Conservation Plan, Delta Risk Management Strategy (DRMS), Delta Regional Ecosystem Restoration Implementation Plan, and the Delta Vision. These overlapping concurrent efforts are forging strategies and actions that will be comprehensive and cohesive, and build upon each other to improve the Delta ecosystem and water supply reliability in response to the impacts of climate change.

- The purpose of the Bay Delta Conservation Plan (BDCP) is to help recover endangered and sensitive species and their habitats in the Delta in a way that also provides for sufficient and reliable water supplies. The BDCP will (1) identify and implement conservation strategies to improve the overall ecological health of the Delta, (2) identify and implement ecologically friendly ways to move fresh water through and/or around the Delta, (3) address toxic pollutants, invasive species, and impairments to water quality, and (4) provide a framework to implement the plan over time. More information is available at www.resources.ca.gov/bdcp/.
- DRMS evaluates the risks from Delta levee failures and ways to reduce those risks. Preliminary evaluations show that the risks from earthquakes and floods are substantial and are expected to increase in the future. In Phase 1, DRMS is evaluating the risk and consequences to the Delta and the state associated with the failure of Delta levees and other assets considering their exposure to a number of hazards today and in the future. In Phase 2, DRMS will evaluate strategies and actions that can reduce risks and consequences. Additional information is available at www.drms.ca.gov.
- The Delta Regional Ecosystem Restoration Implementation Plan is identifying restoration opportunities within the Delta and Suisun Marsh ecological restoration zones. It applies the Ecosystem Restoration Program Conservation Strategy to the Delta, refines existing, and develops new, Delta restoration actions, and includes a conceptual model, implementation guidance, program tracking, performance evaluation, and adaptive management³ feedback. Additional information is available at www.delta.dfg.ca.gov/erpdeltaplan/.
- The Governor established the Delta Vision Task Force in 2006 to develop a durable vision for sustainable management of the Delta including Suisun Marsh. The task force published its vision for the future of this crucial and gravely threatened resource in December 2007. In that vision, the task force described a future in which the California Delta will continue to thrive over the coming generations, despite the major challenges – ranging from climate change to subsidence to population growth – that it will face. At the core of the Delta Vision is a set of 12 integrated and linked recommendations. Of these 12 recommendations, two are especially central:
 - The Delta ecosystem and a reliable water supply for California are the primary, coequal goals for sustainable management of the Delta.
 - The California Delta is a unique and valued area, warranting recognition and special legal status from the State of California.

The Delta Vision Task Force completed its Delta Strategic Plan in October 2008 with strategies, actions, and performance measures for realizing the vision. More information is available at www.deltavision.ca.gov.

On January 5, 2009, The Delta Vision Committee submitted its final implementation plan to the Governor on recommended actions to how the California Delta should be managed to fulfill its co-equal goals. The implementation plan sets priorities based on the Delta Vision Strategic Plan. (<http://www.deltavision.ca.gov/>)

³ *Adaptive Management.* In regard to a marine fishery, is a scientific policy that seeks to improve management of biological resources, particularly in areas of scientific uncertainty, by viewing program actions as tools for learning. Actions shall be designed so that even if they fail, they will provide useful information for future actions. Monitoring and evaluation are emphasized so that the interaction of different elements within the system can be better understood.

SWAN

The Statewide Water Analysis Network (SWAN) is preparing both a short-term and long-term plan to improve and peer-review data and analytical tools. SWAN's plan will also include the development of presentation and decision-support tools to make complex technical information more accessible to decision-makers and resource managers.

For example, the uncertainty that remains in the rate and magnitude of long-term climate change must be reduced. Improved data collection and a robust monitoring network will help identify trends, provide for better real-time system management, and evaluate and, if necessary, correct mitigation and adaptation strategies. (See Chapter 6 Integrated Data and Analysis)

Strengthening Flood Protection

In October 2007, the Governor signed several pieces of legislation aimed at strengthening flood protections in California. The legislative package will lead to the development of a comprehensive Central Valley Flood Protection Plan, reform the Reclamation Board to improve efficiency, require cities and counties to increase consideration of flood risks when making land use decisions, and create a new standard in flood protection for urban development in the region.

AB 162

AB 162 requires cities and counties to amend the land use element of their general plans to identify those areas that are subject to flooding as identified by floodplain mapping prepared by the Federal Emergency Management Agency or DWR. The act also requires, upon the next revision of the housing element, that the conservation element identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for purposes of groundwater recharge and storm water management.

SB 5 Central Valley Flood Protection Act of 2008

SB 5 requires DWR and the Central Valley Flood Protection Board (formerly named the Reclamation Board) to prepare and adopt a Central Valley Flood Protection Plan by 2012, and establishes flood protection requirements for local land-use decisions consistent with the Central Valley Protection Plan.

Propositions and Bonds

In recent years, California voters approved a series of bonds to preserve and enhance the state's natural resources. Propositions 12, 13, 40, and 50 made available a total of \$10.1 billion that have been used by local governments and State agencies for a wide variety of activities such as water conservation, acquisition of land to protect wildlife habitats, and restoration of damaged ecosystems.

The infrastructure package approved by the voters in November 2006 included water and flood measures in propositions 1E and 84. These measures provided \$4.9 billion for flood management and approximately \$1 billion for integrated regional water management including wastewater recycling, groundwater storage, conservation, and other water management actions.

Following the Governor's emergency declaration for California's levee system in February 2006, key repairs to 33 critical erosion sites protecting Central Valley communities were completed in record time. The State is now advancing funds and working with the federal government to repair 71 additional levee erosion sites damaged in last year's floods. An effort to evaluate 350 miles of

urban levees for hidden defects has begun, and the State is leading a coordinated effort involving federal and local agencies to avoid a major flood disaster in California.

In September 2008, Governor Schwarzenegger signed SBx2 1 to appropriate \$842 million in funding from Proposition 1E and 84 passed by voters in 2006. (See Box 4-10 for appropriations. See separate entry for information on propositions)

Box 4-10 SBxx 1 Appropriations for Integrated Regional Water Management grants

SBxx 1 contains appropriations for the IRWM grant program from Proposition 84 and Proposition 1E. The appropriations consist of:

- \$150 million from Proposition 1E for Stormwater Flood Management projects
 - Not less than \$100 million will be available for projects that address immediate public health and safety needs and strengthen existing flood control facilities to address seismic safety issues;
 - \$20 million will be available for local agencies to meet immediate water quality needs related to combined municipal sewer and storm water systems to prevent sewage discharge to state waters.
 - \$20 million will be available for urban stream stormwater flood management projects to reduce the frequency and impacts of flooding in watersheds that drain to the San Francisco Bay.
- \$181.791 million from Proposition 84 subdivided to:
 - \$100 million for implementation grants (from funding area allocations in Proposition 84):
 - Not less than \$20 million shall be allocated to support urban and agricultural water conservation projects to meet a 20 percent reduction in per capita water use by 2020.
 - Not less than \$10 million will be used to support projects that address critical water supply or water quality needs for disadvantaged communities.
 - \$39 million for planning grants and local groundwater assistance grants which consist of:
 - \$30 million for planning grants (half interregional and half funding area allocation)
 - Not less than \$3.9 million to facilitate and support the participation of disadvantaged communities in integrated regional water management planning.
 - \$9 million for local groundwater assistance grants (interregional allocation)
 - \$22.091 million for interregional projects, which includes:
 - \$10 million to connect municipal and industrial water supply aqueducts that cross the Delta, and
 - \$2 million to Tulare County for development of an integrated water quality and wastewater treatment program plan.
 - \$20.7 million for program delivery

The \$150 million is half of the amount of Storm Water Flood Management funding authorized by Proposition 1E. The \$100 million in IRWM implementation funds is one-ninth of the \$900 million total funding allocated to specific regions in Proposition 84.

Proposition 1E – Disaster Preparedness and Flood Protection Bond Act

In 2008, the State took action to improve California's flood protection system by including \$211 million in Proposition 1E funding for four critical levee improvement and construction projects in

three Northern California counties. This \$211 million investment will help rebuild California's aging levee system and protect Californians from dangerous floods that could harm communities, agriculture, and water supplies.

The bond funds will fund four critical flood protection projects:

- Sacramento Area Flood Control Agency, Natomas Levee Improvement Program (Sacramento County), \$49 million.
- Levee District No. 1 of Sutter County, Lower Feather River Setback Levee at Star Bend (Sutter County), \$16.3 million.
- Reclamation District 2103 (Wheatland), Bear River North Levee Rehabilitation Project (Yuba County), \$7.4 million.
- Three Rivers Levee Improvement Authority, Feather River Setback Levee (Yuba County), \$138.5 million

FLOOD CONTROL/WATER SUPPLY

(dollars in billions)

	Amount	TOTAL
Proposed New Bonds		\$6.0
• General Obligation Bonds—additional ground and surface water storage.	2.5	
• Revenue Bonds—additional surface water storage—will be paid by water contractors.	2.0	
• General Obligation Bonds—Delta sustainability to assure the reliability of the state's major water supply systems.	1.0	
• General Obligation Bonds—to provide Water Resources Stewardship including funding for Klamath River, San Joaquin River, Sacramento River and its tributaries, and the Delta.	0.3	
• General Obligation Bonds—for water conservation grants to local communities that coordinate the planning of their shared water resources.	0.2	
Existing Funding Sources:		\$25.0
• General Obligation Bonds—Propositions 1E and 84	6.4	
• Federal Funds—federal share of the cost of projects.	5.2	
• Local match—local share of the cost of projects.	13.4	
New Funding Sources:		\$0.0
• N/A		
Total all funding sources		\$31.0

From: <http://gov.ca.gov/index.php?/issue/sgp-backpage/sgp-flood-water>

The following is from: <http://gov.ca.gov/index.php?/issue/sgp-backpage/sgp-natural-resources>

Proposition 84

In November 2006, voters approved The Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84) authorizing \$5.4 billion in general obligation bonds for natural resources purposes. These new bond funds will enable the state to continue investing in important projects targeted to improve water quality and drinking water availability, flood protection, State and local parks, coastal and ocean protection, and habitat conservation.

These funds have contributed to programs and projects in 18 State departments, boards, and conservancies, including:

- Tahoe Conservancy's Environmental Improvement Program, which will help preserve the world renowned clarity of North America's largest alpine lake;
- Department of Forestry and Fire Protection to preserve urban forestry and biomass projects to reduce the state's emissions of greenhouse gases;
- Department of Fish and Game to restore Bay-Delta and coastal fisheries;
- Wildlife Conservation Board to preserve and protect forests, wildlife habitat, rangeland, grazing land and grasslands, and oak woodlands;
- State Coastal Conservancy and the San Francisco Bay Area Conservancy Program to help protect the scenic beauty, recreational opportunities, and economic vitality of California's 1,100 miles of magnificent coastline;
- Ocean Protection Trust Fund to expand efforts to preserve and protect California's unique ocean resources and diverse marine life;
- DWR for Integrated Regional Water Management projects that will improve and enhance California's use of its natural water resources and for a wide array of expenditures to improve flood protection around the state; and
- State Water Board to leverage federal funds for infrastructure investments to prevent pollution of drinking water supplies and for matching grants to local agencies to reduce storm water contamination of rivers, lakes, and streams.

Federal Water for America Initiative

In 2008, the federal government created a national Water Initiative to coordinate and support federal water research, education, and technology transfer activities to address changes in water use, supply, and demand in the United States. It includes support to increase water supply through greater efficiency and conservation. The Water for America Initiative merges three U.S. Bureau of Reclamation water supply management programs (Water 2025, Water Conservation Field Services, and Investigations) and uses the scientific expertise of the U.S. Geological Survey to monitor water quality, quantity and flows in U.S. rivers and streams as well as the conditions of the nation's major aquifers.

Under the initiative, Interior partnerships with state, local, and tribal governments will use the latest technologies in water planning and management to help communities respond to their changing water needs. At the watershed level, Interior agencies will work with urban, rural, and agricultural water users to stretch existing water supplies and carry out measures to protect endangered species at high-risk watersheds, thereby averting water crises.

The initiative will

- conduct a nationwide assessment of water availability and human and environmental water use by 2019, describing the change in water flows, groundwater storage, and water use,
- proceed with regional-scale studies that compare the current status of water storage and flows to prior conditions for each of the nation's 21 water resource regions,
- cooperate with state and local government in selected watersheds or aquifer systems to increase use of new technologies in water planning and management,
- cooperate with states to map the geologic framework of the nation to improve characterization of the nation's aquifers, and
- modernize the nation's 7,000 streamgages by replacing obsolete telemetry to ensure continued real-time operations and provide more timely information needed for better water management, and stabilize the long-term network by reestablishing critical streamgages discontinued in the past two decades.

Congress is considering other water-related legislation, including:

- *The Water Use Efficiency and Conservation Research Act* would establish a research and development program to promote water use efficiency and conservation, including: (1) technologies and processes that enable the collection, treatment, and reuse of rainwater and gray water; (2) water storage and distribution systems; and (3) behavioral, social, and economic barriers to achieving greater water use efficiency. (HR3957)
- *Produced Water Utilization Act of 2007* the Department of Energy to conduct a program of research, development, and demonstration of technologies for environmentally sustainable use of produced water for agriculture, irrigation, municipal, or industrial uses or other environmentally sustainable purposes. HR2339 requires the program to be designed to maximize the utilization of produced water in the United States by increasing its quality and reducing its environmental impacts. (HR2339)

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Box 4-5 Investing in Watersheds

- **Invest Consistently** - A steady investment in watersheds results in the best yields. For over 30 years, DWR's programs have provided technical and financial assistance to local watershed managers on an ongoing basis.
- **Actively Manage Resources** - DWR works with agencies and groups to continually evaluate priorities, needs, and outcomes from State grants and assistance.
- **Promote Diversity and Balance Assets** - DWR offers diverse programs and local support activities, and has successfully invested millions of dollars to achieve sound watershed management for people and communities throughout California.
- **Build Trust** - DWR staff works closely with project proponents to guarantee a sound technical basis for their projects; conducts fair and open project selection processes for grant and loan programs; and promotes and participates in Environmental Justice efforts. DWR provides technical and financial assistance to support local community consensus building, planning and project implementation, and provides local coordinators for projects, giving a face to the program at the local, State, and federal levels.
- **Create Enduring Value** - DWR works in partnership with stewardship groups, organizations, and government agencies at all levels. DWR resource restoration programs reduce flood damage, support water supply reliability, protect and aid recovery of endangered species, protect and restore wetlands, enhance natural stream and river functions, and preserve the public trust resources of California.

EXHIBIT C - 7

Water Reserve Levels

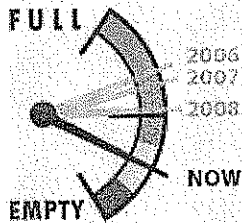
The Metropolitan Water District imports water from the Colorado River via the Colorado River Aqueduct and from Northern California across the Sacramento-San Joaquin Delta via the State Water Project. Metropolitan also has access to reservoirs and groundwater basins that can store more than twice the water that Metropolitan delivers to its 26 member agencies in a typical year. Favorable weather and environmental conditions allowed Metropolitan to store more than a full year's supply of deliveries before dry weather in the West and court-ordered water restrictions in the Delta began to deplete reserves. Below is a chronology of recent water supply conditions.

- Adequate Reserves
 - Depleting Reserves
 - Reserves for Emergencies Only (670,000 AF)
- MAF = Million Acre Feet AF = Acre Feet AF

Storing Reserves

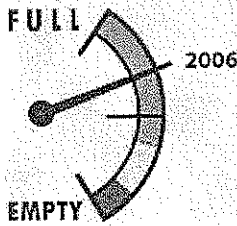
Metropolitan stores water reserves in a network of reservoirs and groundwater basins. The capacity of this storage network can vary over time. As of April 2009, the total potential storage capacity was approximately 5.3 million acre-feet (enough storage to hold more than 1.6 trillion gallons of water).

Current

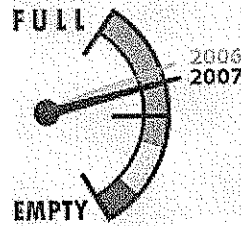


Metropolitan has implemented a Water Supply Allocation Plan which will initiate mandatory conservation throughout Southern California, effective July 1, 2009. Without the Plan, Metropolitan's reserve levels could have been reduced by as much as 60%, or 650,000 acre-feet. With implementation of the Plan, we anticipate using less water from our storage reserves.

