

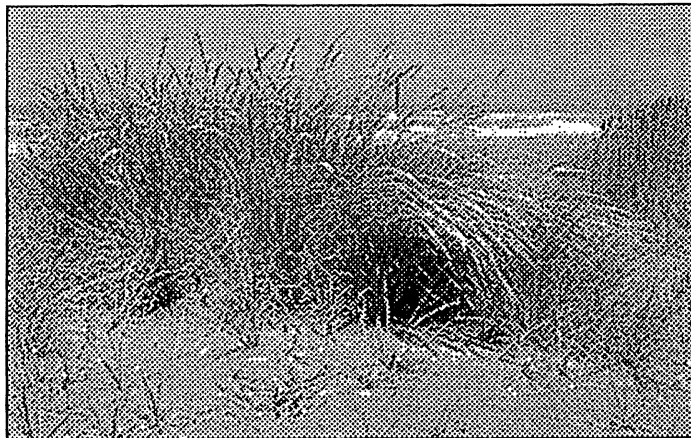
Conservation Topics

Comment Letter No. 172
Attachment 172bb

[[Up](#)] [[Desert](#)] [[ESA](#)] [[Exotics](#)] [[Forestry](#)] [[Grazing](#)] [[Legislation](#)]
[[NCCP-HCPs](#)] [[UC Merced](#)] [[Wetlands](#)]

Invasive Exotics

Invasive exotics are quickly becoming the premier threat to California's unique native plants and plant communities. They can invade and quickly alter areas otherwise protected from impacts. CNPS urges agencies and others involved in land management to develop and implement invasive exotic control and eradication programs. CNPS chapter members participate in a wide variety of local programs to help with this problem.



Issue Statement

Although the term 'exotic' somehow brings up the image of a plant holding a drink with a little umbrella, the reality is that exotic means 'out-of-place' in the California ecosystem. Although there has been debate about how long a plant has to have been resident in California to be considered native, a practical working definition employs pre-European-contact as the cut-off point, while those introduced since that time are considered exotic or non-native.

The problem develops with those exotic plants that spread into the surrounding ecosystems and displace the native plants. They do this either because they are free of their home-range diseases, more aggressive in their growth habits, or because they put out more seed that lasts longer in the soil, or because there is nothing to eat them or compete with them in the California ecosystem that is being invaded. These exotic plant properties may cause a crisis in the web of life of the invaded ecosystem, for the newcomer is not a food source and may support no life, while the displaced native plants take with them the pyramid of life that used the plant as the prime recycler of solar energy.

To the casual viewer there is seldom anything to see that would indicate an invasion of exotic plants is taking place. The green hills of spring are usually the green grasses of Europe that were introduced by

Welcome

- [About CNPS](#)
- [Native Plants?](#)
- [Fun Activities](#)
- [Great Ideas](#)

Action Alerts!

- [Discussions](#)

CNPS Inventory

On-line

CNPS Manual of

California

Vegetation

On-line

Programs, Etc.

- [Conservation](#)
- [Legislation](#)
- [Newhall](#)
- [NCCP-HCPs](#)
- [UC Merced](#)

Education

Plant Science

Local Flora

Rare Plants

Vegetation

Photography

Publications

Fremontia

Bulletin

Policy Archive

State Meetings

Native Plant

Conservation

Campaign

Local Chapters

Sales & Events

Newsletters

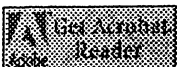
Membership

Kid's Stuff

Photo Gallery

Bookstore

Links...



the hills of Big Sur might look like they have always been there. However, the sad fact is that the invasion is sometimes fast; so fast that within a decade the ecosystem of old has completely vanished.

CNPS has been working with the California Exotic Pest Plant Council (CalEPPC) and the California Department of Food and Agriculture to identify those plants which are putting California's flora at greatest risk, and to find methods to eradicate the menace. Agencies such as the Bureau of Land Management, the National Park Service, US Forest Service, and California state parks are also active participants in the fight against pest plants. Weed Management Areas are springing up all over the state, usually covering one or two counties. They are coalitions of private landowners, public agencies, non-profit organizations, and grassroots activists formed to combat a common enemy.

