I. OVERVIEW OF AIR QUALITY

Oregonians’ concern about environmental quality in general, and air pollution in particular, led to Oregon’s state-wide Air Quality Control Program in 1951. Beginning at that time, and continuing with the creation of the Department of Environmental Quality in 1969, Oregonians have sought a health environment that supports a healthy economy and healthy communities while accommodating rapid population growth. This section provides an overview of air quality, air pollutants of concern in Oregon, the current quality of Oregon’s air, and the basic requirements of federal and state air quality laws.

A. AIR POLLUTANTS

1. Traditional “Criteria” Pollutants

Under the federal Clean Air Act, the United States Environmental Protection Agency (EPA) has set health-based air quality standards - or criteria - for six pollutants. All areas of the country are required to achieve and maintain these standards. The six criteria pollutants are particulate matter, carbon monoxide, ozone, sulfur dioxide, nitrogen dioxide and lead. The health effects and sources of these pollutants are described in the table to the right.

Particulate matter includes particles small enough to be inhaled by people, known as PM10 and PM2.5. These pollutants tend to be of most concern during winter when emissions from heating and other sources are trapped close to the ground by atmospheric inversions, although summertime wildfires have had significant localized impacts in recent years. Carbon monoxide also tends to be of concern in winter, again due to atmospheric inversions trapping pollutants close...
PROGRAM NARRATIVE

to the ground, and because motor vehicles – particularly older models – operate less efficiently when they are cold. Ground-level ozone (smog), which is a corrosive form of oxygen, is primarily a summer season pollutant because the reactions that cause ozone require sunlight and heat. Ground level ozone is distinct from the ozone layer in the upper atmosphere that protects the earth from harmful ultraviolet rays. The remaining traditional pollutants are not of concern in Oregon.

2. Toxic Air Pollutants

Toxic air pollutants, also known as “air toxics” or “hazardous air pollutants,” are air pollutants known or suspected to cause serious health problems. There are literally hundreds of toxic air pollutants, and Congress has listed 188 of these pollutants for regulation under the federal Clean Air Act. Some toxic air pollutants are found in the air as particles while others are gases. They can be released directly from a wide variety of sources, from manufacturing to driving cars to home heating to small business activities.

EPA’s National-scale Air Toxics Assessment (NATA), which models pollutant levels, identified 16 toxic air pollutants in Oregon that exceed levels of concern. Four of those pollutants are long-lived chemicals that are part of the global background and, so, are not possible to control: carbon tetrachloride; DEHP; ethylene dibromide and tetrachloroethane. The health effects and sources of the remaining air toxics are described in the following table.

<table>
<thead>
<tr>
<th>Toxic Air Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acetaldehyde:</strong></td>
</tr>
<tr>
<td><strong>Health effects:</strong> Eye, nose and throat irritation, likely cancer risk.</td>
</tr>
<tr>
<td><strong>Sources:</strong> Acetaldehyde is formed as a product of incomplete wood combustion in fireplaces and woodstoves, coffee roasting, burning tobacco, and vehicle exhaust fumes.</td>
</tr>
<tr>
<td><strong>Acrolein:</strong></td>
</tr>
<tr>
<td><strong>Health effects:</strong> Eye, nose and throat irritation, respiratory congestion, possible cancer risk.</td>
</tr>
<tr>
<td><strong>Sources:</strong> Motor vehicle exhaust, oil and coal power plants, manufacturing of chemicals and pesticides, and tobacco smoke.</td>
</tr>
<tr>
<td><strong>Arsenic:</strong></td>
</tr>
<tr>
<td><strong>Health effects:</strong> Inorganic arsenic is a human poison; organic arsenic is less harmful. Arsenic damages many tissues including nerves, stomach and intestines, and skin. Known to cause lung cancer.</td>
</tr>
<tr>
<td><strong>Sources:</strong> The major use for inorganic arsenic is in wood preservation. It is also a trace contaminant in fossil fuels.</td>
</tr>
<tr>
<td><strong>Benzene:</strong></td>
</tr>
<tr>
<td><strong>Health effects:</strong> Causes cancer (including leukemia), blood disorders, damage to the immune system, and genetic damage.</td>
</tr>
<tr>
<td><strong>Sources:</strong> Motor vehicles, evaporation from gasoline storage and fueling, tobacco smoke, industrial solvents and chemical manufacturing.</td>
</tr>
</tbody>
</table>
Toxic Air Pollutants
(Continued)

1,3-Butadiene:
- **Health effects**: Cardiovascular diseases and effects on the blood, as well as a probable carcinogen.
- **Sources**: Motor vehicle exhaust, combustion of petroleum fuels and woody materials for space heating and industrial processes. It is used in the manufacturing of plastics.

Chromium (and its compounds):
- **Health effects**: Causes damage to the respiratory tract; including bronchitis, pneumonia, asthma and cancer.
- **Sources**: Chrome plating, disposal of products or chemicals containing chromium and burning fossil fuels.

Diesel Particulate Matter:
- **Health effects**: Exacerbates asthma, a reproductive and developmental hazard, causes respiratory illness and probable cancer risk.
- **Sources**: Diesel engine exhaust from cars, trucks, buses, construction and farm equipment, ships, tugboats and locomotives.

Methylene Chloride:
- **Health effects**: Effects the central nervous system, including decreased visual, auditory, and motor functions; considered a probable human carcinogen.
- **Sources**: Used as a solvent in paint strippers, as a process solvent in manufacturing, as a propellant in consumer products and for metal cleaning.

Naphthalene:
- **Health effects**: Causes cataracts and damage to the retina, a developmental hazard and a possible human carcinogen.
- **Sources**: Produced by combustion of coal, oil, tobacco, and wood; has been used in mothballs and moth flakes. It is used in the manufacture of polyvinyl chloride (PVC) plastics and toilet deodorant blocks.

Polycyclic Aromatic Hydrocarbons (combustion by-products):
- **Health effects**: Cancer and respiratory damage.
- **Sources**: Motor vehicle exhaust, residential wood heating, open burning, slash and field burning.

Perchloroethylene (Tetrachloroethylene):
- **Health effects**: Neurological, liver, and kidney effects. Studies of dry-cleaning workers suggested increased risks for cancer. EPA considered it a probable or possible human carcinogen but is currently reassessing its potential carcinogenicity.
- **Sources**: Used for dry cleaning and metal degreasing operations, and in some consumer products such as automotive brake cleaners. After dry cleaning with perchloroethylene, clothing will release small amounts of this chemical into the air.

Trichloroethylene:
- **Health effects**: Affects the central nervous system with symptoms such as dizziness, headaches, confusion, euphoria, facial numbness, and weakness. Causes liver, kidney, immunological, endocrine, and developmental effects, and possibly several types of cancer. The EPA is currently reassessing the cancer classification of trichloroethylene.
- **Sources**: Primarily from degreasing metal parts but also used as an extraction solvent, in the production of other chemicals and as a refrigerant. Released from consumer products such as typewriter correction fluids, paint removers/strippers, adhesives, spot removers and rug-cleaning fluids.
B. QUALITY OF OREGON’S AIR

1. Traditional “Criteria” Pollutants

Oregon has made tremendous progress in improving air quality. During the 1970s and 1980s, Oregon routinely violated federal clean air standards for particulate (smoke and dust), ozone (smog), and carbon monoxide. Thanks to federal, state and local pollution control programs, most areas in Oregon now consistently meet these standards. However, population growth in many areas of the state could lead to worsening air quality without ongoing pollution prevention activities.

The following areas have, at one time, violated one or more federal air quality standards: Portland, Salem, Eugene-Springfield, Klamath Falls, Medford-Ashland, Grants Pass, La Grande, Oakridge, and Lakeview. The air pollutant(s) of concern for each area is identified on the map to the right.

Once an area violates federal standards, it is officially designated as a “nonattainment” area, and DEQ is required to develop a plan to bring the area back into attainment. DEQ has developed attainment plans for each of these areas, all of which have been approved by EPA. The Lane Regional Air Protection Agency (LRAPA) is responsible for air quality assessment and protection activities in cities in Lane County like Eugene, Springfield, and Oakridge. Currently, the entire state is in compliance with all federal criteria air pollutant standards.

When an attainment plan proves successful and air quality standards are met, DEQ may petition EPA to remove that area’s nonattainment classification. Removing this classification is important because it returns authority to local communities to decide whether or not to allow industrial growth, allows DEQ to repeal any pollution control measures that are no longer needed, and continues...
valuable coordination between air quality and transportation planning. To apply for reclassification of an area, DEQ must first develop a “maintenance” plan that shows how the area will stay within health standards for at least 10 years. These plans must include any air quality strategies needed to maintain compliance with standards, as well as contingency measures to correct any unexpected violation.

DEQ has developed and EPA has approved maintenance plans for all of its attainment areas with the exception of ozone and carbon monoxide maintenance plans for the Salem area. Both plans are underway and should be completed during the 2005-2007 biennium.