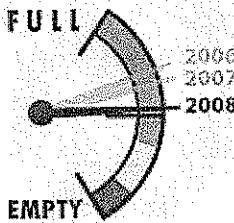
Previous



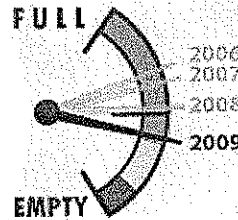
2006
Favorable rain conditions in Northern California help to allow Metropolitan to replenish its storage reserves with 2.44 million acre-feet of water, bringing the total reserves to 3.11 million acre-feet, the peak in recent history before the district began to draw on the supplies.



2007
Metropolitan has enough non-emergency reserves in storage to handle a full year's demand. A 60 percent supply from the Sacramento-San Joaquin Delta is initially projected.

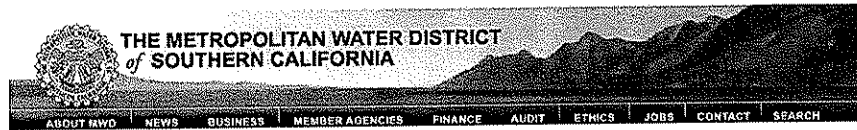


2008
Record dry conditions in Southern California and court-ordered cutbacks in supplies from Northern California create a draw-down on reserves.



February 2009
As of February 2009 Metropolitan's water supply reserves were at approximately 1,770,000 AF. Further water supply restrictions in the Delta are projected.

EXHIBIT C - 8

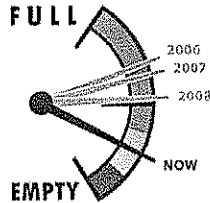


HOME YOUR WATER WATER ALERT

Site Index

A Call to Save Water

WATER RESERVE LEVELS



CLICK HERE
TO VIEW
PREVIOUS LEVELS

APRIL 2009

THE MWD SERVICE AREA
IS CURRENTLY IN A
**WATER SUPPLY
ALLOCATION
LEVEL 2**

Individual (residential, commercial, agricultural) and total water demands in the MWD service area are being reduced to meet the current water supply conditions.

PLEASE DO YOUR PART TO CONSERVE WATER. VISIT US AT WWW.MWDH2O.COM

A Call to Save Water

A federal court has curtailed water deliveries from northern California due to environmental factors in the Sacramento-San Joaquin Delta. And, after a record dry spring that dramatically curtailed snow runoff from the Sierra Nevada mountains, Governor Schwarzenegger declared an official statewide drought on June 4, 2008.

Following the Governor's action, the Metropolitan board of directors issued a Water Supply Alert on June 10 for its six-county service area, urging local jurisdictions to adopt and implement water conservation ordinances and to significantly increase efforts and programs to conserve water.

The Colorado River, the other major source of imported supplies for Metropolitan, has experienced drought conditions for eight of the last nine years.

Since the drought in the late 1980s and early 1990s, Metropolitan enacted a plan to improve water supplies during dry conditions. The Integrated Resources Plan called for increasing Metropolitan's ability to store wet-year surplus supplies from the Colorado River and Northern California's Sacramento-San Joaquin Delta.

The goal has been to increase reserves. As of 2007, enough water in reserve was available to help Metropolitan withstand up to three successive dry years.

Worsening environmental conditions in the Sacramento-San Joaquin Delta now challenge Metropolitan's ability to replenish reserves in wet years. Prolonged dry conditions in California have reduced available supplies.

Metropolitan has tapped its reserves to maintain deliveries to its 26 member agencies. But the reserves are not unlimited. With water uncertainties facing Southern California, the challenge ahead is to lower demand and stretch our reserve supplies as much as possible.

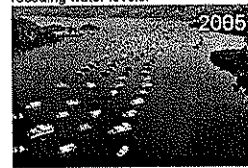
Read more about Governor Schwarzenegger's declaration of a [state of emergency](#) due to the drought.

Read the Metropolitan Board letter adopting the [Water Supply Alert Resolution](#).

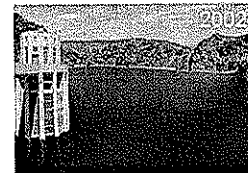
Read "[Dealing with Drought](#)," the new publication from the Association of California Water Agencies (ACWA) about drought impacts around the state and how to become "low-flow" consumers.

Diminishing Supplies

Roll over each image to display receding water levels.



In June, 2005 the elevation of Lake Crowley was 897.12 feet. By February, 2008 the elevation had dropped to 719.86 feet. The lake lost 2,079,738 Acre Feet of water during that time.



Extraordinary conservation would reduce demands throughout Metropolitan's service area, helping to preserve the region's dry-year storage reserves. Actions that reduce demands now could avoid implementation of, or reduce the magnitude of supply allocations in 2009 or 2010 if dry conditions persist.

* All PDF documents on this site require Adobe Acrobat Reader 4.0 or higher. If you do not have Adobe Acrobat Reader, or must upgrade your version, you may download it for free from [Adobe's website](http://adobe.com). If you are using a dial-up modem, please note that many of these documents are large in size and take a long time to open. Use of software other than Adobe Reader may cause discrepancies from the original documents. These risks will be assumed by the reader.

Page updated: April 24, 2009

EXHIBIT C - 9



Office of the Mayor
City of Los Angeles

ANTONIO R. VILLARAIGOSA

FOR IMMEDIATE RELEASE
February 9, 2009

Juan Bustamante
(213) 978-0741

MAYOR VILLARAIGOSA ISSUES CALL IN RESPONSE TO SEVERE, STATEWIDE WATER SHORTAGES

*Mayor calls for accelerated water usage restrictions and
shortage-year water rates*

LOS ANGELES - Mayor Antonio Villaraigosa, in response to severe, statewide water shortages, today called for an acceleration of water use restrictions under his 20-year water strategy as well as implementation of shortage-year water rates.

"Water shortages are becoming permanent realities," Mayor Villaraigosa said. "With new water-use prohibitions and shortage-year water rates in place, Los Angeles will continue to lead the state in water conservation and create a path for a more sustainable future."

Mayor Villaraigosa called for moving Los Angeles from Phase I to implementation of Phase III of the City's Water Conservation Ordinance, which will restrict outdoor irrigation to two days a week - on Mondays and Thursdays only.

The Mayor asked the DWP to approve Shortage-Year Rates, which will lower customer water allocations according to a tiered pricing system. The Mayor also called on DWP to double the number of its Water Conservation Team and expand enforcement hours.

"The message is simple: if you save water, you will save money," Mayor Villaraigosa said.

Facing a third straight dry year and court-imposed limits on imported water, California faces significant water shortages this year. Statewide reservoir levels are their lowest since the 1976-78 drought and currently stand at only one-third of capacity. The Metropolitan Water District of Southern California (MWD), the source of more than half of the City's water, has estimated that if statewide water conditions do not improve they will need to cut deliveries by 15 to 25 percent.

- MORE -

Villaraigosa Water Strategy

In May of 2008, Mayor Villaraigosa rolled out a 20-year water strategy for Los Angeles that plans for enough water conservation and recycling measures to meet 100% our the city's water new water demand by 2030.

Angelenos have been responding to the Mayor's call for conservation. In 2008, commercial use is down four percent, single-family residential use is down 6.9 percent, and City government usage has led the way by reducing water consumption by 16 percent.

The water strategy includes a phased-in approach to water restrictions as well as the first real enforcement efforts since the 1990s. Today's announcement is an acceleration of these water restrictions.

On the technology side, the strategy shifts the city's focus from promoting efficient indoor plumbing to the outdoors, where Angelenos families use 30-40 percent of their water.

BACKGROUND

The Sources of Los Angeles' Water Supply



Los Angeles receives water from five major sources:

1. Eastern Sierra Nevada watershed (via **LA Aqueduct**);
2. Colorado River (via the **Colorado River Aqueduct**);
3. Sacramento-San Joaquin Delta (via the **California Aqueduct**, aka **State Water Project**);
4. **Local Groundwater**; and
5. **Recycled Water**.

In the last 12 months the City of Los Angeles used 642 thousand acre-feet (TAF) of water, which, due to conservation, was 24 TAF less than the previous fiscal year (2006-2007). In order to meet this demand, the City of Los Angeles received, from each water source:

Source	Volume (TAF)	Percentage
1. <u>Los Angeles Aqueduct</u>	146,657	23%
2. Metropolitan Water District*, includes both <u>State Water Project</u> and <u>Colorado River Aqueduct</u>	428,103	67%
3. <u>Local Groundwater</u>	60,025	9%
4. <u>Recycled Water</u>	7,216	1%

*Water from the Colorado River and the Sacramento-San Joaquin Delta is purchased from the Metropolitan Water District of Southern California (MWD).

Current Water Supply Conditions

Each major source of water is experiencing a shortage of supply.

- **The Los Angeles Aqueduct (Eastern Sierra):** The Eastern Sierra snowpack is 71% of normal for this time of year, and only 45% of the total season normal, which will severely limit the water deliveries via the LA Aqueduct. If snowpack conditions do not improve, the LA Aqueduct may, for the first time in history, deliver less than 100 TAF to the City. As it stands, DWP estimates that the LA Aqueduct will deliver approximately 90-110 TAF (from an average of 200 TAF).
- **The Colorado River Aqueduct:** The Colorado Basin is emerging from 7-years of drought which the Colorado River System's storage to only 50% of capacity and limited surplus water deliveries to MWD for the past several years.
- **The California Aqueduct (State Water Project):** State Water Project (SWP) deliveries have experienced ~40% reduction in order to protect the Delta Smelt. In addition, the SWP Eight-Station Index shows that we have received 65% of normal rainfall to date. Currently, the SWP is allocating 15% of normal deliveries, which based on recent snow survey results will likely be reduced to 10%, or even a 5% allocation. MWD's contract with the SWP is for 2.0 million acre-feet of water, this contract will be reduced by 85 to 95 percent.

- MORE -

Impact on the Metropolitan Water District

Given the lack of surplus water from the Colorado River and supply reductions from the State Water Project, the MWD may experience a shortfall of 500 TAF (assuming an optimistic SWP allocation of 15%). MWD is now projecting a 75% chance it will have to allocate its water supplies in 2009, and is planning to decide in April whether or not to begin rationing water this July.

- MWD staff **estimates** that if statewide water conditions do not improve, deliveries to member agencies, including the City of LA, will be reduced by 15 to 25 percent.
- In the event of reduced deliveries by MWD, Los Angeles will have to conserve an additional 8% to 15% (50 to 100 TAF) beyond current conservation (24 TAF).
- Los Angeles must conserve two to four times the level of current conservation.

###

EXHIBIT C - 10

Progress on Incorporating Climate Change into Planning and Management of California's Water Resources

Technical Memorandum Report

July 2006

Department of Water Resources

Groundwater also plays a critical role in providing for the State's water needs. In an average year, groundwater meets about 30 percent of California's applied urban and agricultural water demands. This increases to more than 40 percent during drought years. In 1995, an estimated 13 million Californians, nearly 43 percent of the State's population, were served by groundwater (DWR, 2003).

2.2.3 Climate Change and California's Water Resources

Theories concerning climate change and global warming existed as early as the late 1800s. It wasn't until the late 1900s that understanding of the earth's atmosphere had advanced to the point where many climate scientists began to accept that the earth's climate is changing. Today, many climate scientists agree that some warming has occurred over the past century and will continue through this century.

The United Nations Intergovernmental Panel on Climate Change predicts that changes in the earth's climate will continue through the 21st century and that the rate of change may increase significantly in the future because of human activity (IPCC, 2001b). Many researchers studying California's climate believe that changes in the earth's climate have already affected California and will continue to do so in the future.

Climate change may seriously affect the State's water resources. Temperature increases could affect water demand and aquatic ecosystems. Changes in the timing and amount of precipitation and runoff could occur. Sea level rise could adversely affect the Sacramento-San Joaquin River Delta and coastal areas of the State. Some of the projected effects of climate change on California's water resources and the consequences of those effects are summarized in Table 2-1.

Climate change is identified in the 2005 update of the California Water Plan (Bulletin 160-05) as a key consideration in planning for the State's future water management (DWR, 2005a). The 2005 Water Plan update qualitatively describes the effects that climate change may have on the State's water supply. It also describes efforts that should be taken to quantitatively evaluate climate change effects for the next Water Plan update.

Table 2-1 Potential Effects of Climate Change on California's Water Resources and Expected Consequences

Potential Water Resource Impact	Expected Consequence
Reduction of the State's average annual snowpack	<ul style="list-style-type: none"> • Potential loss of 5 million acre-feet or more of average annual water storage in the State's snowpack • Increased challenges for reservoir management and balancing the competing concerns of flood protection and water supply
Changes in the timing, intensity, location, amount, and variability of precipitation	<ul style="list-style-type: none"> • Potential increased storm intensity and increased potential for flooding • Possible increased potential for droughts
Long-term changes in watershed vegetation and increased incidence of wildfires	<ul style="list-style-type: none"> • Changes in the intensity and timing of runoff • Possible increased incidence of flooding and increased sedimentation
Sea level rise	<ul style="list-style-type: none"> • Inundation of coastal marshes and estuaries • Increased salinity intrusion into the Sacramento-San Joaquin River Delta • Increased potential for Delta levee failure • Increased potential for salinity intrusion into coastal aquifers (groundwater) • Increased potential for flooding near the mouths of rivers due to backwater effects
Increased water temperatures	<ul style="list-style-type: none"> • Possible critical effects on listed and endangered aquatic species • Increased environmental water demand for temperature control • Possible increased problems with foreign invasive species in aquatic ecosystems • Potential adverse changes in water quality, including the reduction of dissolved oxygen levels
Changes in urban and agricultural water demand	Changes in demand patterns and evapotranspiration rates

2.3 The Role of Water Management and Use in Greenhouse Gas Emissions

2.3.1 Executive Order S-03-05

Executive Order S-3-05, signed by Governor Arnold Schwarzenegger June 1, 2005, establishes aggressive greenhouse gas emission reduction goals for California. These goals are:

- by 2010, reduce emissions to 2000 levels
- by 2020, reduce emissions to 1990 levels
- by 2050, reduce emissions to 80 percent below 1990 levels

Since water management and use are a significant part of California's energy matrix, both in terms of energy generation and consumption, they are an important consideration in meeting the emission reduction goals established by the Governor.

2.3.2 Water Supply and Treatment

In the draft "Statewide Assessment of Energy Used to Manage Water," the California Energy Commission estimated that an average of about 44 million tons of carbon dioxide is emitted into the atmosphere each year to provide water in California. Any reductions in energy consumption related to water will help the State meet its greenhouse gas reduction goals.

California's aqueduct systems are one of the larger users of electricity in the State. Other significant uses of electrical power related to water in California include:

- pumping groundwater from wells
- treating drinking water
- delivering of water to consumers through local distribution systems
- treating wastewater and wastewater reclamation.

Diesel, gasoline, and natural gas-powered pumps are used for some water supply and treatment operations. Diesel-powered pumps are most prevalent in agriculture.

End uses of water also result in the consumption of electrical energy and natural gas, such as heating of water for domestic, commercial, and industrial operations. Various industrial processes that use water also result in energy consumption.

2.3.3 Hydroelectric Power

Hydroelectric power is generated at most publicly-owned water supply reservoirs in California and at many privately-owned reservoirs. Hydroelectric power is also generated by run-of-river hydroelectric plants and by power recovery plants along aqueducts and water distribution systems. Most of California's hydroelectric power is produced in the Sierra Nevada and Cascade

Range. This is due to the relatively large amount of precipitation that falls there and the amount of elevation change available for power generation.

Hydroelectric power production varies from year to year in California with changing hydrologic conditions. Hydroelectric power produced outside of California is also imported into the State to help meet energy needs. Hydroelectric power production is a critical consideration for meeting greenhouse gas emission reduction goals set by Executive Order S-3-05. Other than the construction of hydroelectric power facilities, hydroelectric power production essentially does not result in the emission of greenhouse gasses. As discussed in Section 2.5, climate change could reduce hydroelectric power production by existing facilities, especially at reservoirs in the foothills of the Sierra Nevada. This is due to expected losses in annual snow pack and changes in the timing of annual runoff as the result of climate change.