The need to protect natural ecosystems from invasion has run on a parallel and much less well-funded path than programs that are designed to control agricultural pest plants, although the two paths are beginning to converge. Agriculturists have actually opposed including non-crop-damaging exotic plants in state and federal eradication programs, as those programs may ban the shipment or interstate travel of pest-contaminated products, and obviously cause them some problems. However the swift occupation of wildlands and ranching lands by pests such as yellow starthistle, artichoke thistle, and whitetop have caused agriculturists and habitat conservationists to cooperate.

What are the solutions to some of these plant invasions? Plants can sometimes be removed by hand, especially where invasions are freshly started. The policy is to always work from the outside of the population, forcing the invader into a smaller and smaller perimeter. Small outlying populations should be removed early in the process. Piecemeal removal simply does not work. Sometimes the plants resist hand removal, due to a pervasive root structure or to their ability to rereoot from small fragments. Two troublesome plants of the latter type are Cape (German) ivy and giant reed (arundo). Cape ivy, which was brought here from South Africa, is choking the summer-cool areas of the state, particularly the riparian corridors of coastal valleys; it may be capable of also invading inland riparian habitats. Giant reed, a bamboo-like grass that grows to the height of a house, invades riparian areas. Both the ivy and the reed can root from small segments, and therefore the worst thing you can do is hit them with a weed-whacker. If you pull the plant, bits and pieces break off, and the root remains to resprout. It can be removed by very intense manual labor, but this is not possible for multi-acre invasions. The only answer seems to be chemical, and there are some relatively benign herbicides (Roundup, for example) which seem to do the trick. Herbicide should be used with caution, but in many cases there are seldom viable alternatives, given the limited labor pools and finances of conservation organizations and public agencies.

Additional Information

CNPS Policy on Invasive Exotic Plants

Weed Management Areas

Take a look at CalFlora's expanded weed photos
and mapping www.calflora.org

Internet Links on Exotic Plants

CNPS Contacts

Send email inquiries to conservation@cnps.org.

© 1999-2003 CNPS

[[CNPS Home](#)] [[Up](#)] [[Site Contents](#)] [[Search CNPS](#)] [[Discussion Forums](#)]



Dedicated to the preservation of California native flora

California Native Plant Society
2707 K Street, Suite 1 • Sacramento, CA 95816-5113
(916) 447-2677 • fax (916) 447-2727 • cnps@cnps.org

washingtonpost.com

EPA Links Lung Cancer, Diesel Exhaust

Study Says Long-Term Exposure Also Can Cause Respiratory Illnesses

By Eric Pianin
Washington Post Staff Writer
Wednesday, September 4, 2002; Page A02

The Environmental Protection Agency concluded yesterday that long-term exposure to exhaust from diesel engines likely causes lung cancer in humans and triggers a variety of other lung and respiratory illnesses.

The study, the culmination of decades of research, highlights the health problems posed by the complex mix of gases and fine particles emitted by heavy-duty diesel engines operating on the nation's highways, farms and construction sites.

"Overall, the evidence for a potential cancer hazard to humans resulting from chronic inhalation exposure to [diesel emissions] is persuasive," the report states.

The study, involving tests on occupational exposure and on animals, focused on diesel engines manufactured before the mid-1990s, when the government began pressing for tougher emission standards. With new engine and fuel technology expected to produce significantly cleaner engine exhaust by 2007, experts project a 90 percent reduction, from today's levels, in health-threatening exhaust particles from on-road vehicles.

"The agency expects significant environmental and public health benefits as the environmental performance of diesel engines and diesel fuels improves," said Paul Gilman of EPA's Office of Research and Development.

Although the EPA's final assessment echoes preliminary agency findings and other documents from various world health organizations and studies in California, it provides added urgency to efforts by the EPA and others to tighten diesel emission standards under the Clean Air Act.

A federal appeals court in May unanimously upheld a Clinton administration regulation requiring a speedy and dramatic reduction in pollution from large trucks and buses. That rule -- strongly contested by truck manufacturers and diesel fuel refiners because of the associated costs -- would cut emissions of particulate matter by 90 percent and nitrogen oxides by 95 percent, beginning in 2007.

