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Air Management Programs

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Introduction

The federal Clean Air Act and Clean Air Act Amendments of 1990 established air pollution control requirements that states must implement. The U.S. Environmental Protection Agency (EPA) is responsible for federal implementation of the Clean Air Act. The Clean Air Act called for a gradual implementation of many of its provisions over many years.

EPA establishes air quality standards for various air pollutants, and designates areas in states that do not meet the standards. These areas are called "nonattainment areas." EPA issues regulations that require states to reduce emissions of ozone, nitrogen oxides, particulate matter and other pollutants over several years. In general, states are required to: (a) develop and submit to the federal government a series of implementation plans describing the programs and controls the state will utilize to reduce emissions and attain acceptable air quality levels; and (b) implement the plans to attain specific air quality levels by established dates or risk further federal requirements and eventually sanctions.

The Clean Air Act also: (a) created stricter standards on emissions from motor vehicles; (b) called for the use of alternative clean fuels; (c) created additional controls on air emissions at industrial facilities; and (d) established other air emission control measures for power plants, stationary engines at industrial facilities, small nonroad engines, and sources that are too small to regulate individually.

The Wisconsin Department of Natural Resources (DNR) is responsible for development and oversight of the state's programs to comply with federal requirements. DNR is provided authority to conduct air quality programs under Chapter 285 of the statutes and under administrative rules in the NR 400 series. The Department issues construction and operation permits for air emission sources, monitors air quality across the state, and enforces air quality standards. The Department of Transportation (DOT) administers certain provisions regarding vehicle inspections and other transportation control measures.

Federal clean air requirements are having major impacts on individuals and businesses in Wisconsin. In particular, DNR has submitted a series of plans to EPA that outline the measures the state will take in reducing ozone emissions in the southeastern portion of the state. DNR has initiated several programs and instituted several controls necessary to create plans that would reduce ozone emissions and meet national ozone standards. DNR is also working on plans that would help the state meet national particulate matter standards.

The Clean Air Act requires states to implement a permit program for certain large stationary sources of air pollutants. DNR established and operates a program to issue permits to new and existing stationary sources of air emissions.

This paper provides an overview of the major federal provisions that affect Wisconsin, a discussion of actions required of the state and the state's plans and programs for meeting federal clean air requirements. The paper describes the air management activities of the DNR, including issuance of air emission permits, compliance and monitoring activities, development of state implementation plans in compliance with federal requirements, special air studies, other air management programs, and funding sources for DNR air management programs.

CHAPTER 1

MAJOR FEDERAL CLEAN AIR ACT REQUIREMENTS

National Ambient Air Quality Standards

Under the Clean Air Act, the Environmental Protection Agency (EPA) establishes national ambient air quality standards (NAAQS) based on scientific determinations of the threshold levels of air contaminants that will protect public health with an adequate margin of safety. Ambient air standards relate to the quality of the air we breathe. In comparison, emission limits relate to the quality of the air emitted from a pollution source.

Under ambient air standards, the concentration of pollution below the standards is considered acceptable. Where air pollution exceeds the standards, emissions standards are established to reduce air emissions sufficiently to improve air quality to meet and maintain the ambient air quality standard. In addition, where the standards are met, the Clean Air Act includes requirements for some pollutants in order to prevent the deterioration of air quality.

The standards are set based on time of exposure, in recognition that individuals can tolerate higher levels of exposure to pollutants for short periods of time compared to prolonged exposure. Generally, there are two standards for each pollutant: (a) primary standards establish the air quality required to prevent adverse impacts on human health; and (b) secondary standards establish the air quality required to prevent adverse impacts on vegetation, property, or other aspects of the environment.

EPA has adopted air quality standards for six "criteria pollutants," including ozone, sulfur dioxide, nitrogen dioxide, particulate matter (solid or liquid matter suspended in the atmosphere), carbon monoxide and lead. If EPA adopts an air quality standard, then DNR must adopt a standard for the pollutant.

DNR adopts primary and secondary ambient air quality standards by administrative rule. Generally, state law requires DNR to adopt the federal standard. However, 2003 Wisconsin Act 118 affects state adoption of federal standards. This is discussed in the Chapter 2 section on state implementation plan development.