2.3.4 Future Plans

The 2005 California Water Plan Update (DWR, 2005) estimates that water use efficiency can reduce annual urban water use by 1.1 million to 2.3 million acre-feet by 2030. It is also estimated that water use efficiency can reduce annual agricultural water use by 0.5 million to 2.0 million acre-feet by 2030. Accelerating efforts to attain those water use reductions by 2015 could result in a cumulative reduction of greenhouse gas emissions of approximately 30 million tons by 2030.

The Department of Water Resources is developing water use efficiency measures that can help California meet the greenhouse gas emission reduction goals established by the Governor. These measures are described in a Department staff report titled "Reduction of Greenhouse Gas Emissions through Water Use Efficiency Measures, October, 2005."

In the next sections of this chapter, past and potential future changes in temperature, precipitation, and sea level are described. An overview of the potential impacts of possible future changes is also presented.

2.4 Changes in Air Temperature

2.4.1 Past Changes

The Earth's climate has had numerous periods of cooling and warming in the past. Significant periods of cooling have been marked by massive accumulations of sea and land-based ice extending from the Earth's poles to as far as the mid-latitudes. Periods of cooling have also been marked by lower sea levels due to the accumulation of water as ice, and cooling and contraction of the Earth's oceans. Periods of warming caused recession of the ice toward the poles, warming and thermal expansion of the Earth's oceans, and sea level to rise. More discussion on past changes in sea level is in Section 2.6.

Figure 2-3 depicts significant periods of cooling and warming over about the past 400,000 years based on analysis of ice cores. The causes of the temperature changes are unknown, although

they may be due to changes in solar radiation, the Earth's orbit, the composition of the atmosphere, ocean circulation patterns and other factors. Average temperatures in the Northern Hemisphere appear to have been relatively stable from about 1000 to the mid-1800s based on temperature proxy records from tree rings, corals, ice cores and historical observations (IPCC, 2001a). However, there is a significant amount of uncertainty related to proxy temperature records, especially those extending far back into the past.

The United Nations Intergovernmental Panel on Climate Change stated that the Earth's climate has warmed since the pre-industrial era and that some of this change is attributable to the activities of humans (IPCCb, 2001). Global average near-surface air temperatures and ocean surface temperatures have increased $0.6 \pm 0.2^{\circ}\text{C}$ over the 20th century (IPCCa, 2001). Much of the rise occurred during 1910 to 1945 and 1976 to 2000, as depicted in Figure 2-4.

There is evidence that temperatures in the western United States and California have increased during the past century based on temperature measurements, apparent trends in reduced snowpack and earlier runoff, and other evidence such as changes in the timing of blooming plants (NWS, 2005) (Mote, 2005) (Cayan, 2001). More discussion of observed changes in temperature and related changes in snowpack and runoff in the western United States and California is contained in Section 2.5 and Chapter 6.

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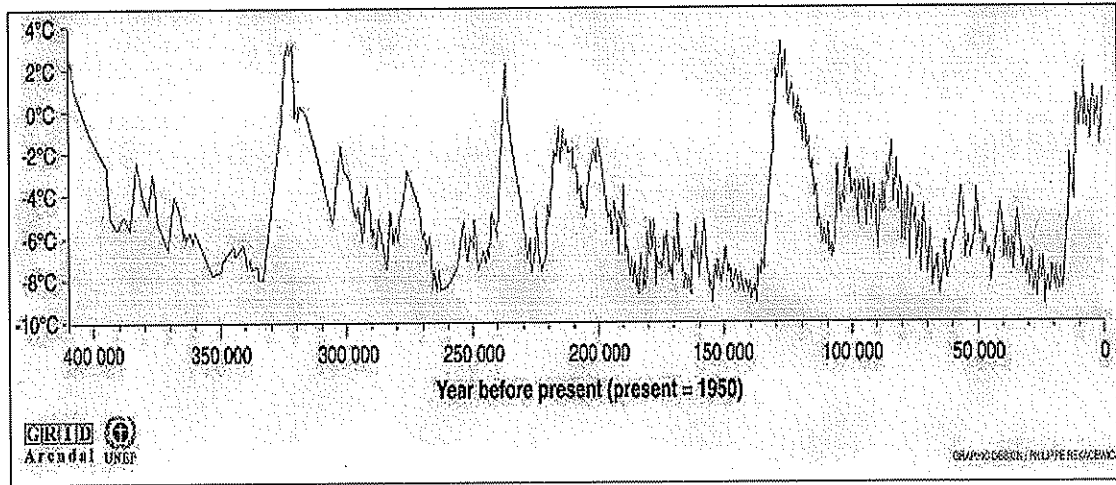


Figure 2-3 Changes in Air Temperature Over About the Past 400,000 Years

Explanation: Graph depicts changes in air temperature as evidenced by isotopic analysis of ice cores obtained at the Russian Vostok station in central east Antarctica. For additional explanation visit: http://cdiac.esd.ornl.gov/trends/temp/vostok/jouz_tem.htm. Source: United Nation's Environment Programme Global Resource Information Database - Arendal website at <http://www.grida.no/climate/vital/02.htm>.

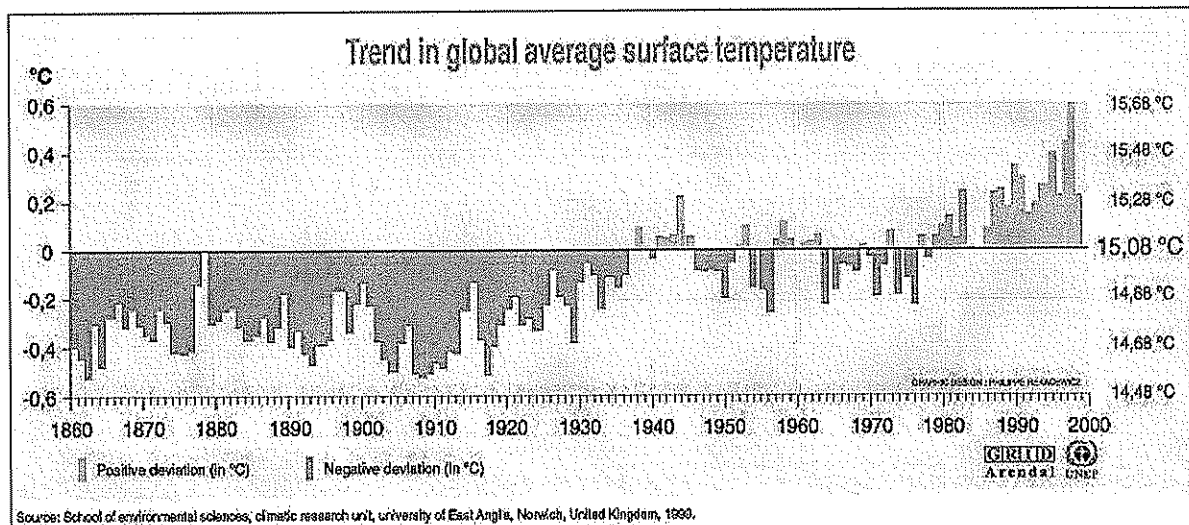


Figure 2-4 Trend in Global Average Temperature from 1860 to 2000

Explanation: The figure depicts global average combined land-surface air and sea surface temperatures from 1861 to 1998 relative to the average temperature between 1961 and 1990. The left vertical scale is in degrees Celsius. Source: United Nation's Environment Programme Global Resource Information Database - Arendal website at: <http://www.grida.no/climate/vital/17.htm>.

2.4.2 Causality

Human-induced changes in the Earth's temperature have been tied to increased concentrations of greenhouse gases in the atmosphere caused by the production and burning of fossil fuels and land uses. The primary gases of concern are carbon dioxide, methane, and nitrous oxide. Table 2-2 lists changes in atmospheric concentrations of these gases from 1750 to 1998, as well as their efficacy in causing warming. Figure 2-5 depicts changes in atmospheric carbon dioxide concentration measured at Mauna Loa Hawaii from 1958 to 2005.

Table 2-2 Abundance of Well-Mixed Greenhouse Gases in 1750 (pre-industrial age) and in 1998 and Radiative Forcing Due to the Change in Abundance

Gas	Abundance (Year 1750)	Abundance (Year 1998)	Radiative Forcing (Wm^{-2})
Carbon Dioxide	278	365	1.46
Methane	700	1745	0.48
Nitrous Oxide	270	314	0.15

Source: IPCC, 2001a

Explanation: Volume mixing ratios for carbon dioxide are in parts per million and are in parts per billion for methane and nitrous oxide. Wm^{-2} = watts per square meter.

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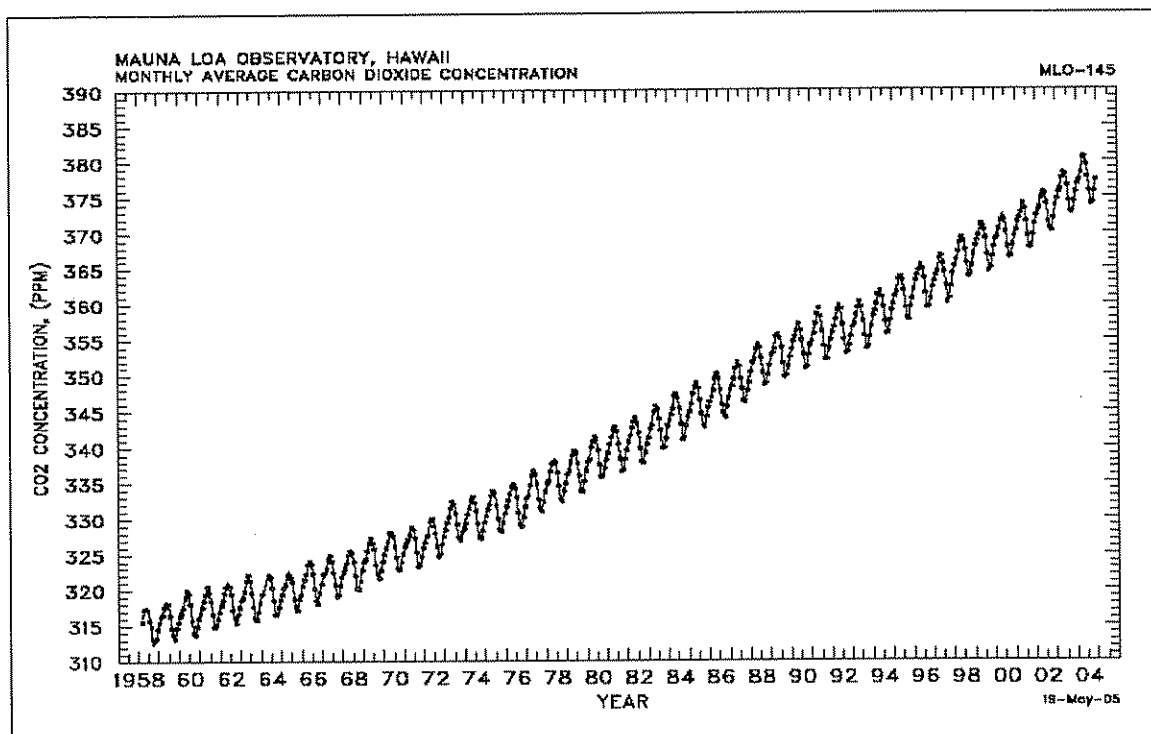


Figure 2-5 Changes in Atmospheric Carbon Dioxide Concentration Measured at Mauna Loa, Hawaii from 1958 to 2005.

Source: United States Department of Energy, Carbon Dioxide Information Analysis Center website at: <http://cdiac.esd.ornl.gov/trends/co2/sio-mlo.htm>.

Explanation: PPM = parts per million. Annual decreases in atmospheric carbon dioxide concentration at Mauna Loa, Hawaii occur each summer and are due to seasonal increases in plant respiration in the Northern Hemisphere.

2.4.3 Temperature Projections

The United Nations Intergovernmental Panel on Climate Change reports that global average surface temperatures are projected to rise between 1.4 to 5.8°C from 1990 to 2100, based on various climate models and greenhouse gas emission scenarios (IPCC, 2001a). Figure 2-6 is a generalized representation of the range of temperature projections reported by the IPCC in its Third Assessment Report (TAR). Information on the various projections making up the range, as well as their basis can be found in the TAR¹.

¹ Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC, 2001a). http://www.grida.no/climate/ipcc_tar/wg1/index.htm

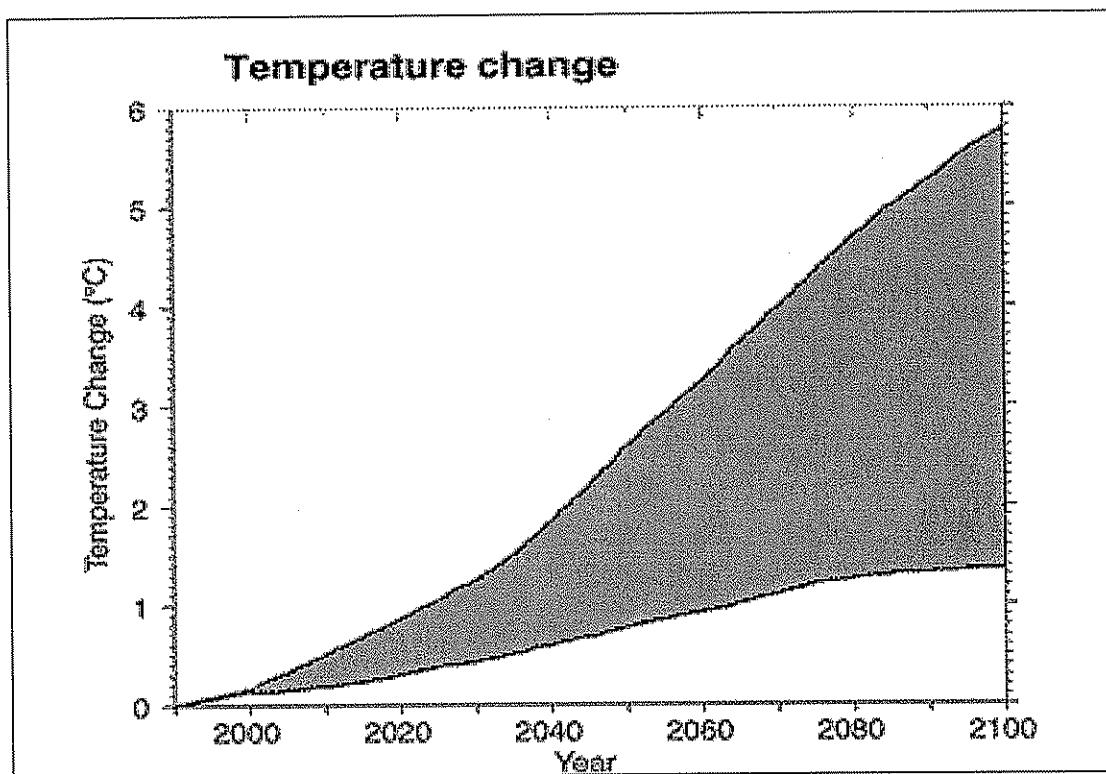


Figure 2-6 Range of Projections Reported by the Intergovernmental Panel on Climate Change for Increasing Global Average Surface Temperature Through 2100.

Source: United States Environmental Protection Agency website at:
<http://yosemite.epa.gov/oar/globalwarming.nsf/content/ClimateFutureClimateGlobalTemperature.html>

Climate change and temperature projections can be developed on a regional basis using techniques to “downscale” from the results of global models. The level of uncertainty related to regional climate change and temperature projections is generally higher than global projections since downscaling adds more uncertainty. One relatively large group of model projections that was recently examined for California provides a range of about 2.5 to 9 degrees Celsius temperature rise for Northern California by 2100. An analysis of the distribution of the projections generally showed a central tendency at about 3 degrees Celsius of rise for 2050, and about 5 degrees Celsius for 2100 (Dettinger, 2005).

2.5 Changes in Precipitation and Runoff

Climate change appears to have already affected precipitation and runoff in California. More changes are expected in the future as additional changes in the Earth's climate occur. Some of the possible effects of climate change on precipitation as well as potential consequences of those effects are listed in Table 2-3.