The Bush administration has largely taken a strong stand in support of the tougher emissions standards. Last month, the White House and EPA rejected a plea from House Speaker J. Dennis Hastert (R-Ill.) and other lawmakers to postpone the new anti-pollution standards for long-haul diesel trucks. The standards will provide stiff penalties for engine manufacturers that don't meet an October deadline for compliance under a consent decree.

The administration has also announced it will increase efforts to regulate emissions from off-road diesel-driven machinery and equipment, such as farm equipment and earth movers. A study by state air pollution control officials found that more than 8,500 premature deaths are caused annually by extraordinarily high levels of air pollution from such machinery.

Some environmental groups have voiced concern that EPA and White House officials might attempt to dilute the effectiveness of the Clinton rules governing on-road diesel trucks and buses. That's because administration

officials have said they would consider incentives to encourage engine makers and refineries to change engine designs and switch to low-sulfur diesel fuel for off-road vehicles by 2006, in return for a reduction in the emission standards for trucks and buses.

One approach under consideration is to set an emissions cap for on-road and off-road vehicles and machinery, and then create a market-based system to allow companies to buy and trade credits for off-road and on-road emissions.

"Children riding buses back to school today need stronger protections against the health impacts of diesel exhaust, but the Bush administration is considering rolling back clean air standards for diesel buses and trucks," said Emily Figdor, clean air advocate for the U.S. Public Interest Research Group. "Until recently, the Bush administration appeared committed to ushering in the next generation of diesel vehicles."

EPA spokesman Joe Martyak disputed assertions that the administration was backing away from its commitment to reducing health-threatening diesel emissions.

"We're already sensitive to the importance of this issue, which is why we are moving along on the diesel issue, on-road and off-road, with an aggressive schedule," he said. "We've been well aware of the health implications and impact of [diesel engine particulate matter] and this report affirms some of those concerns."

The EPA's 651-page diesel health assessment report cited occupational health studies and tests on animals showing diesel emissions to be a carcinogen, or cancer-causing substance. While there remain uncertainties, the report said, "it is reasonable to presume that the hazard extends to environmental exposure levels" as well.

"The overall evidence for potential human health effects of diesel exhausts is persuasive," the report added.

© 2002 The Washington Post Company

Local Offices Donate Volunteer Take Action News/Reporter Center Contact Us

AMERICAN LUNG ASSOCIATION
of California

Working to prevent lung disease and promote lung health
Improving Life, One Breath at a Time

in the spotlight

May is Clean Air Month! -- May 2003

FREE E-NEWS

your email address

Subscribe

What's new

- Quit Smoking
- Tobacco Control
- Asthma
- Chronic Lung Disease
- Tuberculosis
- Outdoor Air Quality
- Indoor Air Quality
- Flu

- Research Grants
- Advocacy
- Thoracic Society
- Español

American Lung Assoc. (National)

- Home
- About Us
- Contact Us
- Make a Donation
- Volunteer
- Event Calendar
- Local Offices
- News/Reporter Center
- California LungNet

SEARCH

Public Health and Diesel

Despite remarkable progress in cleaning up the air over the last 30 years, 95 percent of Californians still live in areas that fail to meet health-based standards for a variety of air pollutants. Diesel exhaust is a major source of air pollution, which contributes to lung and other types of cancer, respiratory tract infections and lung diseases such as asthma, emphysema and chronic bronchitis. Lung disease is a leading cause of death in America, killing nearly 350,000 people each year, and those numbers are growing.

No Smog Check for Buses and Trucks

While California has been working to reduce car emissions through the use of smog-controlling devices like catalytic converters and maintenance and inspection programs like the Smog Check Program, diesel buses and trucks have gone relatively uncontrolled. Despite their small numbers compared to the total number of vehicles in California, diesel engines account for 40 percent of the nitrogen oxide and about 60 percent of the total particulate matter from mobile sources.

Diesel Exhaust and Health

Since 1990, diesel exhaust has been listed as a known carcinogen under California's Proposition 65, and in 1998, the California Air Resources Board (CARB) formally listed diesel particulate as a toxic air contaminant. The extensive scientific literature demonstrates that exposure to diesel exhaust increases the risk of developing lung cancer and other non-cancer health problems.

In listing diesel as a toxic air contaminant, CARB determined that the increased cancer risk from diesel particulates could cause premature deaths in more than 14,000 Californians exposed to diesel pollution over a lifetime.