In 2006, EPA proposed tightening the standard for fine particulate. Recent health studies showed that fine particulate is more dangerous than previously thought. Fine particles evade the body’s natural defenses and travel deep into the lungs. At least two Oregon communities are expected to violate, and several are at significant risk of violating, the new particulate standards. There are also many communities in Oregon where elevated particulate levels are a public health concern as explained below.

The map to the right shows three tiers of communities’ health in relation to the new particulate standards.

- Tier 1 areas are those expected to violate EPA’s proposed particulate standards based on recent monitoring data. Tier-1 areas include the cities of Klamath Falls and Oakridge.
- Tier 2 areas are those at significant risk of violating the proposed standards. Tier-2 areas, with significant risk of violation, include Medford, Lakeview, and potentially Hermiston and Pendleton.
Tier 3 areas are those where a violation of EPA's proposed standard is not imminent, but where particulate concentrations are above levels identified as causing public health concerns by the EPA's Clean Air Science Advisory Committee. Areas of concern include Portland, Salem, Grants Pass and others.

EPA will finalize the new standard in September 2006 and Oregon will likely face a new round of attainment and maintenance plans.

2. Toxic Air Pollutants

Much less is known about the levels of toxic air pollution than the traditional criteria pollutants. Monitoring for toxics is very expensive, because of the large number of toxic air pollutants and the demanding analytic techniques required for evaluating the samples collected. Currently, DEQ operates two sites in Portland and La Grande. LRAPA operates a toxic air monitor in Eugene.

Without an extensive monitoring network, EPA and DEQ use computer modeling to estimate levels of toxic air pollution in Oregon. Every three years EPA, working with the states, prepares a National Air Toxics Assessment (NATA) that identifies and prioritizes air toxics, emission source types and locations which are of greatest potential concern in terms of contributing to population risk. The most recent NATA results for Oregon are displayed in the chart to the right. One or more of these air toxics contribute to an unacceptable cancer risk in every one of Oregon’s counties.

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1 An unacceptable risk means that exposure to the individual toxic air pollutant causes a lifetime risk of more than one excess cancer case in one million people.
Since 1994, DEQ has implemented federal air toxics pollution controls through major industrial source air permits. In October 2003, the Environmental Quality Commission (EQC) adopted new air toxics rules that allow DEQ to fill in gaps in the federal program and protect public health. A key element of this program is improving the Department’s ability to monitor, inventory and predict toxic air pollution. This has allowed DEQ to identify source types, such as woodstoves, backyard burning, and diesel engines, that are contributing to unsafe levels of air toxics.

3. Visibility

Protecting the ability to see Oregon’s treasured vistas – our parks and wilderness areas – is among the public’s highest air quality concerns. Based on requirements in the federal Clean Air Act, DEQ developed the Oregon Visibility Protection Plan to protect the scenic views in Crater Lake National Park and eleven national wilderness areas in Oregon. These 12 areas, shown on the map to the right, are part of 156 “Class I areas” across the country designated by Congress as having unique scenic qualities where special visibility protection is needed.

DEQ’s Visibility Plan focuses on control of forest slash burning and Willamette Valley agricultural field burning through smoke management programs operated by the Oregon Department of Forestry and Oregon Department of Agriculture, respectively. Another key strategy in the Plan is protecting Class I areas from the impacts of added emissions from new and modified major stationary sources, through the Department’s New Source Review permitting program. The Plan also relies on visibility benefits from other ongoing programs in urban areas to reduce emissions from a variety of sources including industrial sources, residential woodstoves and motor vehicles.

In 1999 EPA adopted the Regional Haze Rule to address visibility problems caused by the transport of air pollution over long distances (often across state boundaries) into Class I areas. This rule followed several years of study and recommendations by the Grand Canyon Visibility Transport Commission in 1996 on the need for a comprehensive approach to reduce haze from both urban and rural sources of air pollution (motor vehicles, industrial facilities, and outdoor burning). The rule requires all states in the country to develop
new plans to reduce haze over the next 60 years. DEQ submitted its original Regional Haze Plan to EPA in 2003 and must submit the first update by December of 2007 (with additional updates every five years). The Oregon plan is being developed in conjunction with other states and EPA.

Although not a Class I area, the Columbia River Gorge is nevertheless one of Oregon and Washington’s most scenic areas, and is the nation’s only National Scenic Area. DEQ is helping lead a bi-state effort to improve visibility in the Columbia River Gorge, in conjunction with the public, four Native-American Tribes, federal and state agencies, local governments in Oregon and Washington, stakeholders, and the Columbia River Gorge Commission. The result of this work will be a strategy designed to help protect and enhance the scenic, cultural, natural, recreational resources of the Columbia Gorge, consistent with the purposes of the National Scenic Area Act.

C. CLEAN AIR ACT AND STATE AIR QUALITY LAWS

1. Key Federal Requirements

The federal Clean Air Act provides the basic framework for protecting air quality in Oregon and the rest of the nation. The Clean Air Act includes the following key elements:

- **National Ambient Air Quality Standards**

  Under the Clean Air Act, EPA sets air quality standards and periodically updates the standards to ensure that they are continuously protective of public health. Based on new health information, EPA has proposed to tighten the fine particulate standard and is beginning review of the ozone standard. State and local agencies are required to monitor air quality within their jurisdictions and to use their monitoring data as the basis to classify areas as “attainment” (meeting the standards), “nonattainment” (not meeting the standards), or “unclassifiable” (not enough information to classify). DEQ operates a statewide monitoring network to address this requirement.
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• State Implementation Plans

State and local agencies are required to develop State Implementation Plans (SIPs) to attain and maintain air quality standards, prevent significant deterioration of air quality in areas that are cleaner than standards, and protect visibility in pristine areas. SIPs must be approved by EPA and, once approved, become enforceable by EPA as well as by state and local agencies and the public. SIPs must contain certain minimum elements required by the Clean Air Act, including the assessment of current and future air quality, coordination with federal and local agencies, basic pollution control requirements, provisions to approve proposed industrial and transportation construction projects, and programs to enforce the state’s air quality rules. Beyond that, states have flexibility to tailor SIPs to best meet local needs while meeting Clean Air Act deadlines. The Oregon SIP has been approved by EPA, but must be continuously updated to address new requirements and reflect current air quality conditions.

• Delegated and Approved Programs

EPA is required to establish emission standards and permit programs for existing and new pollution sources. In some cases, programs are implemented by EPA until delegated to states. In other cases, states are required to develop programs that meet EPA criteria for approval. In either case, the goal is to establish uniform national standards that are implemented by state and local agencies. These programs include:

- New Source Performance Standards (NSPS) for a variety of industrial source categories and equipment;
- Reasonably Available Control Technology (RACT) and Reasonably Available Control Measures (RACM) for existing sources in nonattainment areas;
- National Emission Standards for Hazardous Air Pollutants (NESHAP) for categories of new and existing sources of air toxics;
- Title V Permits for major industry.

Oregon has delegation or approval for all of these programs. However, EPA received a petition to revoke approval of Title V and other programs on the basis that Oregon’s exemption for agriculture from air quality requirements in ORS 468A.020 does not meet federal Clean Air Act requirements. DEQ and the Oregon Department of Agriculture have developed a legislative concept (LC #806, SB 235) to make Oregon’s statute match the federal requirement so that Oregon can maintain program delegation.
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- **National Programs**

  EPA also implements several emission control programs on a national level. These include:
  - Emission standards for new motor vehicles, engines and fuel;
  - Acid rain standards for power plants;
  - Phase-out of products that damage the ozone layer in the upper atmosphere.

  The Clean Air Act prevents states other than California from establishing standards for new motor vehicles and engines, but allows states to opt-in to California’s standards in lieu of the national program. In late 2005, the Environmental Quality Commission adopted the Oregon Low Emission Vehicle Program, which will require new passenger vehicles to meet California standards beginning with the 2009 model year. These standards will reduce emissions of greenhouse gases that contribute to global warming.

2. **Key State Requirements**

  Oregon’s clean air laws are found in Chapter 468A of the Oregon Revised Statutes (ORS). With some limitations, these statutes provide the Environmental Quality Commission and the Department with authority to adopt:

  - Air quality standards to protect public health;
  - The State Implementation Plan to meet Clean Air Act requirements;
  - Emission standards for air pollution sources;
  - Registration, construction and permitting requirements for air pollution sources;
  - Motor vehicle inspection and maintenance requirements;
  - Asbestos control requirements.

  In addition, ORS 468A provides for the formation of regional air pollution authorities to implement air quality programs within their jurisdictions. At present, the Lane Regional Air Protection Agency – serving Lane County – is the only regional authority in Oregon.
3. **Agency Roles and Responsibilities**

- **U.S. Environmental Protection Agency**

  The U.S. Environmental Protection Agency (EPA) is responsible for establishing national standards and overseeing state programs to ensure that they meet these standards. Where states fail to meet standards, EPA can impose sanctions or take over operation of substandard programs. Sanctions can include restricting highway funds or tightening limits on new industry. Because EPA implements programs at a national level, it is generally not able to tailor requirements to meet local needs. EPA also places an emphasis on enforcement and high penalties to create deterrence to noncompliance. This results in a strong incentive for states to maintain primacy over air programs.