Ozone

Ozone is a gas composed of three oxygen atoms that, at ground level, is a primary component of smog. Smog is a persistent urban pollution and health problem. Air pollution sources do not directly emit ozone, but do emit air contaminants that are precursors to ozone. Volatile organic compounds (VOCs) and nitrogen oxides (NOx) react in sunlight on hot days to create ozone.

Major sources of ozone formation are large industrial facilities, electric utilities, motor vehicles and a variety of small sources that in total result in sizeable emissions. Individuals exposed to high ozone concentrations may experience a significant health risk, especially the elderly, young children, and people with respiratory difficulties. Health studies have shown exposure to moderate levels of ozone causes increased respiratory problems, such as asthma and emphysema and leads to permanent changes in lung structure. Ozone can also damage crops, trees, rubber, fabrics and other materials.

Volatile organic compounds

Volatile organic compounds include a number of

chemicals that are emitted as gases from certain solids and liquids. Major sources of VOC emissions are solvents used by industry and households, residential wood consumption, nonroad equipment, and motor vehicles. While VOCs are not listed as criteria air pollutants, EPA and state efforts have targeted VOCs for reduction as part of smog control efforts.

Nitrogen oxides

Major sources of nitrogen oxides are power plants, factories, other industrial combustion sources and automobiles. The criteria pollutant nitrogen dioxide is one type of NOx. In addition to being a component of ozone, NOx is a component of particulate matter and acid rain. Acid rain is formed when emissions of sulfur dioxide and nitrogen oxides undergo chemical changes in the atmosphere and return to the earth's surface as acid rain, which causes damage to lakes, forests, other ecosystems and buildings.

Particulate Matter

Particulate matter is also called haze, dust, smoke or soot, and is comprised of tiny pieces of solid particles and liquid droplets that refract light and create haze or brown clouds. Particulate matter can enter the lungs through the mouth and nose and cause negative health effects. Examples of sources of particulate matter include trucks, power plants, industrial processes, crushing and grinding operations, windblown dust, wood stoves, unpaved roads, agricultural plowing, and forest fires.

There are two categories of particulate matter. Inhalable coarse particles, known as PM10, are smaller than 10 micrometers in diameter and bigger than 2.5 micrometers. PM10 particles can cause nose and throat irritation and bronchitis, respiratory and cardiovascular problems for susceptible people. (A micrometer is $1/1000^{th}$ of a millimeter. There are 25,400 micrometers in an inch. A human hair is approximately 70 micrometers in diameter.)

Fine particles, known as PM2.5, are 2.5 micrometers or smaller in diameter, and can penetrate more deeply into the lungs compared to larger particles. EPA studies have concluded that fine particles are more likely than coarse particles to contribute to health effects such as premature deaths and hospital admissions, at lower concentrations than allowed by the PM10 standards.

Carbon Dioxide

Carbon dioxide and other greenhouse gases affect the planet's climate, with environmental and human health consequences. Major human-related sources of carbon dioxide emissions are the burning of coal, oil, and gas. These sources include power plants, motor vehicles, and other industrial combustion sources. According to EPA, the process of generating electricity is the largest source of carbon dioxide emissions, representing 41 percent of all carbon dioxide emissions in the United States in 2006.

EPA believed it did not have jurisdiction under the Clean Air Act to include carbon dioxide as a criteria pollutant. This was challenged in the federal courts as it relates to automobile emissions. In April, 2007, the U.S. Supreme Court ruled that EPA has the authority to regulate emissions of carbon dioxide and other greenhouse gases. In July, 2008, EPA issued a notice of proposed rulemaking to request public comment on potential regulatory approaches for regulating greenhouse gases. EPA accepted public comments through November 28, 2008.

Nonattainment Areas

Areas are designated as "nonattainment" for a specific pollutant if the area fails to meet the NAAQS for the pollutant. Almost all major urban areas experience periods when concentrations of air pollutants exceed one or more NAAQS. Areas that are designated as nonattainment must take actions

to reduce emissions of the specific pollutant. The more severe the air quality problem, the more control measures a nonattainment area must implement. States must identify and implement additional controls if the measures required by the Clean Air Act do not achieve required standards.