While all possible changes in precipitation due to climate change are of potential concern for management of the State's water resources, this section deals mainly with potential changes in the amount, form and variability of precipitation. Existing climatologic and hydrologic data are generally suitable for evaluating historical trends for these three factors. Most research and climate change modeling efforts have focused on potential changes in the amount and form of precipitation in California. Historical information and research efforts are not as abundant or as conclusive for other past and possible future changes in precipitation in California.

2.5.1 Worldwide Precipitation Observations and Projections

Worldwide trends in precipitation over land are hard to determine. The difficulties arise from limited measurements worldwide and measurement problems, such as "undercatch" for precipitation gauges (Hulme, 1995). Where available, streamflow measurements and other information can be used as a proxy record for precipitation.

Worldwide precipitation is reported to have increased about 2 percent since 1900. While global average precipitation has been observed to increase, changes in precipitation over the past century vary in different parts of the world. Some areas have experienced increased precipitation while other areas have experienced a decline (NOAA, 2005). Figure 2-7 illustrates worldwide variation in changes in precipitation over the past century.

Precipitation and streamflow records indicate an increase in precipitation over land at a rate of about 0.5 to 1 percent per decade for the middle and high latitudes of the northern hemisphere, except for East Asia. No comparable wide-scale changes in precipitation have been observed for the Southern Hemisphere. Land surface rainfall in the subtropics has decreased an average of about 0.3 percent per decade (IPCC, 2001a).

Total atmospheric water vapor content has been noted to increase at a rate of several percent each decade in the Northern Hemisphere since about 1980 (IPCC, 2001a). Some studies suggest that regional cloudiness has increased over the past century. Satellite data show a general trend for increasing cloud cover over land and the oceans since the early 1980s. This trend appears to have reversed in the early 1990s (NOAA, 2005).

Table 2-3 Possible Effects of Climate Change on Precipitation in California and Potential Consequences

Possible Changes in Precipitation	Potential Consequences
Amount	<p>Increased precipitation could benefit water supplies and improve environmental conditions in some areas, especially where water supply diversions have significantly affected streamflow. Increased precipitation could also increase the incidence of flooding, depending on the timing and intensity of precipitation.</p> <p>Decreased precipitation could have serious consequences for water supplies and the environment.</p>
Form	<p>Climate warming is expected to increase minimum snow elevations in California's mountains and cause more precipitation to fall in the form of rain rather than snow. This will result in reductions of annual snowpack and reduce effective water storage for maintaining spring and summer streamflow/water supply diversions. Reductions in snowpack could also negatively affect hydroelectric power generation and flood control operations.</p>
Intensity, Duration, and Timing of Precipitation Events	<p>Increased intensity or duration of precipitation events could increase the frequency and severity of flooding. Decreases could reduce flooding.</p> <p>Climate change could affect the incidence of precipitation events where rain falls on accumulations of snowpack. If the incidence or severity of such events increase, it could have serious flood control and water supply implications.</p>
Variability	<p>Increased variability in annual precipitation could present significant challenges for water managers in meeting water demands and providing flood control. Increased surface storage capacity, operational changes for reservoirs and additional use of groundwater storage could be required.</p> <p>Decreased variability could benefit water management.</p>
Location	<p>Shifts in the annual average distribution of precipitation in the State, due to possible changes in regional circulation patterns or other possible causes, could benefit some regions and negatively affect others. California's major water storage and conveyance systems are located and designed in accordance with the historic distribution of precipitation. Significant shifts in the distribution of precipitation could pose serious water management challenges, jeopardize the effectiveness of the State's existing water supply infrastructure and alter ecosystems.</p>

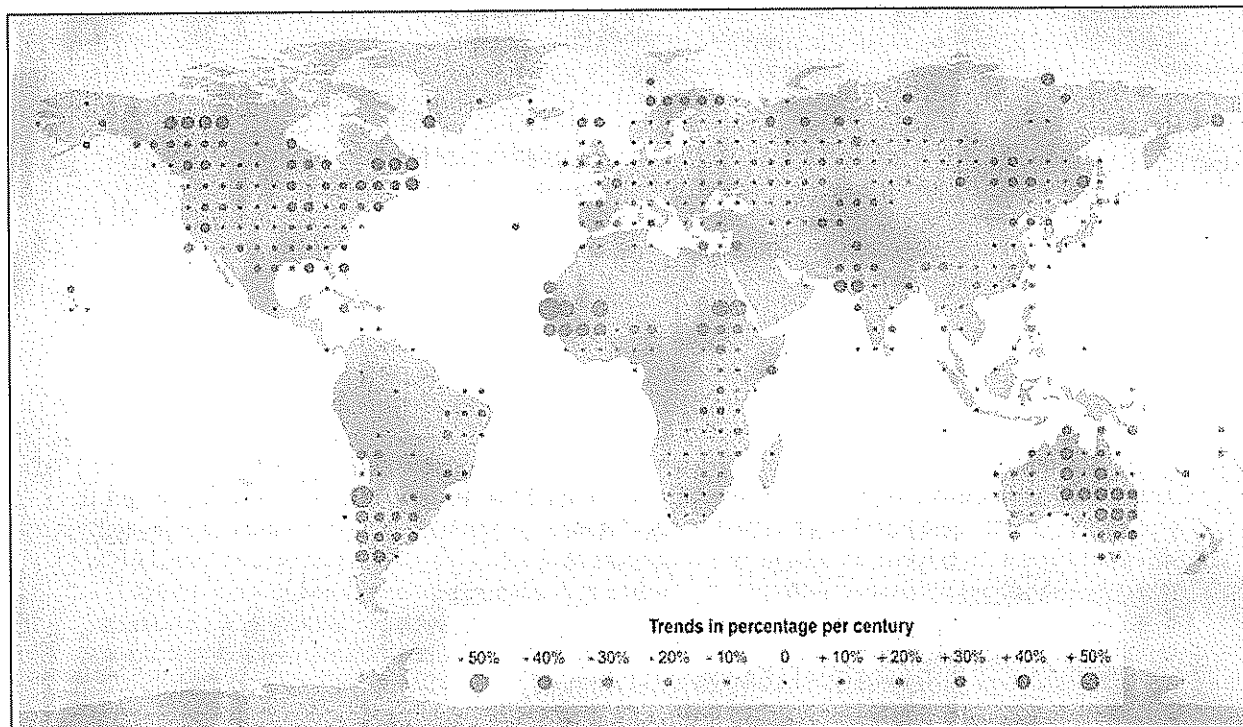


Figure 2-7 Worldwide Precipitation Trend for 1900 to 2000
Source: (IPCC, 2001b) http://www.grida.no/climate/ipcc_tar/vol4/english/fig2-6a.htm

The Intergovernmental Panel on Climate Change predicts that increasing global surface temperatures are very likely to result in changes in precipitation (IPCCb, 2001). Rising temperatures are expected to increase the activity of the world's hydrologic cycle and increase the moisture content of the atmosphere. Water vapor in the atmosphere is a greenhouse gas and will likely provide a positive feedback mechanism for climate warming.

Global average precipitation is expected to increase during the 21st century as the result of climate change based on global climate models for a wide range of greenhouse gas emission scenarios. Regional changes in precipitation will vary (IPCCa 2001). Global climate models are generally not well suited for predicting regional changes in precipitation due to their coarse discretization compared to the scale of regionally-important factors that affect precipitation.

Climate warming may have resulted in an increased occurrence of high-intensity rainfall in various areas with significant regional variation, including the United States (Groisman, 2005; Easterling, 2000). Continued warming through the 21st century may result in further increases in the occurrence of high-intensity rainfall (IPCC, 2001a; Groisman, 2005).

2.5.2 Precipitation Trends in the Western United States and California

An analysis of trends in total annual precipitation in the western United States by the National Weather Service, Climate Prediction Center provides evidence that annual precipitation has increased in much of California, the Colorado River Basin, and the West since the mid-1960s. Figure 2-8 depicts linear trends in annual precipitation in the western United States for areas referred to as "climate divisions."

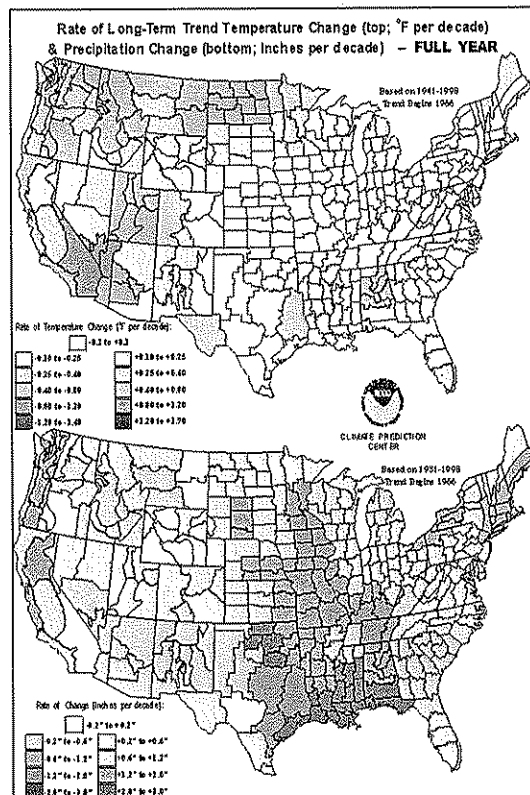


Figure 2-8 Long-Term Linear Trend Rates for Annual Precipitation in Western United States

Explanation: Rate of change is depicted for areas referred to as climate divisions. Trends are based on precipitation data from 1931-1998; however, the linear trends shown are from 1966 to 1998. For additional information concerning this figure and the determination of depicted precipitation trends visit: http://www.cpc.ncep.noaa.gov/trend_text.shtml#limits.

Adapted From: National Weather Service, Climate Prediction Website at <http://www.cpc.ncep.noaa.gov/anltrend.gif>

Most of the precipitation in the western U.S. falls in November through March, although monsoonal rainfall can be a locally-important factor in the Southwest from July to September. California's precipitation season is generally considered to start about mid-October and end in

April. However, most of the State's precipitation typically falls in the months just before and just after the beginning of each calendar year.

Mote and others (Mote, 2005) evaluated trends in annual November through March precipitation for the western United States and southwest Canada. Figure 2-9 depicts linear trends in November through March precipitation for two periods, 1930 to 1997 and 1950 to 1997. Precipitation trends for most of California and the Southwest are positive (increasing precipitation) during both periods.

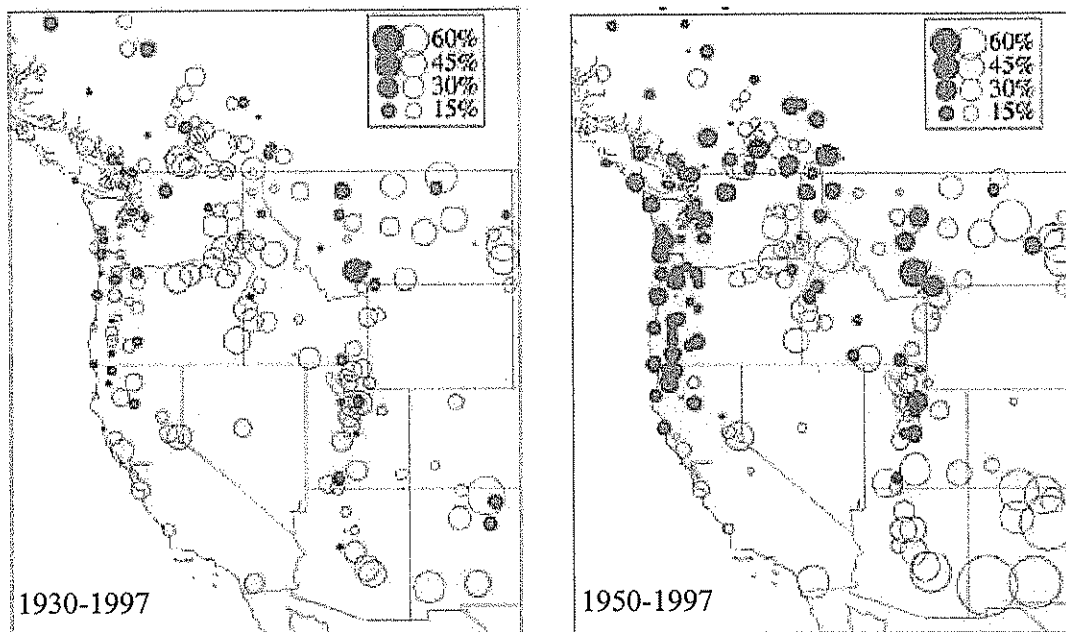


Figure 2-9 Precipitation Trends for the Western United States and Southwest Canada from 1930 to 1997 (left figure) and 1950 to 1997 (right figure)

Explanation: Depicted linear trends are for annual precipitation occurring from November through March. Decreasing precipitation trends are depicted in solid red circles. Increasing precipitation trends are depicted in open blue circles.

Source: Adapted from Mote (2005).

Former State Climatologist James Goodridge compiled an extensive collection of long-term precipitation records from throughout California. These data sets were used to evaluate whether there is a trend in precipitation in the State over the past century. Long-term runoff records in selected watersheds in the State were also examined. Figure 2-10 illustrates the variability in statewide annual average precipitation from 1890-2002. Statewide average precipitation was determined from 102 stations throughout the State. Based on a linear regression of the data, the long-term historical trend for statewide average annual precipitation appears to be relatively flat (no increase or decrease) over the entire record. However, it appears that there may be an upward trend in precipitation toward the latter portion of the record.

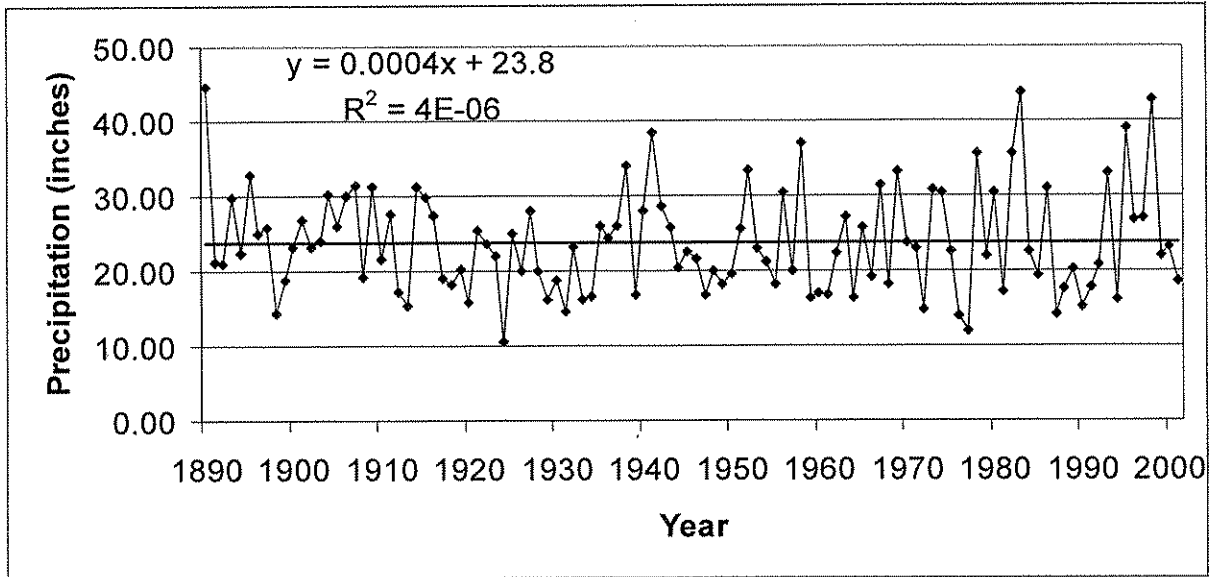


Figure 2-10 Annual Average Precipitation for California from 1890 to 2002 with Linear Trend

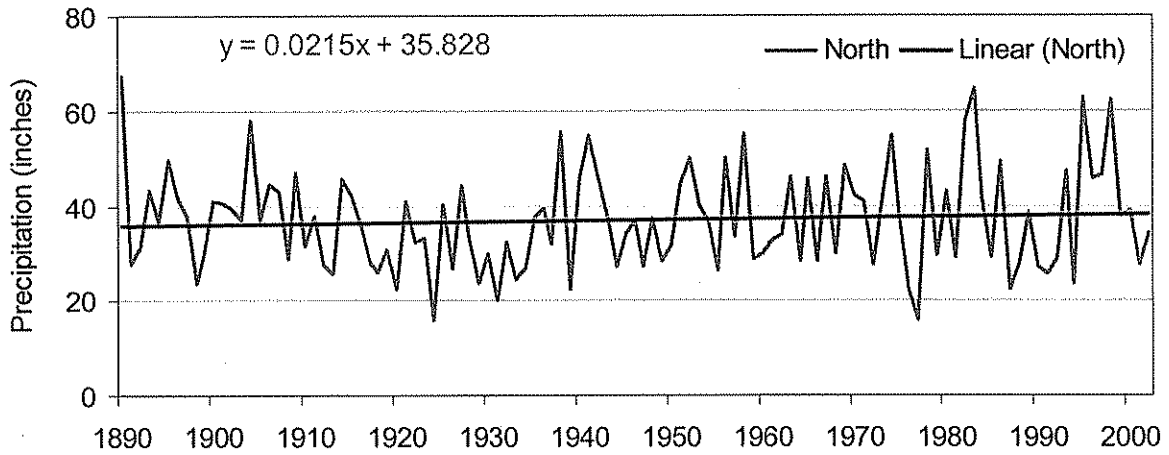
Most of the State's precipitation occurs as the result of storms from the Pacific Ocean. Hemispheric-scale circulation patterns typically cause most of these storms to move eastward across the northern part of the State. The largest amounts of precipitation fall in the mountains due to orographic effects. While a significant number of Pacific storms also cross the central and southern portions of the State, annual precipitation tends to decrease with decreasing latitude.