  In addition to the oversight role, EPA has a partner role to assist states in meeting their obligations under the Clean Air Act. In addition to providing grants, EPA provides advice and assistance to state and local agencies. Finally, EPA is responsible for developing and implementing a number of national programs, including some programs on tribal lands and multi-state enforcement initiatives.

- **Oregon Department of Environmental Quality**

  The DEQ Air Quality Program is responsible for implementing the Clean Air Act and ORS 468A within Oregon other than Lane County, where LRAPA is the lead. The Air Quality Program includes the following elements:

  ➢ **Air Quality Division**

    The Air Quality Program includes the four sections of the Air Quality Division. The Air Quality Planning section works with local communities to establish new plans that protect public health and visibility. The Program Operations section ensures that requirements are implemented efficiently and consistently state-wide, particularly for permitted sources. The Technical Services section provides data and analyses needed to assess air quality problems, design solutions and meet EPA reporting requirements. The Vehicle Inspection section operates eight test centers and on-site testing for car dealers to ensure that motor vehicles are properly maintained in the Portland and Medford areas.
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- **Regions**

  The Air Quality Program includes field offices within the Department’s three regions. Regional Air Quality offices are located in Portland, Gresham, The Dalles, Salem, Medford, Coos Bay, Bend and Pendleton. These offices are primarily responsible for implementing air quality programs, including permitting, complaint response, compliance, enforcement, open burning investigations and permitting, asbestos abatement, transportation control measures such as the Employee Commute Options program, fuel standards, fuel vapor recovery programs, technical assistance, and air pollution prevention work.

- **Laboratory**

  The Air Quality Program includes air quality sampling, monitoring, quality assurance, technical assistance, and analytical and research support services at the DEQ Laboratory. Air quality data developed by laboratory scientists and technicians is used to determine whether an area meets air quality standards, to identify the sources and extent of a pollution event, and to evaluate whether a facility is in compliance with a permit limit.

- **Lane Regional Air Protection Agency**

  The Lane Regional Air Protection Agency (LRAPA) conducts the air pollution control program in Lane County. Under legislation adopted in 1967, members of the regional agency are Lane County and the cities of Eugene, Springfield, Oakridge, and Cottage Grove. LRAPA’s programs must be at least as protective of air quality as DEQ’s programs. LRAPA and DEQ strive to coordinate and cooperate in delivering services. While most of LRAPA’s funding comes from other sources, LRAPA receives a limited amount of General Fund as a Special Payment in DEQ’s budget.

II. ACTIVITIES AND PROGRAMS

A. AIR POLLUTION SOURCE PROGRAMS

Air pollution sources are grouped into three main categories based on their characteristics:

- “Point sources” are stationary facilities with identifiable emission points such as industrial factories.
- “Area sources” are dispersed activities that individually emit small amounts of air pollution but are collectively significant. Examples include wood stoves, gasoline fueling, open burning, consumer product use, and commercial solvent use.
• “Mobile sources” include on-road vehicles such as cars and trucks as well as non-road engines such as construction equipment, locomotives, lawn and garden equipment and recreational vehicles such as marine and off road vehicles.

The following are DEQ’s activities and programs to address pollution from point, area and mobile sources.

1. **Point Source Activities**

   DEQ operates two permitting programs to reduce emissions from point sources. The Title V Permit program is required by the federal Clean Air Act for operating major sources of traditional “criteria” or hazardous air pollutants. There are about 125 facilities in Oregon that receive a Title V permit. The Air Contaminant Discharge Permit (ACDP) Program applies to construction of new and modified point sources of all sizes as well as operation of medium sized point sources that are not subject to Title V. ACDPs are used to approve construction of major new sources of air pollution as required by the federal Clean Air Act. ACDPs are also used to meet requirements of the State Implementation Plan and to assure that a source does not inadvertently exceed Title V permitting thresholds. The ACDP program, which began in 1972, applies to about 1,100 facilities in Oregon.

   Title V and ACDP permits contain emission limits, control technology requirements, equipment testing and reporting requirements and, if needed, compliance schedules. Permits ensure that pollution reductions necessary to meet air quality objectives are achieved. Title V permits also contain enhanced monitoring procedures to help facilities improve and maintain compliance. Activities include technical assistance, construction plan reviews, permit issuance and renewal, compliance inspections, investigation of complaints, pollution prevention recommendations and enforcement. In addition, the Title V and ACDP programs require ongoing rulemaking, policy and guidance development to incorporate frequently changing federal requirements.

2. **Area Source Activities**

   DEQ operates several programs to reduce emissions from area sources. For instance, the Gasoline Vapor Recovery program is a key element of the Portland area ozone maintenance plan. Since 1992, this effort has reduced smog-causing emissions from gasoline transfer and motor vehicle refueling sites in the Portland metropolitan area. Activities include permitting, inspection and technical assistance to transfer and refueling site operators.

   The Open Burning program is designed to reduce public nuisances, encourage alternative disposal methods and resource recovery, and prohibit burning of toxic substances. This program has been operating since 1976 in coordination with local fire districts. Activities include complaint response, technical assistance and enforcement.
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The Field Burning program is designed to protect visibility and minimize smoke impacts on the public in the Willamette Valley. This activity began in 1975, and is now operated by the Oregon Department of Agriculture (ODA). ODA is responsible for issuing field burning permits, authorizing burning when conditions allow, and developing alternatives to open field burning in the summer. DEQ assists ODA by monitoring the air quality impacts of field burning.

The Asbestos program is designed to protect the public from airborne asbestos, a known human carcinogen. In addition to implementing federal requirements for asbestos, the program ensures safe handling of asbestos-containing material during asbestos removal and abatement projects. Activities include asbestos worker certification, laboratory microscopy services, contractor licensing and training provider accreditation. DEQ also responds to many complaints and requests for technical assistance from building owners, contractors and the general public, and takes enforcement actions when violations are discovered.

The Small Business Assistance program provides pollution prevention recommendations to small businesses and assists these firms in meeting air quality requirements. Activities include outreach through trade associations, on-site visits and training. DEQ also manages a statewide advisory group that provides input to the Department’s technical assistance activities.

3. Mobile Source Activities

The Vehicle Inspection program is among the most cost-effective emission reduction activities operated by DEQ. In operation since 1975, nearly 1.1 million vehicles are tested in each biennium in the Portland and Medford areas to ensure that their emission control systems are properly maintained. When tuned according to manufacturer’s specification, motor vehicles have optimal performance, reduced emissions and maximum fuel mileage. Activities in the Vehicle Inspection Program include conducting emission tests on 1975 and newer vehicles, monitoring and certifying self-testing fleets, providing on-site testing for franchise dealers, certifying vehicle inspectors, training inspectors and repair technicians and one-on-one technical assistance for customers having trouble getting their vehicles through the test.

The Employee Commute Options (ECO) program reduces drive-alone commute trips in the Portland area by promoting alternatives to workers and employers. The ECO program started in 1996 and applies to employers with 100 or more employees at a work site. DEQ activities include reviewing and approving trip reduction plans, helping businesses with their follow up surveys, and providing information and assistance to businesses and the general public.

The wintertime oxygenated fuel program began in 1992 to reduce carbon monoxide (CO) emissions from vehicles. Since then, ambient CO concentrations have fallen steadily, primarily as a result of computerized engine controls that efficiently reduce CO emissions. In December 2004, the EQC repealed the oxygenated fuel requirement for the Portland area as they had previously
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done for Grants Pass, Klamath Falls and Medford. The effective date of the repeal is October 31, 2007. After that, DEQ will no longer need to test fuel for oxygen content at gas stations or issue oxygenated fuel permits to fuel terminals and distributors.

The Clean Air Action Day program is part of DEQ’s education and outreach efforts to reduce emissions from mobile sources. On days when smog threatens to reach unhealthy levels, DEQ issues air pollution advisories and recommends voluntary actions (e.g., carpooling instead of driving alone or not using a gas-powered lawn mower) to keep the air healthy to breathe.

The Low Emission Vehicle (LEV) program was adopted in December 2005 to reduce greenhouse gas emissions that contribute to global warming. LEV rules were based on California’s vehicle emission requirements and were developed in consultation with a broad-based stakeholder work group. The new rules will be phased-in between 2009 and 2016 and will only apply to new light and medium-duty vehicles. When the rules are in full effect, they will reduce greenhouse gas emissions from new vehicles by 30% while also reducing smog-forming and air toxic pollutants. DEQ is implementing the program by conducting outreach and providing technical assistance to regulated parties, establishing compliance monitoring systems, inspecting dealers and regularly updating the program to match California as required by the Clean Air Act.