Currently, ozone is one of two air contaminants for which Wisconsin counties are in nonattainment. The status of ozone attainment and nonattainment designations for Wisconsin counties are described in a later section on ozone.

EPA designated nonattainment areas for fine particulate matter (PM2.5) in December, 2008. The status of particulate matter attainment and nonattainment designations for Wisconsin counties is described in a later section on particulate matter.

The 1990 Amendments establish planning procedures and penalties for states that do not achieve air quality standards by the applicable attainment date. Areas that fail to attain the air quality standards by the required time may be faced with additional mandatory requirements.

States are required to develop state implementation plans (SIP) that identify steps the state is taking to bring nonattainment areas into attainment of national ambient air quality standards. If the state's nonattainment areas fail to attain the national standard by the required deadline, the state must submit a revised state implementation plan prescribing control measures necessary to meet the air quality standards, including measures prescribed by EPA. This is discussed in a later section on state implementation plan requirements.

Ozone Attainment

Standards Before 2008

A region is considered in nonattainment for ozone if a violation of the ozone standard occurs within the region. The boundaries of the region are determined on the basis of demonstrated air quality monitoring data.

In 1978, EPA established a one-hour ozone standard of a concentration of 0.12 parts per million (ppm). Violation of the standard determined whether a region was in nonattainment. An area would be considered in violation of the one-hour standard if the number of days in which the standard was exceeded is greater than three during a three-year period. Six Wisconsin counties were designated as being in severe nonattainment of the national one-hour ozone standard, including Kenosha, Milwaukee, Ozaukee, Racine, Washington and Waukesha.

EPA adopted an eight-hour ozone standard in July, 1997, to replace the one-hour standard. The 1997 standard is a concentration of 0.08 parts per million (ppm) or 80 parts per billion (ppb). Because the rounding method used by EPA carried the measurement to three decimal places, the standard is effectively 0.084 ppm. An area is considered to meet the 1997 eight-hour ozone standard if the average of the fourth highest eight-hour concentrations during each of three consecutive years is less than 0.085 ppm and violates it if the measurement is equal to or greater than 0.085 ppm or 85 ppb.

The 1997 eight-hour ozone standard was challenged in court. The United States Supreme Court issued a decision in February, 2001, that upheld the eight-hour standard. EPA issued final nonattainment designations for the eight-hour ozone standard in April, 2004. EPA also revoked the one-hour standard, effective June 15, 2005.

In 2004, nine counties in Wisconsin were designated as in nonattainment of the 1997 eight-hour ozone standards. These counties are: (a) Kenosha, Milwaukee, Ozaukee, Racine, Washington, and Waukesha counties were included in one moderate nonattainment area; (b) Sheboygan County was designated a separate moderate nonattainment area;

and (c) Door, Kewaunee, and Manitowoc counties were designated separate basic nonattainment areas, the category of least nonattainment.

States were required to submit state implementation plans for the 1997 eight-hour ozone standard by June, 2007. Attainment was to be required in 2009 for the basic nonattainment areas and in 2010 for the moderate nonattainment areas. However, court decisions have stopped implementation of the 1997 standard in basic nonattainment areas.

In June, 2007, the Governor submitted a request to EPA to redesignate eight counties as attainment for the 1997 eight-hour ozone standards. The request indicated that Kenosha, Racine, Milwaukee, Waukesha, Washington, Ozaukee, Manitowoc, and Kewaunee counties met the ozone standards for 2004, 2005, and 2006.

EPA redesignated Kewaunee County as attainment effective May 21, 2008. EPA did not make a formal response regarding the other seven counties. However, in March, 2008, EPA issued a finding that Wisconsin and 10 other states missed the June, 2007, deadline for submitting the SIP. EPA noted that Wisconsin did not submit plan elements for: (a) attainment demonstration, that analyzed the potential of the areas to meet the 1997 standard; and (b) reasonable further progress, that showed the state is making continual progress toward attainment standard. EPA also notified DNR that EPA could not approve the request for redesignation of the Milwaukee area and Manitowoc County as attainment because of the violations of the eight-hour standard in those areas during 2007. DNR plans to submit an attainment demonstration to EPA in the summer of 2009.