State precipitation records were sorted into three regions by latitude as follows:

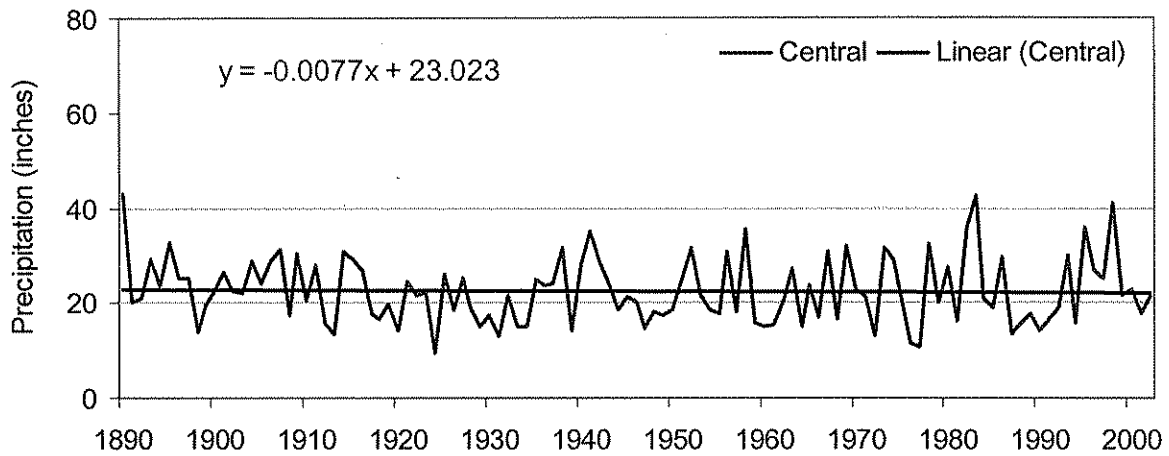
- North; from the California - Oregon border to 39 degrees latitude (latitude where California's eastern border begins to trend northwest at Lake Tahoe);
- Central; 39 to 35 degrees latitude (approximate latitude of Santa Maria); and
- South; 35 degrees latitude to the California - Mexico border.

Annual average precipitation values from 1890 to 2002 are plotted with linear trend lines for these three regions in Figure 2-11. The plots depict decreasing precipitation with decreasing latitude. Precipitation in the northern portion of the State appears to have increased slightly from 1890 to 2002. Increasing runoff trends observed for various Northern California watersheds, as discussed in Section 2.5.3 below, are consistent with the apparent increasing precipitation trend in this part of the State. Precipitation in the central and the southern portions of the State appear to have slightly decreasing trends from 1890 to 2002.

a) Northern Region: California-Oregon border to 39° latitude



b) Central Region: 39° - 35° latitude



c) Southern Region: 35° latitude to California-Mexico border

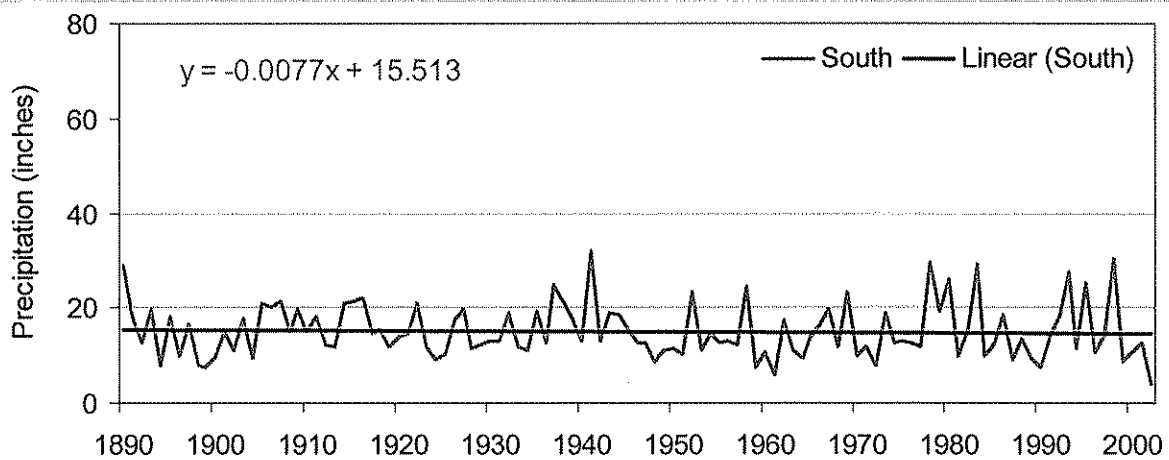


Figure 2-11 Annual Average Precipitation from 1890 to 2002 with Linear Trends by Region

Differences in California precipitation trends between those observed by the National Weather Service, Mote and others, and above analysis are likely due to differences in the:

- the period of analysis
- number and location of precipitation measurement stations used
- geographic regions selected for analysis

While increasing precipitation on a global scale is generally an expected result of climate change, significant regional differences in precipitation trends can be expected. More analysis of precipitation trends in California is probably needed for determining whether changes in California's regional annual precipitation totals have occurred as the result of climate change or other factors.

In addition to possible long-term trends in annual amounts of precipitation, increased variability of annual precipitation is also a possible outcome of climate change. Figure 2-12 depicts the coefficient of variation (standard deviation divided by the mean) based on a 10-year moving average of mean and standard deviation values for statewide annual average precipitation. There appears to be an upward trend in the variability of precipitation over the past century with end-of-period variability values about 75 percent larger than beginning-of-period values. This indicates that there tended to be more extreme wet and dry years at the end of the century than there were at the beginning of the century. This trend may continue with on-going climate change.

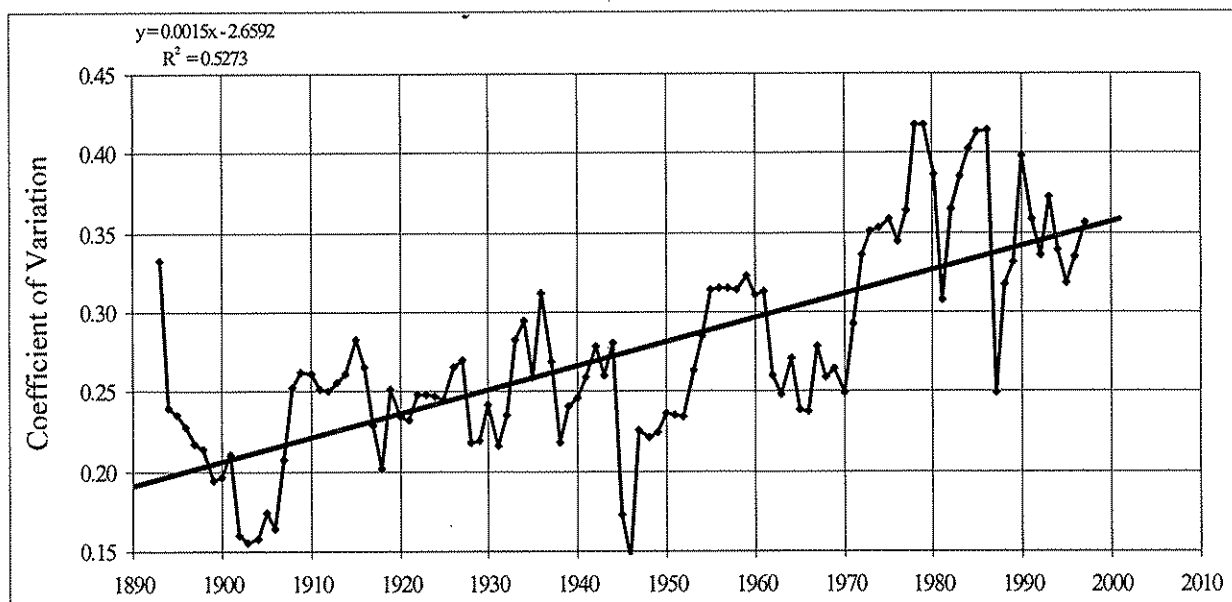


Figure 2-12 Coefficient of Variation for Annual Average Precipitation in California from 1890 to 2001 with Trend Line

2.5.3 Trends in Snowfall and Related Runoff in California

Precipitation in California's higher mountains during the late fall and winter typically falls in the form of snow. Significant accumulations of snow, referred to as snowpack, typically occur each year in the Sierra Nevada along the eastern flank of the Central Valley. A significant annual snowpack also typically occurs in the Cascade Range north and northeast of the Central Valley, and in the Klamath Mountains in the northwest corner of the State. Most of the runoff from the State's snowpack flows into the Central Valley, although snowmelt is also important for flows in rivers and streams on the east slope of the Sierra, such as the Truckee, Carson, and Owens rivers, and for the Klamath River and its tributaries.

California's annual snowpack is, on average, mostly accumulated from November through the end of March. It typically melts from April through July. Snowmelt provides significant quantities of water to streams and reservoirs for several months after the annual storm season has ended. The length and timing of each year's period of snowpack accumulation and melting can vary somewhat due to temperature and precipitation conditions.

California's snowpack is important to the State's annual water supply, because of its volume and when it typically melts. Average runoff from melting snowpack is usually about 20 percent of the State's total annual natural runoff, and probably about 35 percent of the State's total useable annual surface water supply. The State's snowpack is estimated to contribute an average of about 15 million acre-feet of runoff each year, about 14 million acre-feet of which is estimated to occur in the Central Valley. In comparison, total reservoir capacity in the Central Valley is about 24.5 million acre-feet in watersheds with significant annual accumulations of snow (DWR, 2005c).

California's reservoir managers use snowmelt to help fill reservoirs once the threat of large winter and early spring storms and related flooding risks have passed. Water stored in reservoirs is used to help meet downstream water demands when flows from snowmelt begin to recede and are typically not sufficient for satisfying downstream uses.

Some of the annual runoff collected in California's reservoirs is held from one year to the next. Water stored from one year to the next is typically referred to as "carryover storage". California's annual precipitation and snowpack can vary significantly from year to year in California. There may also be decadal-scale variation in precipitation over the Sierra (Freeman, 2002), and possibly other parts of California. Carryover storage can help meet water demand in years where precipitation and runoff is low.

Rising temperatures as the result of climate change threaten California's snowpack. An inchoative analysis of annual runoff trends in the Sacramento Valley was performed by Maurice Roos of DWR in the late 1980s (Roos, 1989). The purpose of the analysis was to determine if changes in the timing of annual runoff in the Sacramento Valley watershed had occurred as the result of possible increasing temperatures and diminished snowpack. It was concluded that, since the beginning of the 20th century, the amount of annual runoff from April through July in the upper Sacramento River watershed had a downward trend compared to each year's total runoff. This was determined to be a possible indication of a long-term reduction in the State's snowpack due to temperature rise.

An updated evaluation of runoff trends was performed for this report. Figure 2-13 presents combined unimpaired April through July runoff for four rivers in the Sacramento Valley (Sacramento, Feather, Yuba, and American rivers) as a percent of total water year runoff from 1906 to 2005. Figure 2-14a presents total April through July unimpaired runoff volume for the same period of record and for the same four rivers. Figure 2-14b presents total unimpaired water year runoff volume for the same period and rivers.

Based on the linear trends depicted in Figure 2-13 and Figure 2-14 for the four Sacramento Valley rivers:

- April through July runoff, as compared to total water year runoff, has declined about 9 percent over the past 100 years
- April through July runoff volume has decreased over the same period and total water year runoff during the same period has remained about the same

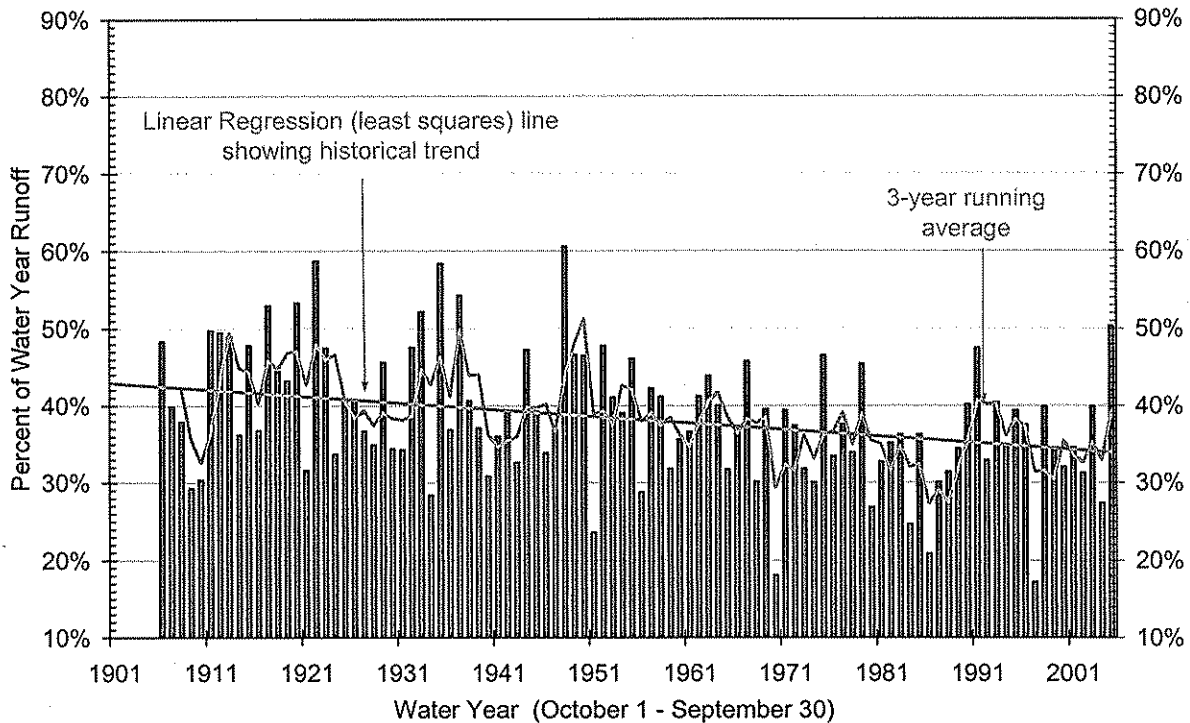
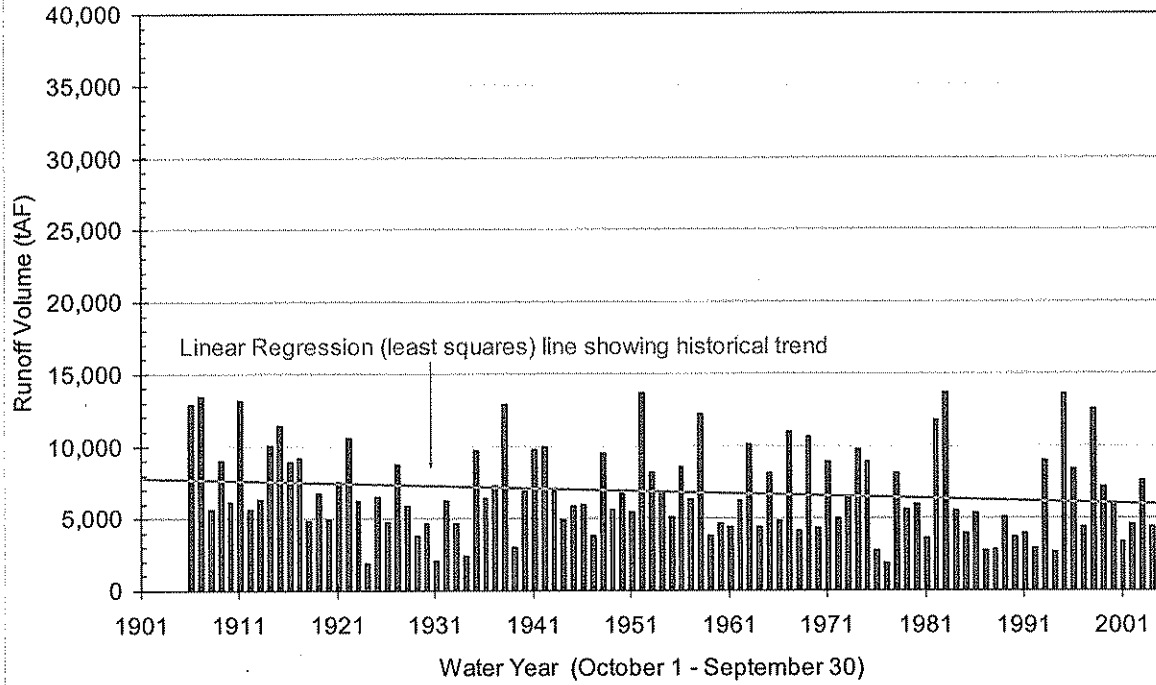