The Clean Diesel Initiative addresses one of the most potent air toxics to which Oregonians are exposed, diesel exhaust. Diesel engines, while very useful, powerful and efficient, emit a complex mixture of gases and particles that lead to elevated risk for cardiovascular and respiratory diseases including cancer, asthma and bronchitis. New diesel engines are required to be much cleaner, but the durability of the engines means that it will take years to get the old, polluting engines off the road. Equipment is available now to retrofit existing diesel engines, allowing these vehicles to operate with low emissions. DEQ provides diesel fleet owners with innovative technical and financial assistance for the installation of particulate filters on existing vehicles. DEQ also works to reduce diesel exhaust by promoting alternatives to diesel engine idling at truck stops and rail yards. Again, DEQ’s role is to inform, provide technical assistance, and identify available grants and tax credits that provide funding assistance to make the project work.
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B. PLANNING AND ASSESSMENT PROGRAMS

1. State Implementation Plan

The State Implementation Plan (SIP) is DEQ’s primary program to attain and maintain air quality standards, prevent significant deterioration of air quality in areas that are cleaner than standards, and protect visibility in pristine areas. Developing and updating the SIP is a public process carried out in close coordination with local governments, other state agencies, federal agencies, businesses, and public interest organizations. Tailoring the SIP to local conditions is critical to ensure that economic and air quality needs are in harmony.

Areas that violate air quality standards are classified as “nonattainment” areas by EPA. For these areas, DEQ develops attainment plans to ensure the return of healthy air. Once an area attains the standards, DEQ develops a maintenance plan to ensure that the air will remain healthy to breathe for at least 10 years. DEQ can then ask EPA to remove the nonattainment classification.

DEQ also leads a state-wide program to protect visibility in wilderness areas, national parks and other pristine areas. This program relies heavily on interagency agreements to manage smoke from forestry and agricultural burning. In addition, the ACDP permitting program ensures that new major emission sources do not significantly degrade visibility. Recently, this work has expanded to include coordination with neighboring states and regional organizations in the West to reduce regional haze.

2. Air Toxics Program

With growing public concern about toxic air pollution, DEQ has expanded its efforts to understand and reduce air toxics. Since 1994, DEQ has been implementing the federal technology standards to reduce emissions from major sources of air toxics. In this effort, EPA adopts emission standards for categories of air toxics sources and DEQ ensures compliance with these requirements at individual facilities through the Title V and ACDP permit programs.

While the federal program is an important cornerstone in protecting public health from toxic air pollution, there are a number of significant gaps. First, it does not apply to all air toxics of concern in Oregon (including diesel exhaust). Second, it focuses primarily on major industrial sources whereas most emissions of air toxics come from smaller, but numerous, area and mobile sources such as automobiles, residential open burning, commercial boilers and solvent use. Third, it does not address the additive effect of many sources of air toxics in a community.

Between 1999 and 2002, DEQ worked with two broad-based advisory committees to develop an Oregon air toxics program. The committees included representatives from all affected constituents, including large and small business, environmental...
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organizations, neighborhood organizations, health agencies and local government. The committees recommended and developed a program based on good science that will address health risks not addressed by the federal program. Rules implementing the Oregon air toxics program were adopted in October 2003.

In May 2004, DEQ established a science advisory committee to aid in determining air toxics concentration levels of concern, called benchmarks. These benchmark concentrations were adopted as rule in August 2006, and will be used to assess toxic air pollution statewide. DEQ will use these concentrations to identify communities with unhealthy levels of air toxics, to identify source types – such as diesel engines and woodstoves – that are most responsible for releasing these pollutants, and to provide the public with information about health risks.

3. Air Quality Monitoring

The Air Quality Monitoring Section of the DEQ Laboratory measures ambient (outside) air to track progress in meeting and maintaining health-based air quality standards and to support the new air toxics program. The Laboratory operates a statewide network of about 40 monitoring stations. Among the air pollutants measured are suspended particulate, carbon monoxide, ozone, oxides of nitrogen, hydrocarbons and toxic air pollutants. Additional monitoring stations measure visibility and meteorological conditions such as temperature and wind speed.

Periodically, the Laboratory also performs special air pollution surveys in areas without permanent monitors to check air quality and in areas with permanent monitors to validate the location of existing monitoring sites. Other analytical or technical services include: studies of chemicals that react to form ozone, microscopic analysis of asbestos and other substances, studies of toxic air pollutants, speciation and chemical mass balance analysis of particulate filters to identify individual chemicals contained in the particulate, forecast and monitoring of field burning impacts, meteorological monitoring, review and quality assurance of industrial self-monitoring plans, and sampling and monitoring in support of complaint investigations.

DEQ’s laboratory operates a network of monitors and samplers required and funded by EPA to measure fine particulate (PM$_{2.5}$). The sampling network currently consists of 9 federal reference samplers at 7 locations throughout the state, with continuous fine particulate monitors at an additional 13 locations. A complementary network to identify the chemical components of PM$_{2.5}$ is also part of this effort. While the information from this network is essential for determining compliance with the new health-based fine particulate standard, proposed federal budget cuts will result in an inadequate network without new state funding.
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EPA has established a national network to measure toxic air pollution and in 2004 DEQ began measuring air toxics in La Grande as part of the National Air Toxics Trends Site network. La Grande was selected as representative of rural communities in the West. This monitoring is supported by federal funds and will operate until at least 2010.

III. IMPORTANT AIR QUALITY BUDGET ISSUES

A. INCREASED COST OF THE NEW DEQ LABORATORY

The 2003 Legislature authorized the Dept. of Administrative Services (DAS) to purchase a building for relocation of both the DEQ Laboratory and Oregon Health Services Laboratory. The current Laboratory space is located on the Portland State University (PSU) campus. The space is no longer available for use by DEQ and Oregon Health Services. DAS located property in western Washington County, and the facility should be ready for DEQ and Oregon Health Services to relocate by June 1, 2007.

Relocation of the Laboratory will result in significant cost increases since rent at PSU has been well below market rates for years, and the share allocated to the Air Quality program will impact General, Federal and Other Funds. However, as explained below, Federal and Other fund revenues are not adequate to pay for these increased costs because the federal air quality grant is declining and the Air Quality program’s primary fee programs are already generating insufficient revenue to cover existing costs. As a result, the Air Quality program requested additional General Fund in Policy Package #171 to pay the increased rent costs.

B. INCREASED COSTS TO COMPLY WITH NEW FEDERAL STANDARDS

The Clean Air Act requires EPA to set air quality standards to protect public health and welfare. As discussed in section I.B.1, EPA has proposed a new, tighter standard for fine particulate because recent scientific studies show that fine particulate is more dangerous than previously thought. Based on air quality monitoring, DEQ expects that two communities will violate the new standard, four communities will be at risk of violation, and an additional nine communities have air pollution above levels identified by EPA’s science advisory committee as causing health concerns.

In all areas experiencing elevated levels of fine particulate, it will cost more to monitor air quality, provide information to the public, and implement voluntary emission reduction programs to protect public health. For areas that actually violate the revised federal standard, DEQ will have significant new work to identify emission sources, evaluate atmospheric dispersion and chemistry, and develop and implement new air quality improvement plans. Since 2001, the Air Quality program’s General Fund resources have been cut in half and, as explained below, the federal air grant is being cut. As a result, DEQ requested new General Fund resources
in Policy Packages #110 and 116 to address fine particulate air pollution. However, Policy Package 116 was not included in the Governor’s Recommended Budget.

C. CUTS IN FEDERAL FUNDING FOR AIR QUALITY

At the same time that EPA is tightening the fine particulate standard because of public health concerns, federal budget cuts will reduce the support for fine particulate monitoring as well as air toxics monitoring, visibility monitoring, air quality technical analyses, developing air quality improvement plans, and local government programs to reduce pollution. The President proposed an overall reduction of 16% in the federal air grant, and Oregon will receive a disproportionately high share of the cut based on EPA’s allocation formula. The proposed federal cuts mean the loss of approximately one-third of the current federally funded Air Quality staff (6.6 FTE of 20 FTE cut). In addition to lost positions, federal fund cuts will eliminate funding for local government work to reduce fine particulate and toxic air pollution from woodstoves and open burning. These cuts contribute to the need for funding requested in Policy Packages #110, 111, 114, 115 and 171.

D. REVENUE SHORTAGES IN AIR QUALITY’S PRIMARY FEE PROGRAMS

Fee revenues generated by three major Air Quality programs – Title V, ACDP and Asbestos – are inadequate to cover costs. While DEQ continues to streamline those programs, fee increases are needed to maintain the current service level.

The Title V air permit program applies to the largest industrial facilities. Federal law requires the program to be fully-funded by fees, and state law sets a fee per ton of emissions that may be increased to match general inflation in the economy as measured by the Consumer Price Index (CPI). However, the amount of emissions subject to the fee has decreased, and the CPI has not kept pace with increases in state employment costs. As a result, 3 FTE were cut from the program in the 2005-2007 budget and the program is already experiencing backlogs in inspections and permitting. Without a fee increase, this problem will grow significantly during the 2007-2009 biennium and beyond. As a result, DEQ requested a fee increase in legislative concept #823 (SB 107), as described in Policy Package #112.