Under federal Circuit Court decisions in December, 2006 and June, 2007, EPA was directed to continue to require states to implement certain provisions in one-hour ozone nonattainment areas such as the Milwaukee area. In November, 2008, DNR issued a notice of public hearings to be held in January, 2009, regarding a DNR proposal to redesignate the six-county Milwaukee area from nonattainment to attainment of the one-hour ozone standard.

2008 Eight-Hour Standards

In March, 2008, EPA revised the eight-hour ozone standard to a concentration of 0.075 ppm (instead of 0.084 ppm under the 1997 standards, due to EPA's rounding practice), or 75 ppb. An area will meet the revised eight-hour standard if the average of the fourth highest eight-hour concentrations during each of three consecutive years is less than 0.075 ppm or will violate it if the measurement is equal to or greater than 0.075 ppm or 75 ppb.

States are required to make recommendations to EPA by March, 2009, for areas to be designated as attainment or nonattainment of the 2008 eight-hour ozone standard. EPA will issue final designations of nonattainment areas by March, 2010, unless there is insufficient information to make the designations, in which case EPA would issue designations by March, 2011. In the fall of 2008, DNR was reviewing monitoring data for the three year periods of 2005 through 2007 and 2006 through 2008 to prepare for submitting a recommendation to EPA of areas to be designated as attainment and nonattainment.

States will have to submit state implementation plans showing how they will meet the 2008 eight-hour ozone standards no later than three years after EPA makes the final nonattainment designations. If EPA issues designations in 2010, states will have to submit a SIP by 2013. The deadline for bringing a nonattainment area back to attainment of the standard will vary based on the severity of the problem.

Particulate Matter Attainment

Standards Before 2006

Particulate matter standards address PM2.5 (fine particles that are 2.5 micrometers in diameter or less) and PM10 (inhalable coarse particles that are less than 10 micrometers and larger than 2.5 micrometers). EPA made initial designations of PM10 nonattainment areas in 1991, designating all of Wisconsin as in attainment, and has not changed the Wisconsin designation for PM10 since then.

In 1997, EPA established PM2.5 standards. In December, 2004, EPA designated all of Wisconsin as being in attainment of the 1997 PM2.5 standards.

2006 Standards

In September, 2006, EPA revised national ambient air quality standards for particulate matter. EPA reduced the PM2.5 24-hour average threshold from the 1997 standard of 65 micrograms per cubic meter to 35 micrograms per cubic meter. EPA retained the 1997 PM2.5 annual average standard of 15 micrograms per cubic meter. EPA retained the 1997 PM10 24-hour average standard of 150 micrograms per cubic meter. EPA revoked the PM10 annual average standard of 50 micrograms per cubic meter.

EPA requires states to establish monitoring sites and collect data on fine particulate matter. EPA also specifies the types of data that states must collect and that EPA will use to determine whether an area is to be designated as in nonattainment of the standard. For example, an area will meet the 24-hour standard if the 98th percentile of 24-hour PM2.5 concentrations in a year, averaged over three years, is less than or equal to the standard of 35 micrograms per cubic meter.

States were required to submit recommendations to EPA by December, 2007, for areas to be designated as attainment (meeting the standards) or nonattainment (violating the standards) of the 2006 PM2.5 standards. In December, 2007, the Governor submitted a recommendation to EPA that all of Wisconsin be designated as attainment with the 2006 PM2.5 standard because Wisconsin will attain the standard in 2015 without implementing any additional control programs beyond those already in existence or planned to be in effect. In August, 2008, EPA informed the Governor that EPA is required to apply a designation of nonattainment to areas that are currently violating the standard, irrespective of whether the areas might be expected to come into attainment in some future year.

On December 22, 2008, EPA issued a final designation of six Wisconsin counties as in nonattainment with the PM2.5 standard. The counties are Brown, Columbia (just the Town of Pacific), Dane, Milwaukee, Racine, and Waukesha. The final designations will be effective in approximately early April, 2009.

States with areas that are designated in nonattainment of the 2006 PM2.5 standard will need to submit a state implementation plan by 2012 (three years after the effective date of the designation), that describes steps the state will take to reduce PM2.5 emissions, and come into attainment of the standard. States would be required to meet the standards in 2014.