Diesel exhaust contains hundreds of constituent chemicals, including many that are human toxicants, carcinogens, or present reproductive hazards. Forty chemicals in diesel exhaust are on California's list of toxic air contaminants, and California residents face high diesel-related health risks based on the heavy concentration of diesel truck traffic in urbanized areas and recent reports demonstrating that diesel cancer risks far outweigh cancer risks from other toxic air contaminants.

Diesel exhaust is a major source of particle pollution in California. Ninety-four percent of diesel emissions are estimated to be fine particles, less than 2.5 microns in diameter, which can bypass respiratory defense mechanisms and lodge deep in the lungs. Numerous studies have found that fine particles impair lung function,

emphysema, and are associated with premature deaths. Dozens of studies link airborne fine particle concentrations to increased hospital admissions for respiratory diseases, chronic obstructive lung disease, pneumonia and heart disease.

Diesel is also a major contributor to ozone pollution in California. Ozone air pollution, generated by nitrogen oxide and hydrocarbons from fuel combustion, is a powerful respiratory irritant that may lead to shortness of breath, chest pain, wheezing, coughing, and exacerbation of respiratory illnesses such as asthma. Long-term and repeated exposures may lead to large reductions in lung function and inflammation of the lung lining.

Recent studies on the relationship between asthmatic responses and proximity to major roadways add to concerns about diesel's contribution to asthma. Studies have shown that the proximity of a child's school or home to major roads may be linked to asthma, and the severity of children's asthmatic symptoms increases with proximity to truck traffic. Studies are ongoing in this area of research.

Recent reports by CARB and the South Coast Air Quality Management District have concluded that diesel exhaust is the most significant source of air toxics in California and accounts for more than 70 percent of the cancer risk statewide from toxic air contaminants. While the particulate component of diesel was specifically listed as a toxic air contaminant by CARB, both the particulate and hydrocarbon components of diesel have been associated with diesel toxic risks.

Vulnerable Populations Most at Risk

It is impossible for most people to avoid exposure to diesel exhaust. Trucks and buses are everywhere. To make matters worse, the most vulnerable among us are being exposed to the most diesel exhaust.

Children are among those most vulnerable to the health risks of diesel exhaust exposure, yet they ride on some of the oldest and most polluting diesel buses on the road today, sometimes for hours at a time. Constant, significant exposure to diesel exhaust, coupled with a child's heightened vulnerability to pollution, is widely recognized as a potential cause of severe health problems in children. It is well known, for example, that children raised in heavily polluted areas face the prospect of reduced lung capacity and prematurely aged lungs. In addition, childhood asthma is on the rise and is, among chronic conditions, the leading cause of absenteeism from school.

Another vulnerable population is low-income communities where large numbers of people of color and the elderly live. These communities are often located near freeways, shipping yards, and other areas with heavy diesel truck traffic.

Diesel emissions are also released throughout the process of fuel production, refining, distribution and dispensing. Diesel refining, distribution and storage facilities are predominantly located in these communities, which are already burdened by major air pollution and toxic risks. Continued use of diesel fuel increases toxic air pollution and raises the risk of lung cancer and other lung diseases in these communities.

There are ways to reduce the risk, such as limiting exercise and activities to areas far from freeways or industrial complexes. But for

most Californians, avoiding diesel exhaust is nearly impossible.

Reducing Diesel Health Dangers


There is a way to reduce public exposure to diesel exhaust and transition to cleaner fuels. Alternative power sources such as natural gas and fuel cells can eventually replace diesel fuel. Upgrades and engine replacements are available tools to reduce on-road diesel emissions. Buses and trucks can run on natural gas today, and fuel cells are being developed that could be capable of powering them in the future.

To significantly reduce the amount of pollutants and cancer-causing toxic air contaminants, California must promote cleaner alternatives where possible and substantially reduce diesel emissions through the use of retrofit devices and lower-emitting diesel fuel. The American Lung Association of California has been advocating for restrictions on diesel emissions and promotion of alternative fuels. Local American Lung Associations around the state have been working with their local transit agencies and school districts to encourage them to switch over to buses powered by natural gas. Until we make a concerted effort to rid our state of dirty diesel fuel and transition to lower-emission fuels and cleaner alternative fuels, diesel exhaust will remain a serious public health threat.