The Air Contaminant Discharge Permit (ACDP) program is supported by a combination of state General Funds, Federal Funds and fees with the majority of the funding coming from fees. Since the late 1990’s, the ACDP program has undergone a significant streamlining effort, making the process easier and faster for permittees and making the process easier and faster for DEQ. As a result, ACDP staffing has been reduced by more than 20% since 2001 when fees were last raised. However, ACDP revenues are insufficient to cover costs and maintain enough balance to operate the program for the 2007-2009 biennium and beyond, and DEQ requested a fee increase to maintain current staffing levels as described in Policy Package #114.
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DEQ’s asbestos program of about 6.5 FTE is funded by asbestos contractor license fees and asbestos abatement notification fees. The last asbestos fee increase was in 1995 and fees are no longer adequate to support this small but important staff that works to prevent exposure to asbestos – a cancer-causing air pollutant. Without the fee increase described in Policy Package 113, 1.5 FTE will be cut from the 2007-2009 asbestos budget and the resulting 5.0 FTE staffing level is inadequate for statewide coverage.

IV. AIR QUALITY ACCOMPLISHMENTS AND EXPECTED RESULTS


During the 2005-2007 biennium, DEQ’s Air Quality programs helped to continue excellent air quality for Oregonians while accommodating continued population growth. During the 2007-2009 biennium, the Air Program will continue efforts to prevent violations of traditional “criteria” pollutants, reduce the number of unhealthy air days, reduce health risks from air toxics and continue timely permit issuance as measured by Oregon Progress Board benchmarks. However, the new fine particulate standard, increased costs and reduced federal funding as noted in section III (Important Air Quality Budget Issues) will make achieving the benchmarks impossible without the resources requested in the Air Quality Policy Packages.

1. Quality of Oregon’s Air – Accomplishments and Expected Results

   Traditional “Criteria” Pollutants

   • 2005-2007 Accomplishments: Oregon did not experience any official violations of the federal clean air standards to date during this biennium. A violation occurs when DEQ measures multiple days over the federal standard, indicating a pattern of reoccurring air pollution. However there are many individual days in many cities in Oregon where the air is unhealthy to breathe as shown in the graphic to the right depicting the Oregon Progress Board’s environment benchmark #75a. The benchmark target is zero days by 2015.

   Most of the unhealthy air days are caused by elevated fine particulate levels resulting from wood stoves and other combustion sources (the impact of forest fires has been removed from this data). Under EPA’s
PROGRAM NARRATIVE

proposed new fine particulate standard, many of these days would be reclassified from “unhealthy for sensitive groups” to generally “unhealthy,” and several of these cities would have recorded violations if the new standard had been in effect during this biennium.

2007-2009 Expected Results: Based on past monitoring data, DEQ expects that air quality monitors will record violations of the new federal health-based fine particulate standard in two or more Oregon communities, resulting in formal designations as “nonattainment” areas. In addition, DEQ expects to monitor fine particulate levels in about a dozen communities above levels identified as causing health impacts by EPA’s Clean Air Science Advisory Committee. Areas that violate the standard will be subject to federally-imposed restrictions on industrial growth and transportation system development. For these areas, DEQ will develop and implement air quality improvement plans as quickly as possible to protect public health and eliminate growth restrictions. DEQ will also implement voluntary prevention plans to reduce public health risks in other areas that are near the new fine particulate standard.

Reducing smoke from residential wood heating, the most significant source of fine particulate in most parts of Oregon, will be central to DEQ’s strategy to restore healthy air quality. DEQ proposed Legislative Concept #664 (SB 338) and companion Policy Package #116, Heat Smart for Clean Air, which requested authority and resources to help low-income Oregonians change-out old technology woodstoves with cleaner woodstoves or other lower emitting options. The package was not included in the Governor’s Recommended Budget but the Senate Environment and Natural Resources Committee introduced the bill. DEQ also requested positions and resources in Policy Package #110 to monitor air quality and develop strategies to prevent health risks from fine particulate. These resources are needed to meet the Benchmark #75a target of zero unhealthy air days.

Air Toxics

- 2005-2007 Accomplishments: Ninety nine percent of Oregonians are at significant risk for cancer and other health effects from exposure to toxic air pollutants as shown in the graph to the right, which depicts Oregon Progress Board benchmark #76a. The interim target is to reduce the percentage of Oregonians at significant risk to 95% by 2010 and to 90% by 2015.

During the biennium, EPA released an update to the National Air Toxics Assessment (NATA), a computer model that calculates risk from air toxics exposure based on emission information submitted by states. The current report, based on 1999 data, shows roughly the same pattern of 76a. Percent of Oregonians at risk from toxic air pollutants that contribute to cancer (Oregon goals based on new science)
risk as the original report based on 1996 data, although more toxic air pollutants were included and the methodology was more thorough. DEQ reached similar conclusions in a more detailed report of the Portland area completed in August 2006, called the Portland Air Toxics Assessment (PATA). In the limited areas where DEQ has air toxics monitors, the NATA results generally match the monitored levels fairly closely. The top cancer-causing air toxics in Oregon are polycyclic aromatic hydrocarbons (combustion by-products), benzene (mainly from motor vehicles and gasoline), and diesel particulate matter (from all types of diesel engines). The top non-cancer air toxic is acrolein, which causes serious respiratory effects.

2007-2009 Expected Results: While risks will remain above health benchmarks for most Oregonians, some improvement in air toxics exposure will occur during 2007-2009 as DEQ implements new emission reduction strategies. These strategies include new federal standards to reduce air toxics emissions from the wood products industry, industrial boilers and other major sources. Efforts to reduce emissions from woodstoves and other fine particulate sources will also reduce emissions of some of Oregon’s top air toxics. In addition, DEQ requested Legislative Concept #819 (HB 2172) and companion Policy Package #119 to reduce toxic emissions from diesel engines. DEQ also requested staff and resources to conduct air toxics monitoring and develop air toxics emission reduction strategies in Policy Package #111.

2. Air Quality Program Activities – Accomplishments and Expected Results

a. Point Source Activities

Air Contaminant Discharge Permit (ACDP) Program

- **2005-2007 Accomplishments:** While there has been a drop in performance over the last few years as indicated in the chart to the right, DEQ continued to meet the target for ACDP permit timeless in Oregon Progress Board benchmark #10a until 2005. Business and industry need quick turn around times on permits to construct, expand or modify their operations. The public also benefits from timely ACDP permits, which help ensure compliance with air quality regulations.

  In 2001, DEQ streamlined the ACDP permitting process, which significantly increased timeliness. This allowed DEQ to set a shorter target period for timely processing, from an
PROGRAM NARRATIVE

average of 167 days to an average of 69 days. The streamlining also allowed DEQ to reduce staff by 7.5 FTE in the ACDP program and still meet the benchmark target of 85% timely permits. However, permit timeliness dropped from 90% in 2001 to 84% in 2005 as the target increased to 90%.

- **2007-2009 Expected Results:** Without a fee increase, staffing in the ACDP program would have to be reduced by another 2 FTE during the 2007-2009 biennium. At this level, DEQ would not be able to meet the current timeliness target of 90%, and would not make progress toward the 2010 target of 95% timely permits. Because the ACDP permit program is used to authorize construction and modification of industrial facilities, reduced timeliness would hurt Oregon’s business environment. To prevent a continued erosion of timeliness, DEQ has requested restoration of existing resources in Policy Package #114, Maintain an Effective ACDP Permit Program.

**Title V Permit Program**

- **2005-2007 Accomplishments:** Due to revenue shortfalls, staffing in the Title V program was reduced by 3 FTE during the current biennium. This has resulted in permitting and inspection backlogs and, for the first time since the Title V program began, 25% of Title V permits are expired. DEQ has been able to target limited resources to ensure timely completion of permit modifications needed to incorporate new federal requirements and enable permittees to make desired changes in operations. However, program effectiveness and customer service have declined due to inadequate staffing.

- **2007-2009 Expected Results:** Without a fee increase, staffing in the Title V program would have to be reduced by another 1.5 FTE during the 2007-2009 biennium, further exacerbating the backlog in permitting and inspections. DEQ plans to streamline rules to simplify monitoring, testing, reporting and permit application requirements that apply to Title V permittees. While these changes will reduce compliance costs for the permittees, they will not significantly reduce DEQ’s costs. To restore an effective and responsive program, DEQ requested a fee increase in Legislative Concept #823 (SB 107) and addition of the resources in Policy Package #112, Meet Clean Air Act Requirements for Title V Permitting.
b. Area and Mobile Source Activities

Asbestos Program

- **2005-2007 Accomplishments:** The asbestos program continues outreach to building owners and contractors to prevent exposure to asbestos fibers, a known cause of cancer and respiratory illnesses. Outreach efforts include: an advertisement in the asbestos section of all yellow pages throughout the state, asbestos mats in building supply stores and local building and planning departments that identify typical places in a home where asbestos may be found, advertisements and brochures in Sunday newspapers, radio announcements, billboards and the addition of a DEQ asbestos link on the web pages of many local governments. The success of these efforts to educate individuals and protect human health from exposure to asbestos fibers is demonstrated by the dramatic increase in the number of asbestos notifications for both small commercial and residential projects.