Figure 2-13 Annual April through July Unimpaired Runoff for Four Sacramento Valley Rivers Compared to Total Unimpaired Annual Runoff*

* Based on the flows of four rivers in the Sacramento Valley; Sacramento River at Bend Bridge (near Red Bluff), Feather River into Lake Oroville, Yuba River at Smartville, and American River below Lake Folsom.

a) Annual April through July Runoff Volume



b) Total Water Year Runoff Volume (October-September)

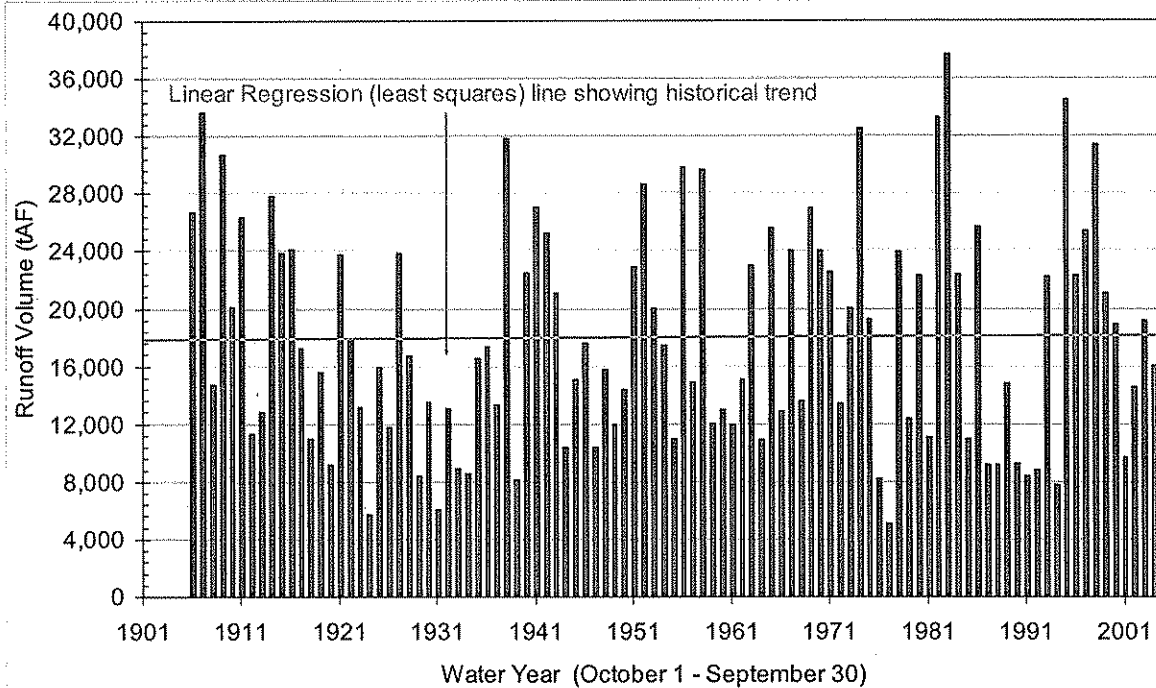


Figure 2-14 Unimpaired Runoff Volume for Four Sacramento Valley Rivers*

*Based on the flows of four rivers in the Sacramento Valley; Sacramento River at Bend Bridge (near Red Bluff), Feather River into Lake Oroville, Yuba River at Smartville, and American River below Folsom Lake. (taf) = thousand acre feet.

Figure 2-15 presents combined unimpaired runoff from April through July for four rivers in the San Joaquin River watershed (Stanislaus, Tuolumne, Merced, and San Joaquin rivers) as a percentage of total water year runoff from 1901 to 2005. Figure 2-16a presents total unimpaired April through July runoff volume for the same four rivers and for the same period of record. Figure 2-16b presents total unimpaired water year runoff volume.

The trends depicted in Figure 2-15 and Figure 2-16 for the four San Joaquin Valley rivers indicate that:

- April through July runoff, as compared to total water year runoff, has declined about 7 percent over about the past 100 years
- while total water year runoff volume decreased somewhat during the past 100 years, April through July runoff volume decreased at even a greater rate.

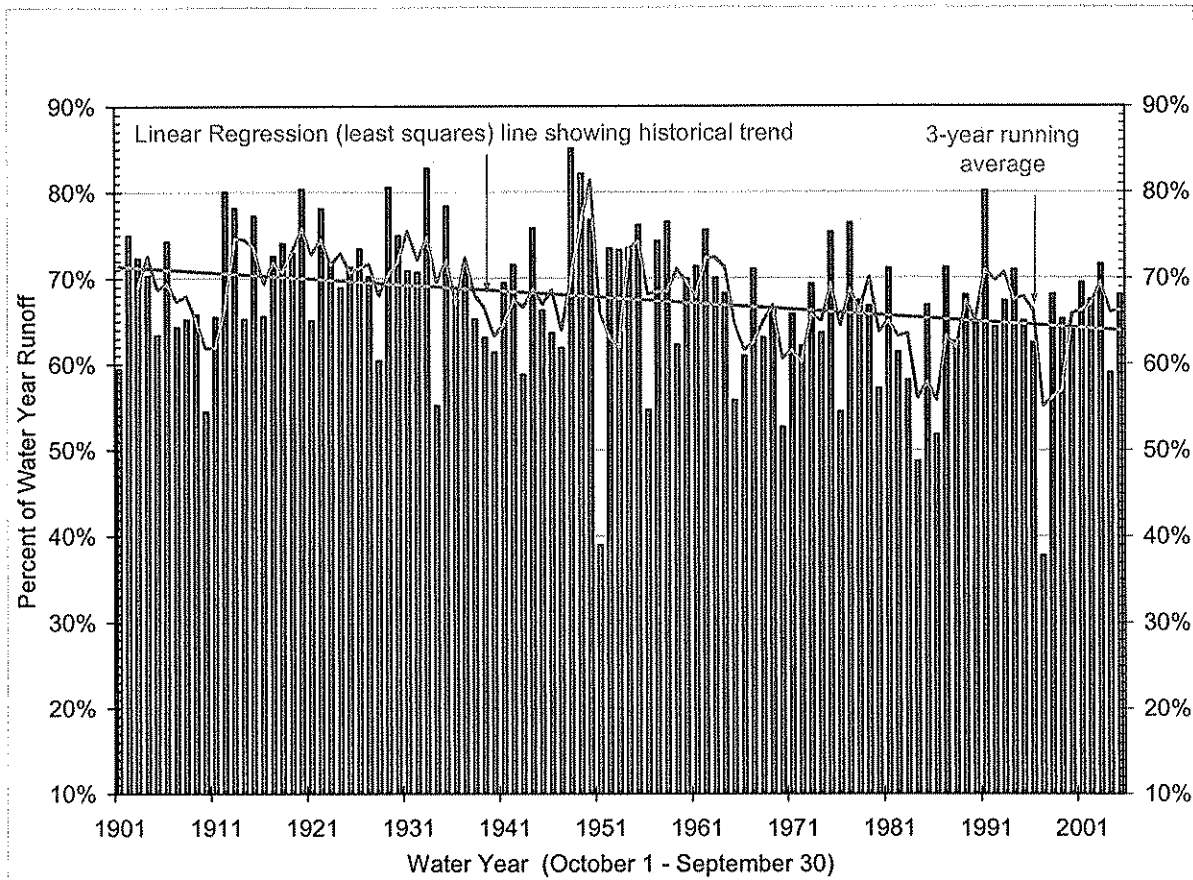
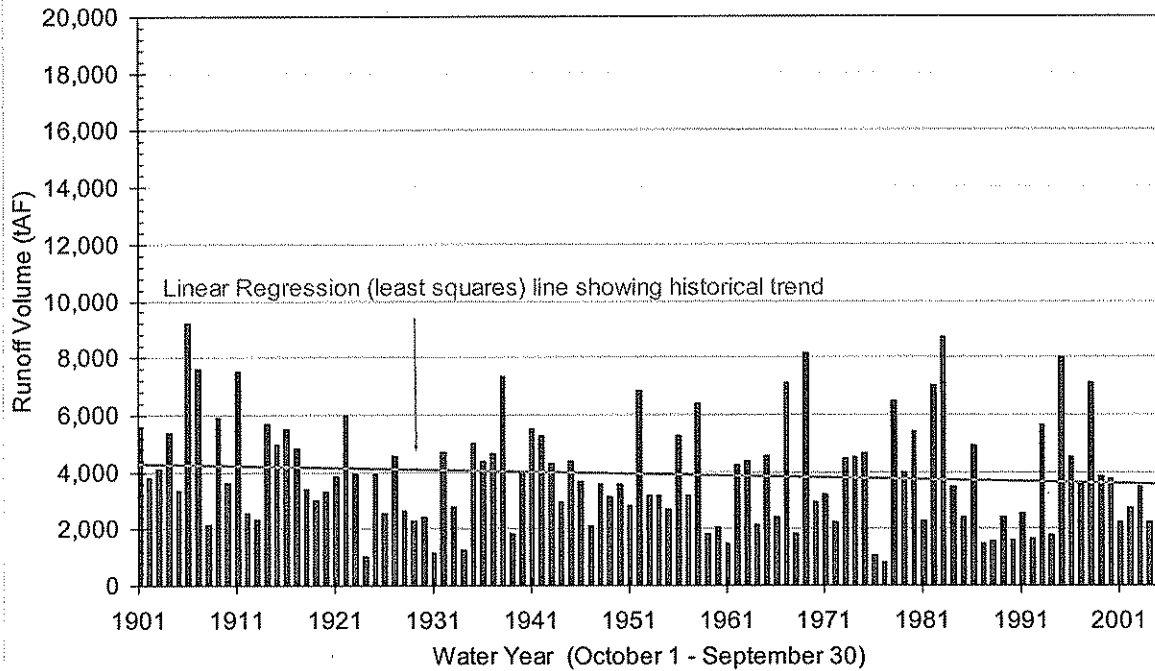


Figure 2-15 Annual April through July Unimpaired Runoff for Four San Joaquin Valley Rivers Compared to Total Unimpaired Annual Runoff*

* Based on the flows of four rivers in the San Joaquin Valley; Stanislaus River into New Melones Reservoir, Tuolumne River into Don Pedro Reservoir, Merced River into Lake McClure, and San Joaquin River into Lake Millerton.

a) Annual April through July Runoff Volume



b) Water Year Runoff Volume

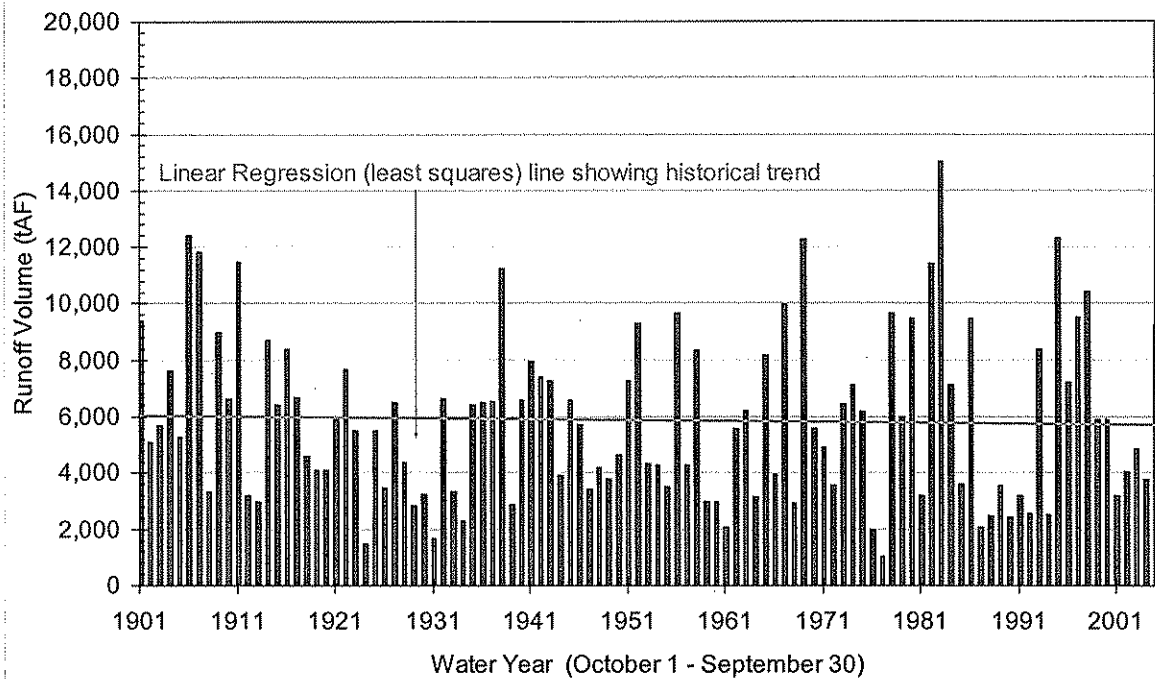


Figure 2-16 Total Unimpaired Runoff Volume for Four San Joaquin Valley Rivers*

*Based on the flows of four rivers in the San Joaquin Valley; Stanislaus River into New Melones Reservoir, Tuolumne River into Don Pedro Reservoir, Merced River into Lake McClure, and San Joaquin River into Lake Millerton. (taf) = thousand acre feet.

Some investigators have evaluated trends in Sierra runoff for different time periods over the past century. Figure 2-17 depicts two trends in April through July runoff as a percentage of total annual runoff for eight western Sierra rivers. No statistically significant downward or upward trend was determined for the period before 1945. However, the trend following 1945 is toward diminished runoff from April through July as compared to total annual runoff (Dettinger, 2005a).