Clean Air Month 2003 Links

Clean Air is Everyone's Business: Cleaner Options are Here Now

28 California Counties Receive F Grades for Ozone Air Pollution According to State of the Air Report -- American Lung Association Raises Awareness About Cleaner Transportation Options during Clean Air Month in May
(News Release -- May 1, 2003)

<p>Are you one of the 137 million Americans who breathe unhealthy air?</p> <p>FIND OUT. Enter Your Zip: <input type="text"/> <input type="button" value="Go"/></p> <p></p>
--

State of the Air Report 2003 report (with California data).

(1.1MB PDF - requires free [Adobe® Acrobat® Reader](#))

American Lung Association Raises Awareness About Cleaner Transportation Options During Clean Air Month in May -- "Clean Air is Everyone's Business: Cleaner Options are Here Now"
(News Release -- April, 2003)

in the spotlight

May is Clean Air Month! -- May 2003

FREE E-NEWS

your email address

latest e-news

- Quit Smoking
- Tobacco Control
- Asthma
- Chronic Lung Disease
- Tuberculosis
- Outdoor Air Quality
- Indoor Air Quality
- Risk

- Research Grants
- Advocacy
- Thoracic Society
- Spanish

American Lung Assoc. (National)

- Home
- About Us
- Contact Us
- Make a Donation
- Volunteer
- Event Calendar
- Local Offices
- News/Reporter Center
- California Lungnet

SEARCH

Particulate Matter Air Pollution

There's Even More You Should Know About Particulate Matter

What is Particulate Matter?

Particulate matter air pollution consists of complex and varying mixtures of particles suspended in the air we breathe. Particles are present everywhere, but high concentrations and/or specific types of particles have been found to present a serious danger to human health. Of greatest concern to public health are the particles small enough to be inhaled into the deepest parts of the lung. These small particles are known as PM10 (less than 10 microns in diameter) and even finer particles are known as PM2.5 (less than 2.5 microns in diameter). For comparison, a human hair is about 75 microns in diameter.

Particulate matter is a combination of fine solids such as dirt, soil dust, pollens, molds, ashes, and soot; and aerosols that are formed in the atmosphere from gaseous combustion by-products such as volatile organic compounds, sulfur dioxide and nitrogen oxides.

Particulate matter air pollution comes from such diverse sources as motor vehicles, wood-burning stoves and fireplaces, construction activity, agriculture, industrial smokestacks, wildfires and other burn activity, and windblown dust from open lands.

Particulate Matter and Health

Particulate matter air pollution is among the most harmful of all air pollutants. When inhaled, these particles evade the respiratory system's natural defenses and lodge deep in the lungs. Particulate matter is especially harmful to people with lung disease such as asthma and chronic obstructive pulmonary disease (COPD), which includes chronic bronchitis and emphysema, as well as people with heart disease. Exposure to particulate air pollution can trigger asthma attacks and cause wheezing, coughing, and respiratory irritation in individuals with sensitive airways.

Recent research has also linked exposure to relatively low concentrations of particulate matter with premature death. Those at greatest risk are the elderly and those with pre-existing respiratory or heart disease.

Particles of special concern to the protection of lung health are PM 2.5. These are known as fine particles and mainly come from motor vehicle exhaust. Fine particles are easily inhaled deeply into the lungs where

long periods of time. A recent study showed a 17 percent increase in mortality risk in areas with higher concentrations of small particles.

Particulate Matter in California

The American Lung Association of California is supporting state legislation to require the California Air Resources Board (CARB) and local air districts to adopt new measures to reduce particulate matter air pollution and move toward meeting the new California air quality standards. CARB adopted the more stringent particulate matter (PM 10) standards last summer, which included new regulations for fine particulate (PM 2.5).

The benefit assessments in CARB's staff report under the stricter particulate matter standards project a reduction of 6,500 cases of premature death each year in California. Meeting the new particulate matter standards in California would also prevent about 32,000 cases of bronchitis in children, 340,000 asthma attacks, and 2.8 million lost workdays, according to CARB.

For more information, visit <http://www.arb.ca.gov/research/aags/pm/pm.htm> and click on Ambient Air Quality Standards for Particulate Matter Air Pollution.