- **2007-2009 Expected Results:** DEQ's plans to continue protecting public health from asbestos by focusing on preventing exposure through education, contractor certification, complaint response and enforcement. Since most new asbestos removal projects are conducted by individual homeowners or small businesses that lack information on how to safely remove asbestos, DEQ plans to increase education and outreach to those groups. Both on-going and new outreach work is contingent on a fee increase and restoration/addition of resources in Policy Package 113, Maintain Asbestos Health Protection Program.

Vehicle Inspection Program

- **2005-2007 Accomplishments:** This biennium, DEQ replaced deteriorating emissions testing equipment and software needed for continued operation of the Vehicle Inspection Program and future streamlining. In addition, DEQ made some changes to the types of emissions tests performed in Portland, eliminating the Enhanced test that was very labor-intensive and costly to operate and replacing it with the Basic test. Although the Basic test is not as thorough as the Enhanced test, this change will not jeopardize meeting air quality standards in Portland because of the declining number of vehicles that had been subject to the Enhanced test. DEQ now operates the On-Board Diagnostics (OBD) test for 1996 and newer vehicles and the Basic test for 1995 and older vehicles in the Portland and Medford areas.

  The 2005 legislature authorized DEQ to implement two new OBD testing options – self-service testing and on-line testing. Self-service testing will be available 24 hours per day, 7 days per week, enabling customers to get an emissions test outside of DEQ’s normal working hours. DEQ is installing a demonstration lane at the Sunset test center, with construction beginning in August 2006. The second new OBD testing option is on-line testing, which enables customers to transmit OBD data to DEQ via the internet or U.S. mail. Participating customers will be provided with data loggers that interface with their vehicles’
computer and their home computer. DEQ will conduct a pilot study with up to 5,000 individuals who sign-up for the program in the fall of 2006.

DEQ added another important customer service option to the Vehicle Inspection Program this biennium. In cooperation with ODOT's Driver and Motor Vehicle Division (DMV), DEQ began accepting debit and credit cards as payment for emissions tests as well as DMV vehicle registration renewals performed at DEQ's test stations. These payment options are necessary for self-service and on-line OBD testing, and they provide a convenient payment option for customers using DEQ's regular test centers. As part of the move to debit and credit cards, DEQ took over the banking and accounting duties for all DEQ/DMV transactions at DEQ testing stations. These services had previously been handled by DMV.

- **2007-2009 Expected Results:**

  *Efficient operations*
  Due to the phase out of the Enhanced test, DEQ will be able to reduce staffing by 20 FTE in the Vehicle Inspection Program during the 2007-2009 biennium. DEQ has requested Policy Package #117, Implement Advanced Technology Vehicle Inspection, to align staffing with program changes.

  *Expansion of new test options*
  During the 2007-2009 biennium, DEQ plans to expand on-line testing beyond the initial pilot study. DEQ also plans to expand self-service testing by adding 4 additional self-service lanes in the Portland Metropolitan area: one at the Sherwood test center, one at a planned co-located DEQ/DMV facility in Northeast Portland (described below), and two convenient stand-alone locations away from DEQ facilities (including an outlying area and a shopping mall).

  Now that the first two advanced OBD test options are underway, DEQ is ready to implement a third new testing option called Broadcast OBD. This option is fundamentally different from the other options in that it rewards vehicle owners for keeping their vehicles well maintained by exempting them from the requirement to have their vehicles tested on the normal two-year cycle. During the pilot, vehicle owners can choose to install a data transmitter in their vehicle that automatically notifies DEQ’s computer when the malfunction indicator light (MIL) illuminates. The data transmitter also notifies DEQ’s computer when the vehicle has been repaired. As long as the repair is made within 45 days, the customer can remain in the broadcast program and never has to visit a DEQ facility to have his or her vehicle tested. In addition to the added convenience, this option improves air quality by encouraging more timely vehicle maintenance. Based on initial survey data, DEQ anticipates that many customers may be interested in participating.
If approved by the 2007 legislature, the contractor who developed the self-service and on-line testing will develop the broadcast test option under an existing contract. The contract cost for this test option is $273,816. In addition, DEQ will need to lease locations for 14 receivers strategically located to pick up the broadcast OBD data. Because the receivers only need a roof antenna and a shelf or closet for computer equipment, DEQ anticipates the lease costs to be approximately $200 per month for each site. The data loggers used for the on-line testing option can be converted into broadcast devices at no additional cost with a plug-in antenna and the flip of a switch. DEQ can implement the broadcast test option without increasing the test fee and within existing limitation.

For all three OBD test options – self-service, on-line and broadcast – DEQ is working closely with DMV to ensure a seamless integration of the testing and registration systems. Throughout the piloting and implementation of these options, DEQ and DMV are carefully planning how participating customers will register their vehicles at DEQ test centers, DMV field offices and mail-in registration. The addition of these test options will also enable customers within DEQ’s testing boundaries to register their vehicles from their home computer using DMV’s e-Gov (on-line) registration system.

Relocating 2 test centers
DEQ reported to the 2005 legislature that it is necessary to relocate two existing test centers when the existing leases expire: Sherwood and Northeast Portland. The Sherwood station needs to be relocated because it is under high voltage power lines that are causing safety hazards to staff and customers. The Northeast Portland station needs to be relocated because customer queuing causes traffic impacts on nearby businesses. DEQ is working on relocation plans for both stations and projects that the moves will occur during the 2007-2009 biennium.

DEQ and DMV considered adding a DMV express lane to the new Sherwood station, but determined that this would not be cost-effective because DMV has a fairly new field office nearby. However, DEQ and DMV are exploring the potential for a co-located facility in Northeast Portland since DMV also needs to replace its Northeast Portland field office.

Test fee in the Portland and Medford areas
When the test fee was last increased in 1997, DEQ anticipated that it would cover costs for at least five years or through 2002. Due to subsequent cost savings measures (e.g. purchasing used equipment, streamlining procedures, introduction of OBD testing, and early phase-out of Enhanced testing), DEQ now anticipates that the 1997 fee increase will cover costs through 2007-2008. While DEQ will continue to streamline the program, it is likely that a fee increase will be needed to cover costs during the 2009-2011 biennium.
The vehicle inspection fee is currently $21 per certificate in the Portland area and $10 per certificate in the Medford area. The higher Portland-area fee was set in 1997 due to the increased cost of the Enhanced test. Because of the phase-out of the Enhanced test during the 2005-2007 biennium, DEQ is further analyzing the relative costs in the Portland and Medford areas and will provide the results as soon as they are available.

**Oregon Low Emission Vehicle Program**

**2005-2007 Accomplishments:** In December 2005, the Environmental Quality Commission adopted the Oregon Low Emission Vehicle (LEV) Program. Under this program, new passenger vehicles sold in Oregon must meet California standards beginning with the 2009 model year. These standards will reduce emissions of greenhouse gasses that contribute to global warming. DEQ is developing the processes and procedures needed to implement the new standards, including outreach and assistance for dealers, credit banking and reporting for manufacturers, and coordination with ODOT’s Driver and Motor Vehicle Division (DMV) to ensure compliance. These procedures must be in place for 2009 model year vehicles, which can be introduced as early as January 2008.

**2007-2009 Expected Results:** Full implementation of the Oregon LEV program will begin during the 2007-2009 biennium. DEQ plans to expand outreach efforts to ensure that dealers fully understand what they need to do to comply with the new rules. HB-2272 proposes a statute change that will allow DMV to deny registration to noncompliant new vehicles, the most efficient and effective compliance method. Without the statute change, DEQ will review DMV vehicle registration records to verify compliance and still protect Oregon dealers from potential unfair competition by out-of-state dealers. DEQ also expects that further rulemaking will be necessary to ensure that the Oregon LEV program remains consistent with changes in the California standards as required by federal law. Positions to provide these services are requested in Policy Package #118, Implement Oregon Low Emission Vehicle Program. Funding for the package will be provided by a fee on the largest automobile manufacturers.
Clean Diesel Initiative

**2005-2007 Accomplishments:** DEQ continues to provide assistance to fleet owners for the installation of particulate filters on their diesel engines. During the 2005-2007 biennium, DEQ assisted the following fleets with retrofits: Beaverton, Reynolds, Eugene, Springfield, Ashland, Central and Athena-Weston School Districts and Rogue Disposal and Recycling in Medford. DEQ also assisted Associated General Contractors (AGC) with a federal grant application to demonstrate exhaust retrofitting in the construction industry. AGC was awarded the grant, which was the first federal grant of its kind to a trade association.

DEQ will soon complete a project conducted in cooperation with Oregon State University, The Climate Trust, the Oregon Department of Energy and truck stop operators to “electrify” truck parking spaces. These electrical connections at truck stops along the I-5 corridor allow personal comfort and other services to be delivered to long haul truckers during their mandated rest periods instead of relying on engine idling. DEQ also worked with Burlington Northern and Santa Fe Railroad to outfit several switch locomotives with idle control features expected to reduce emissions and bring the company over $30,000 in fuel savings per locomotive per year.