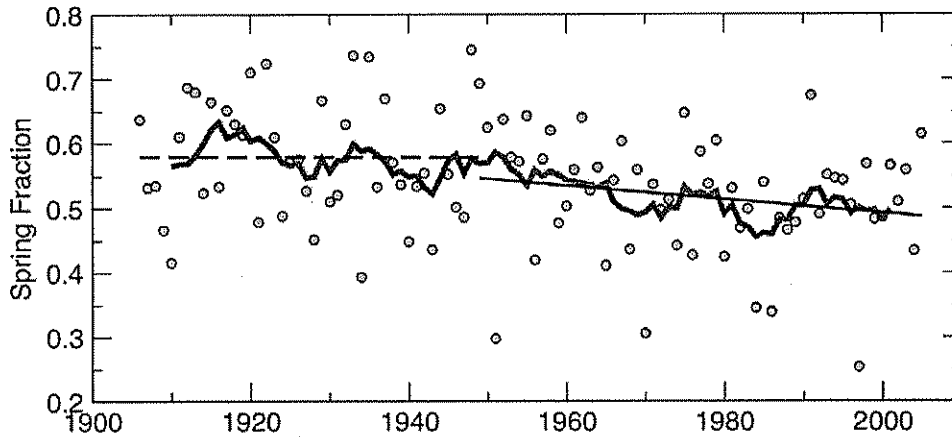


Figure 2-17 Annual April through July Unimpaired Runoff in the Central Valley Compared to Total Unimpaired Annual Runoff

Source: Dettinger, 2005a. (Updated by original author).
Explanation: Individual points depict yearly combined values for the Sacramento River at Bend Bridge (near Red Bluff), Feather River into Lake Oroville, Yuba River at Smartville, American River below Folsom Reservoir, Stanislaus River into New Melones Reservoir, Tuolumne River into Don Pedro Reservoir, Merced River into Lake McClure, and Kings River into Pine Flat Reservoir. The blue curve is the nine-year moving average of annual values. The dashed line is the linear trend prior to 1945. The solid line is the linear trend after 1945.

Updated runoff data for the Sacramento Valley and San Joaquin Valley, as discussed above, continue to support the conclusion from earlier analyses that there appears to be a long-term trend toward reduced April through July runoff compared to total annual runoff from the Sierra. It is reasonable to conclude that this trend is the likely result of climate change and warming and an attendant decline in Sierra snowpack. A portion of the trend may also be attributable to progressively earlier melting of Sierra snowpack due to warming.

The trend toward diminished April through July runoff, as compared to total annual runoff, appears to be stronger for the Sacramento Valley than for the San Joaquin Valley, as evidenced by Figure 2-13 and Figure 2-15. This may be due to elevation differences between the northern and southern Sierra. Rising temperatures could be expected to impact the northern Sierra snowpack to a greater degree than the southern Sierra snowpack because the northern Sierra is generally lower in elevation than the southern Sierra.

Table 2-4 summarizes runoff statistics and linear trends for the Sacramento and San Joaquin Valleys, selected river basins in the two valleys, and selected rivers elsewhere in the State where data could be readily obtained and where unimpaired flows could be determined or inferred. The

long-term trend in April through July runoff volumes for the Sacramento and San Joaquin valleys is downward, as are the trends for individual Sacramento Valley basins listed in the table. April through July runoff volume trends for most of the San Joaquin Valley basins listed in the table are also downward. These trends are consistent with the previously discussed conclusion that the Sierra snowpack is undergoing decline, possibly because of warming. Total water year runoff in the Sacramento Valley has an increasing trend while total water year runoff in the San Joaquin Valley appears to be decreasing on a long-term basis.

Outside of the Central Valley, the most noteworthy temporal change evident in Table 2-4 is an increasing trend in total water year runoff in the major river basins in the north coast portion of the State.

Table 2-4 Runoff Statistics and Trends for Selected River Basins in California

Basin/River System	Period of Record	Period A-J ¹ Average (TAF) ³	Period WY ² Average (TAF)	Period A-J Linear Trend (TAF/yr) ⁴	Period WY Linear Trend (TAF/yr) ⁴
Central Valley River Systems					
Sacramento River System ⁵	1906-2005	6,847	18,024	-17	3
San Joaquin System ⁶	1901-2005	3,922	5,900	-7	-3
Sacramento Valley Basins					
Sacramento at Bend Bridge	1906-2005	2,522	8,476	-3	6
Feather	1906-2005	1,901	4,490	-6	2
Yuba	1901-2005	1,096	2,372	-3	-2
American	1901-2005	1,359	2,739	-5	-3
North San Joaquin Valley Basins					
Cosumnes	1908-2005	127	369	0	0
Mokelumne	1901-2005	487	758	-1	-1
Stanislaus	1901-2005	745	1,175	-2	-1
Tuolumne	1901-2005	1,248	1,911	-1	0
Merced	1901-2005	646	997	-1	0
San Joaquin	1901-2005	1,283	1,816	-2	-1
South San Joaquin Valley Basins					
Kings	1901-2005	1,238	1,683	-2	-1
Kaweah	1901-2005	285	432	0	0
Tule	1930-2005	63	145	0	0
Kern at Isabella	1930-2005	453	697	0	1
Kern at Bakersfield	1901-2005	473	739	0	2

Table 2-4 Runoff Statistics and Trends for Selected River Basins in California (continued)

Basin/River System	Period of Record	Period A-J ¹ Average (TAF) ³	Period WY ² Average (TAF)	Period A-J Linear Trend (TAF/yr) ⁴	Period WY Linear Trend (TAF/yr) ⁴
Eastern Sierra Basins					
East Carson and West Walker	1922-2005	326	433	1	2
Truckee	1906-2005	274	452	-1	0
North Coast Basins					
Klamath	1928-2005*	1,665	4,646	1	7
Salmon	1912-2005*	521	1,288	0	2
Eel	1911-2005	914	5,493	0	12
Napa	1930-2005*	8	72	0	0
Russian	1941-2005	101	897	0	1
Central and South Coast Basins					
Arroyo Seco near Soledad	1906-2005	23	122	0	0
Arroyo Seco near Pasadena	1911-2005	2	7	0	0
Nacimiento	1916-2005	23	200	0	0
Santa Ana	1901-2005	21	60	0	0

Footnotes:

¹ A-J = April through July.

² WY = Water Year.

³ TAF = Thousand acre-feet.

⁴ Trend rounded to the nearest thousand acre-foot/year.

⁵ Composite of runoff data for the Sacramento River at Bend Bridge, Feather River into Lake Oroville, Yuba River at Smartville, and American River below Lake Folsom.

⁶ Composite of runoff data for the Stanislaus River into New Melones Reservoir, Tuolumne River into Don Pedro Reservoir, Merced River into Lake McClure, and the Kings River into Pine Flat Reservoir.

2.5.4 Projected Changes in Precipitation for California

2.5.4.1 Changes in the Amount of Precipitation

As discussed above, there are indications that total annual precipitation in some Northern California watersheds has been increasing. While the cause of this apparent change is unknown, it may be due in part to climate change since warming is expected to result in a more active hydrologic cycle.

Climate model projections for changes in total annual precipitation in California through the end of this century are mixed. Models predicting the greatest amount of warming generally predicted

moderate decreases in precipitation. Models projecting smaller increases in temperature tend to predict moderate increases in precipitation. When some of the most extreme projections are underweighted, the central tendency in the projections is toward moderately decreased precipitation (Dettinger, 2005b).

2.5.4.2 Changes in Snowpack

As discussed in Section 2.4, temperatures in California are projected to increase from about 2.5 to about 9 degrees Celsius by the end of this century as the result of climate change. One expected consequence of this is further reduction in the State's annual snowpack and earlier melting of snow.

Historically, average snowline elevations in California have ranged from about 4,500 feet in the north to above 6,000 feet in the southern Sierra. DWR staff estimates that the average snow-covered area totals about 13,200 square miles in the water supply producing basins of the Central Valley and the Trinity River above Lewiston. This is about 8 percent of the State's total land surface. The northern Sierra and Trinity mountains account for about 7,000 square miles of the 13,200 square mile total. The west slope of the southern Sierra accounts for the remainder.

Rising temperatures will cause reductions in the State's snowpack by raising snowline elevations and reducing the area where annual snowpack accumulates. A rudimentary analysis of the impact of rising temperatures on snowpack, shows that a 3 degree Celsius rise will likely cause snowlines to rise about 1,500 feet based on a moist lapse rate of 500 feet per 1 degree Celsius. This would cause a significant reduction in the amount of snow-covered area in the State and an estimated average annual loss of about 5 million acre-feet of effective water storage in snowpack.

Climate model studies support projections for continued reductions in the State's snowpack as the result of warming. Simulations under various amounts of temperature rise indicate that California's snowpack is very vulnerable to warming. One set of simulations by N. Knowles and D. R. Cayan (Knowles, 2002) provide the following projections for loss in April Sierra snowpack snow-water equivalent (in comparison to existing conditions) as a result of rising temperatures:

- 0.6 degree Celsius rise, ~5 percent loss
- 1.6 degrees Celsius rise, ~33 percent loss
- 2.1 degrees Celsius rise, ~50 percent loss

These three levels of average temperature rise were projected by Knowles and Cayan to occur by 2030, 2060 and 2090, respectively.

Losses in snow were projected to occur mainly at low to mid-altitudes. Loss of snowpack was projected to be greater in the northern Sierra and Cascades than in the southern Sierra due to the relative proportions of land at low and mid-elevations. At the highest temperature projection (increase of 2.1 degrees Celsius), the northern Sierra and Cascades were projected to lose 66

percent of their April snowpack, while the southern Sierra was projected to lose 43 percent of its snowpack.

Newer climate model studies, including those for the Intergovernmental Panel on Climate Change's 4th Assessment, due to be published in 2007, will provide a new set of temperature projections in addition to those already available. Most existing temperature projections, as well as those expected from the 4th Assessment, indicate that losses in the State's snowpack are likely to continue increasing through the end of this century.

Warming and loss of the State's snowpack will affect the operation of most major multipurpose reservoirs at low and mid-elevations in the Sierra. Operation of these reservoirs now includes maintaining empty flood-control space during winter months and then gradually allowing them to fill with snowmelt during the spring after the threat of storms and flooding has passed. Higher snow lines and more precipitation falling in the form of rain rather than snow will increase winter inflows to these reservoirs. Higher winter inflows will also likely mean that a greater portion of the total annual runoff volume will occur in the winter. Thus, more annual runoff will likely be passed through reservoirs and will not be available for hydropower production and water supply uses later in the year. Higher winter inflows may also diminish the ability of reservoir managers to store a portion of a year's runoff volume as annual carryover storage.

2.5.4.3 Other Effects

As discussed at the beginning of this section, climate change could affect the intensity, duration, and timing of precipitation events in California. It could also affect the spatial distribution and temporal variability of precipitation. Significant changes in one or more of these factors could have serious consequences for water resources management. While there may be some evidence that year-to-year variation in California's precipitation has increased over the past century, additional work is needed to determine the possible nature and extent of any changes that may already be occurring or could occur as a result of climate change.

2.6 Sea Level Rise

One of the major areas of concern related to global climate change is rising sea level. Worldwide average sea level appears to have risen about 0.3 to 0.6 of a foot over the past century based on tide gauge data (IPCC, 2001a). Rising worldwide average sea level over the past century has primarily been attributed to:

- warming of the world's oceans and the related thermal expansion of ocean waters (steric changes)
- the addition of water to the world's oceans from the melting of land-based ice, such as from Greenland and southeast Alaska (eustatic changes)

Some researchers have attributed most of the worldwide rise to steric changes, although there is some uncertainty about the relative contributions of steric and eustatic changes (Munk, 2002). Worldwide average sea level is projected to rise from between 0.3 of a foot and 2.9 feet by 2100, as discussed below (IPCC, 2001a).

Earth could suddenly affect the State's climate and water resources, the frequency of their occurrence together with their projected effects are extremely difficult to predict.

2.11 Summary

As discussed in previous sections, climate change could cause significant impacts on California's water resources and water demand. Changes in temperature and precipitation patterns in the State have been observed over the past century. Further changes are expected over the next century due to climate change. Changes in sea level are also expected to occur in response to the changing climate. These changes in precipitation and temperature patterns across the State may have profound impacts on ecologic and water resources systems in the State.

There is a significant amount of uncertainty about the magnitude of climate change that will occur over this century. It is unlikely that this level of uncertainty will diminish significantly in the foreseeable future (Dettinger, 2005b). There is also uncertainty about changes in hydrologic conditions, aquatic ecosystems and water demand that could occur as the result of various amounts of climate change. In the following chapters of this report, an initial attempt is made to quantify the impacts of climate change on some aspects of California's water resources.

2.12 References

Sources for illustrations are referenced below each illustration. References cited in the chapter text are listed below.

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EXHIBIT C - 11



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FUTURE OF WATER

Future of Water

LADWP will continue to manage the City's water resources to provide for the highest level of supply reliability in a sustainable manner to its customers.



In addition to hydrologic variability, the reliability of the City's water supply is linked to environmental issues affecting areas where the supply sources originate. Significant investments have and will continue to be made by the City to ensure supply reliability through proper environmental stewardship. This responsibility effectively spans the Western portion of the United States, from the basins of the Colorado River and Owens River, and the Sacramento-San Joaquin River delta. Working with other agencies, environmental stewardship is a responsibility that must be fulfilled to ensure a level of water supply certainty for the City.

Ever mindful of the fact that water imported from other areas supplies most of the water used in the City, water resource best management practices require that the highest level of use efficiency be maintained within the service area. Conservation will continue to be a foundation of LADWP water resource management policy, and will be implemented to the fullest extent concurrent with further consideration of alternative water supplies.

As a municipal agency serving a diverse cultural and economic background, LADWP will continue its efforts to reliably deliver a safe and economical water supply. To this end, further consideration will be given to projects that have the greatest potential to produce water at a reasonable cost.

LADWP will maintain its current course for water resource management. A coordinated approach to effectively fulfilling environmental responsibilities and water use efficiency will be pursued to deliver a reliable, cost-effective water supply to citizens of the City of Los Angeles.

CUSTOMER SERVICE

- Access Your Account
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- Transfer Service
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- Contact Customer Service

▪ **ESPAÑOL**

EXHIBIT D - 1



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June 5, 2007

Honorable Antonio R. Villaraigosa, Mayor
Honorable Rockard J. Delgadillo, City Attorney
Honorable Members of the City Council
of the City of Los Angeles

SUBJECT: CITY'S OVERSIGHT OF PLAYA VISTA PHASE I DEVELOPMENT

My Audit Division conducted a review of the City's oversight responsibilities for the Playa Vista-Phase I Residential Development Project. The primary objectives were to determine if the responsible City Departments adequately ensured the guidelines established by the Chief Legislative Analyst (CLA) were followed.

Background

Playa Vista is a large commercial and residential development project in West Los Angeles. The site has varying concentration levels of methane gas and other possible contaminants in the soil and underground. In 2000, the CLA convened a working group consisting of the Department of Building and Safety (DBS), the Department of City Planning (Planning), the Department of Public Works Bureau of Engineering (BOE), and sought input from other City Departments and contracted peer reviewers to perform studies of the land and offer recommendations. After an extensive study, the CLA prepared a report entitled "City Investigation of Potential Issues of Concern for Community Facilities District No. 4 Playa Vista Development Project." The report included methane mitigation guidelines prepared by a Playa Vista-hired consultant, Sepich Associates Methane Specialists, in conjunction with other expert consultants and DBS. The CLA Report was presented to the Council in May 2001. Though not mandated by City ordinance until February 2004, the CLA Report became the accepted authoritative guidelines by all City Departments involved, for methane mitigation at Playa Vista – Phase I.

DBS, LAFD and Planning had significant oversight responsibilities with regards to ensuring compliance with the 2001 CLA Report. Some of these responsibilities

Honorable Antonio R. Villaraigosa, Mayor
Honorable Rockard J. Delgadillo, City Attorney
Honorable Members of the City Council
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required Departments to expand from their traditional jurisdictions in order meet the challenges posed by this large-scale, technologically advanced project.

The scope of this review was limited to Departmental oversight of residential developments of Playa Vista-Phase I. It should be noted that a large portion of Playa Vista has yet to be developed. Groundbreaking for a 64-acre area zoned for Phase I commercial development commenced in April 2007. The City Council has also approved a second phase of development, "The Village at Playa Vista," which will include an additional 2,600 residential units, retail stores, restaurants and parks. The anticipated groundbreaking for Playa Vista Phase II is in 2008.