Clean Air Month 2003 Links

Clean Air is Everyone's Business: Cleaner Options are Here Now

28 California Counties Receive F Grades for Ozone Air Pollution According to State of the Air Report -- American Lung Association Raises Awareness About Cleaner Transportation Options during Clean Air Month in May
(News Release -- May 1, 2003)

Are you one of the 137 million Americans who breathe unhealthy air?

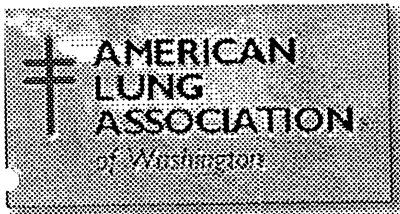
FIND OUT. Enter Your Zip:


www.lungusa.org

State of the Air Report 2003 report (with California data).
(1.1MB PDF - requires free [Adobe Acrobat Reader](#))

American Lung Association Raises Awareness About Cleaner Transportation Options During Clean Air Month in May -- "Clean Air is Everyone's Business: Cleaner Options are Here Now"
(News Release -- April, 2003)

Print Ads: There's Even More You Should Know About Diesel
View or Download Ads



Improving Life, One Breath at a Time

Search

Search input field with a Go button

Facts About Diesel Exhaust

- * Childhood Asthma
* Tobacco Control
* Air Quality
 * Breathe Easy Network
 * Healthy House Programs
 * Indoor Air Quality
 * Master Home Environmentalist
 * Outdoor Air Quality
* Lung Disease
* Support ALAW

Diesel exhaust is a major source of air pollution, which contributes to lung and other types of cancer, respiratory tract infections and lung diseases such as asthma, emphysema and chronic bronchitis.

Diesel exhaust is a major source of air toxics. More than 40 substances are listed as hazardous pollutants. Because of their size, when these particles are inhaled, they can become trapped in the small airways of the lungs. These particles can be coated with potent mutagens and carcinogens.

Since 1990, diesel exhaust has been listed as a known carcinogen under California's Proposition 65, and in 1998, the California Air Resources Board (CARB) formally listed diesel particulate as a toxic air contaminant. The extensive scientific literature demonstrates that exposure to diesel exhaust increases the risk of developing lung cancer and other non-cancer health problems.

Numerous studies have found that fine particles impair lung function, aggravate respiratory illnesses such as asthma, bronchitis and emphysema, and are associated with premature deaths. Dozens of studies link airborne fine particle concentrations to increased hospital admissions for respiratory diseases, chronic obstructive lung disease, pneumonia and heart disease. In April 2003, the American Lung Association® released a report called Closing the Diesel Divide, Protecting Public Health From Diesel Air Pollution to spotlight the magnitude of the impact of diesel air pollution and to show policy makers and the public that there are life-saving solutions at hand.

Quicklinks:

- * Donate
* Advocacy and Legislation
* Master Home Environmentalist
* Healthy House Training for Professionals
* Big Ride
* Climb for Clean Air
* Trek Tri Island
* Research

Recent studies on the relationship between asthmatic responses and proximity to major roadways add to concerns about diesel's contribution to asthma. Studies have shown that the proximity of a child's school or home to major roads may be linked to asthma, and the severity of children's asthmatic symptoms increases with proximity to truck traffic. Studies are ongoing in this area of research.

In Washington, asthma is now an epidemic where one in ten adults and one in nine have this chronic lung disease.

Protecting Yourself From Diesel is Nearly Impossible

It is impossible for most people to avoid exposure to diesel exhaust. Trucks and buses are everywhere. To make matters worse, the most vulnerable among us are being exposed to the most diesel exhaust.

Children are among those most vulnerable to the health risks of diesel exhaust exposure, yet they ride on some of the oldest and most polluting diesel buses on the road today, sometimes for hours at a time. Constant, significant exposure to diesel exhaust, coupled with a child's heightened vulnerability to pollution, is widely recognized as a potential cause of severe health problems in children. It is well known, for example, that children raised in heavily polluted areas face the prospect of reduced lung capacity and prematurely aged lungs. In addition, childhood asthma is on the rise and is, among chronic conditions, the leading cause of absenteeism from school.

Handwritten initials 'LA'