DEQ initiated a new diesel recognition program this biennium. The Oregon Clean Diesel Excellence Program recognizes public and private efforts to reduce diesel emissions. Participants can include schools, government entities and businesses. The program will recognize forward thinking and environmentally conscientious diesel fleet owners for voluntarily reducing diesel emissions.

**2007-2009 Expected Results:** Federal rules recently required the use of ultra-low sulfur diesel fuel in on-road diesel engines including trucks and buses. The widespread availability of this fuel will enable DEQ to expand efforts to retrofit engines with high-efficiency particulate filters that do not tolerate sulfur. DEQ will also promote the use of ultra-low sulfur diesel and biodiesel in non-road engines such as construction equipment. The Department will also continue to move forward with innovative projects to reduce emissions through innovative projects like the Clean Diesel Zones for Hospitals in which regional hospitals make efforts to reduce diesel emissions from generators, delivery vehicles and other diesel engines.

Because of the significant public health risks form exposure to diesel exhaust, DEQ has proposed Legislative Concept #819 (HB 2172) and Policy Package #119, Clean Diesel, for consideration by the 2007 Legislature. This proposal would offer a variety of incentives to diesel engine users to reduce emissions. Approval of the concept and package would reduce Oregonian’s exposure to air toxics as measured in Oregon Progress Board environmental benchmark #75b.
c. Planning and Assessment Activities

Meeting National Ambient Air Quality Standards

**2005-2007 Accomplishments:** DEQ made substantial progress in developing plans to meet and maintain compliance with national ambient air quality standards. DEQ will complete the Salem Carbon Monoxide maintenance plan and submit a reclassification request to EPA. Clean air attainment and maintenance plans for particulate matter (PM$_{10}$) for the Medford-Ashland, LaGrande, and Lakeview areas were submitted to EPA in 2004 and 2005. In 2006, EPA redesignated all three areas to attainment for PM$_{10}$. Also during this biennium, the entire state of Oregon was designated “in attainment” with the new 8-hour ozone standard. Federal rules now require DEQ to develop maintenance plans for Portland and Salem that demonstrate continued compliance with the 8-hour ozone standard for at least ten years. DEQ will submit a maintenance plan for Portland and Salem to EPA in late 2006.

- **2007-2009 Expected Results:** By the end of the 2005-2007 biennium, all clean air plans under development should be completed, and DEQ will turn its attention to plans required to meet EPA’s proposed more stringent fine particulate standard (PM$_{2.5}$). Once EPA finalizes its proposal, DEQ will have to develop new attainment plans for areas that violate the new standard. Based on recent monitoring data, DEQ expects that Klamath Falls and Oakridge will violate the new standard, and Medford-Ashland, Hermiston, Pendleton and Lakeview will be at risk of violating. An additional dozen communities are not at immediate risk of violating the new standard, but have fine particulate levels high enough to cause health concerns. DEQ will work with local governments and stakeholders to reduce fine particulate levels and meet federal standards. DEQ is requesting resources to do this work, including financial support for local governments, in Policy Package #110, Meeting Federal Air Quality Health Standards. DEQ is also proposing Legislative Concept #664 (SB 338) and Policy Package #116, Heat Smart for Clean Air, to reduce emissions from older woodstoves, which are the largest contributor to fine particulate levels. However, Heat Smart for Clean Air was not included in the Governor’s Recommended Budget.

Reducing Risk From Air Toxics

**2005-2007 Accomplishments:** Based on the recommendations of the Air Toxics Science Advisory Committee (ATSAC), the Environmental Quality Commission adopted health benchmarks for the most common toxic air pollutants emitted in Oregon. These benchmarks form the basis of Oregon’s air toxics program by serving as planning goals, improving risk communication, and enabling DEQ to measure and report on the performance of the program. Based on the benchmarks, DEQ has determined that the primary sources of air toxics are combustion products (including diesel exhaust, wood burning and open burning), gasoline vapors, and a variety of commercial and industrial processes. DEQ is developing strategies to reduce toxic emissions from source categories that are not adequately addressed by the federal air toxics program.
PROGRAM NARRATIVE

In 2006, DEQ completed the Portland Air Toxics Assessment (PATA), a computer modeling project designed to assess the risk from 12 air toxics in the Portland area. The information collected allows DEQ to better understand local patterns of air toxics exposure and the locations of elevated risk. PATA will help DEQ communicate about air toxics and promote voluntary reductions in Portland.

- **2007-2009 Expected Results:** DEQ will continue implementation of the federal air toxics program in Oregon, by including federal requirements in air permits and ensuring compliance through inspections. With sufficient funding from Policy Package #111, Reduce Health Risks from Air Toxics, DEQ can continue air toxics monitoring, develop emission reduction strategies and conduct community air toxics prevention work. The package will enable DEQ to continue air toxics monitoring in Portland and begin air toxics monitoring in Salem/Albany and Medford, better quantify air toxics emissions and develop innovative strategies to reduce emissions that contribute most to public health risks.

Improving Visibility

- **2005-2007 Accomplishments:** During the 2005-2007 biennium, DEQ developed the Oregon Regional Haze Plan that is due to EPA in December 2007. Much of this work involved identifying haze conditions in national parks and wilderness areas in and around Oregon and determining visibility improvements that will be needed to meet federal requirements. DEQ is working closely with the Western Air Regional Partnership (WRAP), which is providing much of the technical data and analysis of regional haze needed by western states.

DEQ also began working on the Best Available Retrofit Technology (BART) requirements that are part of the Regional Haze Rule. These requirements involve evaluating ten older industrial facilities that went into operation before visibility protection was a prerequisite for permitting new industrial sources. Under BART, these larger sources must be evaluated to see how much they contribute to regional haze, and if retrofitting with controls is feasible and cost effective. This BART evaluation should be completed by the end of 2006.

- **2007-2009 Expected Results:** For the 2007-2009 biennium, DEQ plans to implement the Oregon Regional Haze Plan based on adoption of this plan by the Environmental Quality Commission in late 2007. This includes implementing requirements for Best Available Retrofit Technology on certain older industrial sources, tracking Oregon’s progress in meeting visibility improvement goals, and coordinating with other state and federal agencies.

Protecting and Enhancing Air Quality In The Columbia River Gorge National Scenic Area
PROGRAM NARRATIVE

- **2005-2007 Accomplishments:** In 2000, the Columbia River Gorge Commission called on the states of Oregon and Washington to develop a strategy that will protect air quality in the Columbia River Gorge National Scenic Area. DEQ and Washington air agencies have been conducting a technical study of air quality in the Gorge funded by a special appropriation by Congress. This study, which is expected to be finalized during the first half of 2007, will forecast future air quality in the Gorge and enable DEQ to evaluate the benefit of potential air quality improvement projects. DEQ and the Washington air agencies are also exploring the formation of a bi-state, consensus-based stakeholder workgroup, built on the Oregon Solutions Group model, to help facilitate continued air quality improvement in the Gorge.

- **2007-2009 Expected Results:** Upon completion of the technical study, DEQ will recommend next steps to the Columbia River Gorge Commission. DEQ plans to participate in a Gorge Solutions Group with local governments, tribes, federal and state agencies, and stakeholders to develop consensus-based emission reduction projects that will provide continued air quality improvement in the Gorge. Policy Package #115, Protect Columbia River Gorge Air Quality, provides the resources necessary for this work.

**Air Quality Monitoring**

- **2005-2007 Accomplishments:** Sampling for air toxics continues at two sites in Portland. An EPA funded Air Toxics Community Assessment Monitoring study, which added three sites in the Portland area for one year, was completed in early 2006. This monitoring study provided valuable data about air toxics concentrations in various parts of Portland. This will allow DEQ to assess risk by comparing monitoring data to health benchmarks, and it will allow DEQ to improve air quality models by comparing monitoring and modeling results. DEQ also continues to operate an air toxics monitor in La Grande, which was established as a rural site in the National Air Toxics Trends network.

  The DEQ Laboratory modernized the Oregon Air Quality Index (AQI) that provides hourly updates on air quality from air monitoring sites throughout the state on the DEQ web site. The new AQI includes more cities, provides more hourly updates, and includes fine particulate (PM$_{2.5}$). DEQ also developed and implemented a “Wildfire Index” to provide information to the public during extreme, but often short-term, exposures to smoke from wild land and forest burning.

  EPA’s National Monitoring Strategy calls for the operation of a comprehensive multi-pollutant station in the major urban areas of the country. In response to this requirement, monitoring for sulfur dioxide and ozone were implemented at an existing site in Portland. Several monitors at this site will be upgraded to “trace” level instruments by the end of 2006.
EPA recently provided DEQ with supplemental funding for a one year study of air quality of the Columbia River Plateau near Hermiston. The project will be completed in partnership with the Confederated Tribes of the Umatilla Reservation (CTUIR). Monitoring at this site will include ozone, sulfur dioxide, oxides of nitrogen, and fine particulate.