Summary of Review Results

Based on our review, we found that the required inspections, testing and approvals related to the installation of methane mitigation systems were performed for multi-family dwellings. However, the CLA Report did not make a distinction between single-family dwellings and multi-family or other commercial developments. In addition, it did not address potential conflicts over City departmental jurisdictions or professional qualifications when assigning oversight responsibilities. The vagueness of the CLA Report led to conflicting interpretations of the guidelines by DBS and LAFD. As a result, we found that there was inconsistent installation and acceptance testing of detection systems in some single-family homes.

We noted issues that must be addressed to ensure consistent protocols are followed relative to any and all City construction projects. City departments with oversight responsibilities must be provided with clearer lines of authority for the design, installation and testing of methane systems. The lack of clear authority resulted in poor coordination among City departments during Phase I. In addition, our review noted poor record-keeping by DBS that resulted in inconsistent documentation of the permit approval process. Significant issues and related recommendations are presented here for your consideration.

The Phase I guidelines were inadequate by not clearly defining the requirements for different types of properties.

The 2001 CLA Report contains a set of guidelines called the "Playa Vista Methane Prevention, Detection and Monitoring Program." The guidelines state that a methane system, including prevention, detection and monitoring systems, will be implemented for properties located at Playa Vista. However, no

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distinction was made between commercial or residential properties, or different types of residential projects, such as single-family and multi-family homes.

Our review noted that all properties included a methane prevention system, and all but one, a development of single-family homes located in a lower level methane area, also included detection systems.

- DBS approved building plans without the inclusion of a methane detection system for these homes citing a footnote (#5) to the guidelines, which states that the number, type, and location of detectors or "approved equivalents" can be determined by a qualified methane engineer. DBS considered the elimination of a detection system, as endorsed by a qualified methane engineer citing the adequacy of prevention systems for these homes, as an "approved equivalent".
- The guidelines also state that all buildings will be equipped with methane detection systems and that the detectors will be approved by DBS and LAFD. Another footnote (#6) states that when methane is detected, audio and visual alarms and automatic notification of LAFD shall be triggered. The interpretation made by DBS to eliminate methane detectors under footnote #5 appears to contradict the requirements stated in footnote #6, since without methane detectors, alarms could never be activated, nor could LAFD be notified.

In addition, the guidelines state that detection systems will be tested and approved pursuant to LAFD standards. The guidelines do not, however, take into consideration what those LAFD standards consist of and who is given the authority and responsibility to perform testing to LAFD standards.

- The LAFD does not have a certification program that allows anyone outside of the LAFD to perform this type of testing, nor does the LAFD have the authority to perform testing of single-family homes at Playa Vista.

As a result of the guidelines' vagueness, which were subject to interpretation by both DBS and LAFD, one single-family home development has no methane detection system installed, and tests of detection systems at other single-family dwellings were performed on an inconsistent basis.

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Recommendations

1. *Mayor and City Council should direct participating Departments to establish an agreed-upon set of guidelines which clearly define methane mitigation requirements for both multi-family and single-family homes in Playa Vista Phase II.*
2. *Ensure that guidelines do not conflict with any City ordinances, administrative codes or laws.*
3. *Request that the City Council adopt the guidelines.*

A lack of clear direction regarding their roles and responsibilities resulted in poor coordination among City Departments.

In June 2001, the City Council directed the Department of City Planning (Planning) to oversee the implementation of methane mitigation measures by all agencies constructing facilities at Playa Vista. In addition, City departments were directed to coordinate with Planning regarding methane mitigation measure implementation, including taking enforcement actions as appropriate. However, there is no mention in the CLA guidelines of Planning's role over the project.

- Participating department representatives, led by Planning, developed a comprehensive document known as the "matrix" to specify each department's oversight responsibility and to ensure that all activities had received appropriate authorization. However, the document has never been finalized and remains in draft format. DBS and Planning also have varying interpretations of the primary purpose of the matrix, and of the importance it plays in ensuring compliance with the CLA guidelines.
- Planning is not ordinarily included as an approver of a Temporary Certificate of Occupancy (TCO), since their oversight does not include life-safety issues. However, based on inter-departmental discussions, and in the absence of clear delegation of authority, Planning perceived their role to become, in effect, the final reviewer prior to the issuance of TCOs and COs, in order to ensure that all Departments' respective oversight responsibilities had been fulfilled.
- During a 2005 site visit, Planning discovered that one development was given TCO authorization by DBS, and residents had moved into their

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homes without final certification from LAFD or Planning. Planning management stated that they lacked the authority to hold approval of TCOs.

The CLA Report states that DBS has the responsibility to approve the design and implementation of methane systems and that methane detection systems will be tested and approved pursuant to LAFD standards.

- DBS inspectors must ensure that systems have been installed according to the stated building plans; however, we noted that DBS relied on non-City engineers, consultants and Deputy Inspectors to assure that the systems were operational. We also noted that the City has no certification program for Deputy Methane Inspectors; instead, DBS required the manufacturers of the methane systems to certify the deputy methane inspectors.
- The LAFD performs acceptance testing of the methane detection systems to ensure that they meet all of the required detection and emergency alert standards. However, since LAFD's typical jurisdiction includes only commercial buildings and multi-unit residential structures, single-family homes were not required to be inspected by LAFD.
- LAFD did perform acceptance tests for some single family homes to ensure that their systems operated appropriately. However, in 2005 the testing ceased based on an agreement signed by DBS and LAFD management stating that "testing and approval of methane systems shall be certified by the installer and engineer of record or someone certified by LAFD," however, the LAFD also did not have a methane certification program. As a result, the testing was performed by contracted installers who provided only a certification that the system was installed, calibrated, and functional, instead of being independently tested by LAFD to its standards.
- This lack of clearly defined responsibilities continued during our review, when DBS and LAFD entered into a second written agreement in February 2007, requiring that all methane detection systems in single-family dwellings be tested and approved using LAFD standards and procedures, and that acceptance testing be conducted by LAFD inspectors.

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As a result of the Report's unclear jurisdictional authority, testing of methane detection systems for single-family homes was performed on an inconsistent basis. In addition, LAFD and Planning did not approve Temporary Certificates of Occupancy for one single-family home development, since LAFD inspectors had not completed acceptance testing.

Recommendations

4. *The Mayor and City Council should designate a City Department which has the responsibility, expertise and authority to lead the Playa Vista Phase II project*
5. *Mayor and Council should more clearly define the roles, responsibilities and jurisdictional authority of DBS and LAFD regarding the standards pertaining to the installation, inspection and testing of methane systems for all structures at Playa Vista.*
6. *DBS and LAFD management should require more formalized methane training for all staff with oversight responsibilities over inspection and approval of methane systems, and develop a certification program for Deputy Inspectors and others who perform methane-related inspections and testing on behalf of the City.*

DBS' poor record-keeping resulted in inconsistencies over project documentation and the permit approval process.

DBS inspection documents had to be individually retrieved from each field inspector because there is no centralized record-keeping system organized by site location. DBS also stated they could not guarantee that all the requested documents had been retrieved, and that certain documents may no longer exist.

While the completeness of the files varied and not all individual permits for the sites had adequate documentation to substantiate appropriate approval, we focused on those documents that provided assurance that methane mitigation systems were inspected according to approved plans.

- DBS explained that there is no uniform process for crosschecking or following up on specific open permits by an assigned inspector or for a given site location.

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- During our review, DBS consolidated Playa Vista inspection reports and discovered that many permits were never closed on projects where Certificates of Occupancy had been issued. DBS subsequently closed these permits as part of their "housekeeping" procedures.

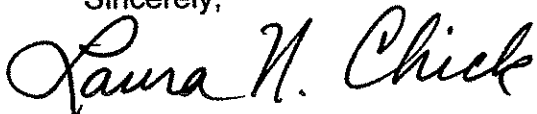
Although DBS exhibited poor record-keeping and had many permits that remained open for Playa Vista properties, nothing came to our attention to indicate that required inspections relating to methane mitigation, or the project as a whole, were not performed.

Recommendation

7. DBS management should improve internal record-keeping procedures to ensure the approval of open permits prior to the issuance of certificates of occupancy.

We would like to thank the management and staff of DBS, LAFD and Planning for fully cooperating with our review. If you have any questions, please contact Rushmore D. Cervantes, Chief Deputy Controller, at (213) 978-7323.

Sincerely,



LAURA N. CHICK
City Controller

cc: Andrew A. Adelman, General Manager, Department of Building and Safety
Chief Douglas Barry, Los Angeles Fire Department
S. Gail Goldberg, General Manager, Department of City Planning

EXHIBIT D - 2

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

RECEIVED
LOS ANGELES CITY CONTROLLER

2007 AUG -1 PM 1:07

DATE: July 30, 2007

TO: Honorable Laura N. Chick, City Controller

FROM: Gail Goldberg *GG*
Director
Department of City Planning

Douglas Barry *DLB*
Interim Fire Chief
Fire Department

Andrew A. Adelman, P.E. *aa*
General Manager
Building and Safety

SUBJECT: **RESPONSE TO CONTROLLER'S REVIEW OF THE CITY'S
OVERSIGHT OF PLAYA VISTA PHASE I DEVELOPMENT**

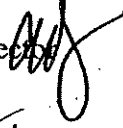
According to your request, attached is the response previously transmitted to your office on July 6, 2007, which was prepared in response to your letter of June 18, 2007.


Attachment

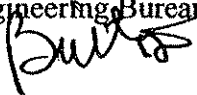
CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

DATE: July 6, 2007

TO: Honorable Laura N. Chick, City Controller

FROM: Eva Yuan-McDaniel, Deputy Director
Department of City Planning 

Chief Jimmy Hill, Fire Marshal
Fire Department 

Hector Buitrago, Engineering Bureau Chief
Building and Safety 

SUBJECT: **RESPONSE TO CONTROLLER'S REVIEW OF THE CITY'S
OVERSIGHT RESPONSIBILITIES FOR THE PLAYA VISTA - PHASE I
DEVELOPMENT PROJECT**

The City Planning Department, Fire Department, and Department of Building and Safety (Departments) received your letter of June 18, 2007 requesting a response on the timeframe and actions to be taken to implement the report recommendations of the review of the City's oversight responsibilities for the Playa Vista - Phase I Development.

The Departments appreciate the effort you and your staff made in conducting an objective review of the City's oversight of the Playa Vista Phase I development project. The findings and recommendations of the review will be used as a road map to make further improvements and enhancements.

The review emphasizes that there are several important issues relating to the clarity of requirements, responsibility, authority, and roles for the enforcement of the Playa Vista Phase I guidelines. It is very encouraging that the reviewers indicated that "nothing came to our attention to indicate that required inspections relating to methane mitigation, or the project as a whole, were not preformed."

On June 27, 2007, the Departments met to review the three findings and seven recommendations outlined in the review. Subsequently, the Departments have jointly developed an action plan outlined in the following matrix entitled, "Actions in Response to the Controller's Review of the City's Oversight of the Playa Vista Phase I Development." The matrix outlines the actions and time lines necessary to address each of the recommendations.

The Departments appreciate the effort you and your staff made in reviewing and making recommendations for clearer lines of authority for the enforcement of the Playa Vista Phase I guidelines. Please call either Eva Yuan-McDaniel, Deputy Planning Director, Department of City Planning at 213-978-1273, Chief Jimmy Hill, Fire Marshall, LAFD, at 213-978-3570, or Hector Buitrago, Chief, Engineering Bureau, LADBS at (213) 482-0440 if we can provide you with additional information.

ACTIONS IN RESPONSE TO THE CONTROLLER'S REVIEW OF THE CITY'S OVERSIGHT RESPONSIBILITIES FOR THE PLAYA VISTA PHASE I DEVELOPMENT

REVIEW ISSUE	REVIEW RECOMMENDATION	ACTIONS	STATUS COMMENTS & CLARIFICATIONS
<p><u>ISSUE #1:</u> The Phase I guidelines were inadequate by not clearly defining the requirements for different types of properties.</p>	<p><u>RECOMMENDATION #1:</u> Mayor and City Council should direct participating Departments to establish an agreed-upon set of guidelines which clearly define methane mitigation requirements for both multi-family and single-family homes in Playa Vista Phase II.</p>	<p>The LAFD and LADBS will update previously established written agreements and information bulletins to better delineate responsibilities and clearly define methane mitigation requirements for both multi-family and single-family homes.</p>	<p>Complete by October 2007</p>
	<p><u>RECOMMENDATION #2:</u> Ensure that guidelines do not conflict with any City ordinances, administrative codes or laws.</p> <p><u>RECOMMENDATION #3:</u> Request that the City Council adopt the guidelines.</p>	<p>LAFD and LADBS will re-examine the methane guidelines to ensure there are no conflicts between the guidelines with any City ordinances, administrative codes or laws.</p> <p>The Los Angeles City Council has codified the methane mitigation guidelines on February 4, 2004.</p>	<p>Complete by October 2007</p> <p>Done</p>

**ACTIONS IN RESPONSE TO THE CONTROLLER'S REVIEW OF THE CITY'S OVERSIGHT RESPONSIBILITIES FOR THE
PLAYA VISTA PHASE I DEVELOPMENT**

REVIEW ISSUE	REVIEW RECOMMENDATION	ACTIONS	STATUS COMMENTS & CLARIFICATIONS
<p><u>ISSUE #2:</u> A lack of clear direction regarding their roles and responsibilities resulted in poor coordination among City Departments.</p>	<p><u>RECOMMENDATION #4:</u> The Mayor and City Council should designate a City Department which has the responsibility, expertise and authority to lead the Playa Vista Phase II project.</p>	<p>The Phase II EIR requires a Mitigation, Monitoring and Reporting Program (MMRP) that specifies the applicable project enforcement and monitoring agencies which have different expertise and authorities as specified in the City Charter and Municipal Code. Further, under the City's Development Agreement with Playa Vista Capital, an annual evaluation by the Department of City Planning is required to determine compliance in good faith with the terms and conditions of the Phase II EIR.</p>	
	<p><u>RECOMMENDATION #5:</u> Mayor and Council should more clearly define the roles, responsibilities and jurisdictional authority of LADBS and LAFD regarding the standards pertaining to the installation, inspection and testing of methane systems for all structures at Playa Vista.</p>	<p>LAFD and LADBS are establishing clear written agreements for reviewing, approving and inspecting methane systems. The written agreements are being updated to define roles, responsibilities and jurisdictional authority between the two Departments for all structures at Playa Vista.</p>	<p>Complete by October 2007.</p>

ACTIONS IN RESPONSE TO THE CONTROLLER'S REVIEW OF THE CITY'S OVERSIGHT RESPONSIBILITIES FOR THE PLAYA VISTA PHASE I DEVELOPMENT

REVIEW ISSUE	REVIEW RECOMMENDATION	ACTIONS	STATUS COMMENTS & CLARIFICATIONS
<p><u>ISSUE #2:</u> (continued)</p>	<p><u>RECOMMENDATION #6:</u> LADBS and LAFD management should more formalize methane training for all staff with oversight responsibilities over inspection and approval of methane systems, and develop a certification program for Deputy Inspectors and others who perform methane-related inspections and testing on behalf of the City.</p>	<ul style="list-style-type: none"> • LAFD is in the process of implementing a Regulation #4, methane acceptance testing certification program, following the approval of the certification protocol by the City Council. • All electronic components (active system) will be acceptance tested by LAFD inspectors or qualified testers certified by LAFD. • Formal training will be provided for LADBS inspection staff by LAFD. • LADBS will establish a Deputy Inspector program to monitor the installation of the impervious methane membrane barrier. 	<p>Complete by October 2007</p> <p>Complete by October 2007</p> <p>Complete by December 2007</p> <p>Complete by November 2007</p>
<p><u>ISSUE #3:</u> LADBS' poor record-keeping resulted in inconsistencies over project documentation and the permit approval process.</p>	<p><u>RECOMMENDATION #7:</u> LADBS management should improve internal record-keeping procedures to ensure the approval of open permits prior to the issuance of certificates of occupancy.</p>	<p>LADBS is in the process of implementing the recommendations from the Controllers Performance Audit of July 10, 2006 which stipulates similar recommendations.</p>	<p>Complete by February 2008</p>