Construction of a new facility for the DEQ Laboratory began in July 2006. The new Laboratory, to be shared with the Oregon Department of Health Lab, is located in Hillsboro. Construction is expected to be complete by June 2007. The new Lab is planned to significantly improve efficiency, safety, and analytical performance. It will also alleviate the serious overcrowding at the current building.

- **2007-2009 Expected Results:** The demand for monitoring will increase significantly during the coming biennium to assess air toxics risks, to track visibility trends and to respond to the new federal fine particulate standard. However, reduced federal funding for air toxics monitoring, visibility monitoring and fine particulate monitoring along with the increased cost of rent at the new Laboratory will mean significant cuts to DEQ’s air monitoring network without new General Fund resources. Policy Packages 110, 111, 115 and 171 include laboratory restoration elements that are vital to continue DEQ’s current air monitoring network.

### III. PROGRAM POLICY PACKAGES

#### #110 Meet Federal Air Quality Health Standards

The purpose of this package is to prevent health risks from fine particulate and ozone air pollution and to bring areas that violate the new federal health standard for fine particulate pollution back into compliance. Fine particles travel deep into the lungs where they cause health effects, and EPA is tightening the standard to reflect recent scientific studies showing that fine particulate is more dangerous than previously thought. Oregon will most likely have two new nonattainment areas with more than a dozen other communities at risk of not meeting the new standard. In addition, Oregon faces ongoing challenges in ensuring long-term compliance with the federal ozone (smog) standard due to rapid population growth. DEQ lacks resources to address the new standard and maintain compliance with existing standards due to past General Fund cuts along with proposed cuts in Federal Funds. This package requests General Fund to replace lost monitoring and technical capabilities, restore open burning education and compliance programs, adequately fund local government work to reduce fine particulate air pollution and develop and implement federally-required attainment plans in areas that violate the new standard.

#### #111 Reduce Health Risks from Toxic Air Pollution
PROGRAM NARRATIVE

Air toxics create significant public health risks in Oregon, with all Oregonians currently exposed to 10 or more times the safe exposure level for cancer. In 2001, the Environmental Quality Commission adopted an innovative and science-based program to cost-effectively reduce risk from air toxics. However, much of the funding to implement this program was cut during 2001-2005 budget reductions. Planned cuts in Federal Funds also threaten loss of resources for monitoring, developing emission reduction strategies and conducting community air toxics prevention work. In Oregon, the primary sources of air toxics are combustion products (including diesel exhaust, wood burning and open burning), gasoline vapors, and a variety of commercial and industrial processes. This package requests General Fund to restore air toxics monitoring, improve the scientific basis for air toxics work by thoroughly quantifying emission sources, expand voluntary programs to reduce emissions, restore work with neighborhoods and small businesses to prevent air toxics emissions, develop cost-effective community emission reduction strategies, and improve information about air toxics and risk.

#112 Meet Clean Air Act Requirements for Title V Permitting

Even with inflation adjustments, Title V revenue has not kept up with costs. The Clean Air Act requires a fully fee-funded program. In 2005-07, a workload analysis indicated that previous streamlining efforts made possible a permanent 1 FTE cut, however, revenue shortfalls required a 3 FTE cut. Now, only a year into reduced staffing levels (33 FTE), the program is already experiencing permitting and inspection backlogs. Without a fee increase, additional FTE will have to be cut in the coming biennium. Streamlining planned for the coming year will reduce compliance costs for permittees, but will not significantly reduce DEQ’s costs. This package will enable DEQ to issue and renew permits in a timely fashion and ensure compliance with air quality regulations at Title V facilities. The package would restore 1.5 FTE that will be lost due to inadequate fee revenue and replace 2 of 3 FTE lost due to inadequate fee revenue in previous biennia. Funding would be provided by a fee increase proposed in Legislative Concept #823 (SB 107).

#113 Maintain Asbestos Health Protection Program

The current asbestos fees cannot support existing staff. In the last two years, there has been a substantial shift from large to smaller projects, which generate less fee income. Most new asbestos removal projects are conducted by individual homeowners or small businesses that lack information on how to safely remove asbestos to avoid exposure to a proven carcinogen in compliance with rules. This shift has resulted in a need for more technical assistance and community outreach to avoid health impacts and penalties for homeowners and small businesses. This package would maintain current service level by restoring 1.5 FTE and add 1 new position to provide technical assistance and community outreach to increase awareness and avoid penalties for homeowners and small businesses. Funding will be provided by an increase in the asbestos abatement notification fees, which have not increased since 1995.
#114 Maintain an Effective ACDP Permit Program

The Air Contaminant Discharge Program is funded by a combination of General Fund, Federal Fund and Fees. Permit streamlining in this program has helped to contain costs. Based on the streamlining, the program reduced staffing by 3.5 FTE in 2001 and by an additional 4 FTE in the current biennium. Current staffing levels (27.7) are adequate to operate the program. However decreased Federal Funds and increased costs means that a fee increase is now necessary to maintain this staffing level. Fees were last increased in 2001.

#115 Protect Columbia River Gorge Air Quality

The National Scenic Act sets a goal of protecting and enhancing the scenic, natural, cultural, and recreational resources of the Columbia River Gorge while at the same time supporting the local economies that are vital to the area’s future prosperity. The Columbia River Gorge Commission charged DEQ and Washington agencies with developing an air quality plan for the Scenic Area that meets the goals of the Scenic Act. A large monitoring and modeling study, funded by a special appropriation from Congress, is expected to be completed in the spring of 2007. However, resources to develop an air quality strategy and conduct stakeholder and public involvement were cut in 2005 and resources to conduct visibility monitoring will be reduced due to cuts in Federal Funds. This package requests General Fund to restore the visibility monitoring network, develop an air quality strategy for the Columbia River Gorge National Scenic area utilizing a "Gorge Solutions" approach and coordinate effectively with Washington agencies to ensure bi-state parity and cooperation.

#116 Heat Smart for Clean Air

The purpose of this package is to protect public health by reducing the use of old technology woodstoves. Residential heating with old, uncertified woodstoves releases fine particles and gases that contribute to serious human health effects. In 1991, a residential wood heating fund was created but never funded. Legislative Concept #664 would update the statute to include: 1) required removal of uncertified stoves upon sale of residential property, 2) grants to low income individuals for stove replacement, and 3) redirection of open burning and asbestos penalties to the fund. The Policy Package requests $50,000 of General Fund for the woodstove replacement fund, which is needed to support immediate emission reductions in those areas most at risk of violating the new federal fine particulate standard. The package also requests 0.50 FTE to administer the grant fund.
#117 Implement Advanced Tech Vehicle Inspection

With the enhanced emissions test phased-out, the Vehicle Inspection Program is reducing inspectors. In 2001, DEQ proposed to reduce inspectors from a total of 115 to 60 between July 2001 and July 2009. Current projections indicate that 65 inspectors will be needed long term, but DEQ can achieve the reduction earlier than anticipated (by July 2007 rather than July 2009). The 5 additional inspectors are needed to adequately staff each station to meet wait time and customer service goals. This reduces DEQ’s staffing request for next biennium from 25 positions phased out over the biennium to 5 permanent FTE. The package also requests one Scientific Instrument Technician needed to service the sophisticated electronic equipment used by the program.

#118 Implement Oregon Low Emission Vehicle Program

The Environmental Quality Commission adopted the Oregon Low Emission Vehicle (LEV) program to reduce greenhouse gas emissions from passenger vehicles. DEQ will require staff support to operate the program. Implementation work will include: providing information and assistance to auto manufacturers, dealers and repair shops; managing phase-in procedures designed to provide flexibility for manufacturers; tracking registration data to identify non-compliance and provide a level playing field for Oregon dealers; reviewing annual reports from manufacturers; investigating cross-boarder sales issues; pursuing enforcement actions; and keeping Oregon's rules current with changes to California's rules. This package requests 1.5 FTE funded by this fee to adequately operate the program. Funding will be provided by a fee on the largest automobile manufacturers.

#119 Clean Diesel

This package complements Legislative Concept #819 to reduce public health risks from diesel emissions by offering a variety of incentives to diesel engine users who reduce emissions. The Legislative concept would: (1) create a fund to retrofits and rebuild diesel engines; (2) create a tax credit for diesel retrofits, (3) create a tax credit to scrap old diesel engines and replace them with new, cleaner engines; and (4) allow State School Fund monies to be used by school districts as match for federal funds.

#171 Laboratory Rent Increase

Relocation of the DEQ Laboratory will result in significant cost increases, and the share allocated to the Air Quality program will impact General, Federal and Other Funds. However, Federal and Other fund revenues are not adequate to pay for these increased costs because the federal air quality grant is declining and the Air Quality program’s primary fee programs are already lacking sufficient revenue to cover existing costs. As a result, the Air Quality program is requesting additional General Fund in this package to pay the increased rent costs.