State Implementation Plan Requirements

States are required to achieve compliance with national ambient air quality standards through the development of, and revisions to, a "state implementation plan" (SIP). The SIP is a series of documents and regulations that identify, in great detail, the measures a state is taking to control emissions of regulated pollutants. The SIP must also demonstrate how these measures will allow the

state to attain national ambient air quality standards by specified deadlines for each classification of nonattainment. Areas with worse air quality classification will have to implement more controls. As a result, to date, Wisconsin's SIP places more stringent controls on ozone pollutant emissions in the state's ozone nonattainment counties.

The Clean Air Act contains specific deadlines for submission of the plans and EPA approval. If the state does not meet required deadlines, the state can be subject to further federal requirements and eventually sanctions. The SIP must include the following general provisions.

1. Enforceable emissions limitations, control requirements, and schedules to achieve compliance with the Act.

2. Systems to monitor, compile and analyze data on air quality.

3. A permit program and a fee schedule to cover the costs of permitting.

4. Provisions that prohibit emissions which contribute significantly to nonattainment of an air quality standard or cause significant deterioration of air quality or visibility.

5. Applicable controls on interstate and international air pollution.

6. The assurance of adequate personnel, funding and authorities under state law to implement and enforce the SIP.

7. The required installation of monitoring equipment by stationary sources, reports on the monitored emissions and correlation of the monitored emissions to emission limitations.

8. Enforcement authority and procedures.

9. Provisions providing for the revision of the plan as required.

10. Requirements for consultation with local governments on applicable provisions and public notice if air pollutant levels exceed standards.

11. Air quality modeling to predict the effect of emissions on air quality standards.

Sanctions for Deficient State Implementation Plans

If a state does not submit a required SIP or submits a SIP that is judged to be inadequate, EPA may impose sanctions on the state. Under certain circumstances for instance, if the state fails to submit a SIP demonstrating attainment of an ambient air quality standard, the Clean Air Act requires EPA to impose sanctions on the state. If a state does not rectify its SIP situation and sanctions are enacted, EPA develops a federal implementation plan in order to move the state toward attainment. In general, if EPA finds a SIP submittal incomplete, the state is given eighteen months to correct the submittal before federal sanctions begin, and sanctions would apply until the plan deficiency is corrected.

Sanctions include: (a) a requirement that new industrial projects provide emission offsets at a ratio of up to two tons of emission reductions to one ton of new emission increases; (b) the withholding of federal highway aids, except for: (1) projects principally for safety improvements and (2) a specific list of project types which have a secondary impact of reducing vehicle emissions; and (c) EPA implementation and enforcement of a federal implementation plan (FIP) in place of the state plan or portions of plan which is determined to be deficient.

Types of Pollutant Sources

Pollutant sources are generally grouped into categories based on the characteristic of the pollut-

ant source. The Clean Air Act establishes different control mechanisms for each type of source, and in some cases, subdivides the source for purposes of setting control requirements. These categories of pollutant sources include: (a) stationary sources, which generally include fixed sources of pollution, such as factories, power plants, gas stations and other business facilities; (b) mobile sources, which generally include any motor vehicle equipment that is capable of emitting any air pollutant while moving, such as automobiles, buses, trucks and motorcycles; and (c) area sources, which encompass all other sources too small and numerous to regulate individually, generally including paints, solvents, asphalt paving, bakeries, autobody finishing shops, degreasing supplies, farm equipment, pesticides, small graphic arts shops, and consumer products.

Stationary Sources

Many of the Clean Air Act requirements for stationary sources apply only to those facilities that emit pollutants greater than a certain quantity. These larger emitters of pollutants are referred to as major sources and often emit substantial quantities of air contaminants such as sulfur dioxide and nitrogen oxide. The definition of a major source varies with the pollutant and the severity of the pollution in the area in which the facility is located. For example, a facility emitting 50 tons per year of a pollutant in a highly-polluted area may be a major source subject to regulation, but the same facility located in a less polluted area may not have to meet as stringent regulatory requirements as the same source would have to meet in a nonattainment area. Minor stationary sources include all facilities that are not categorized as a major source. Major sources are the primary facilities subject to the requirements of the Act, although provisions exist for the application of restrictions to minor sources in certain cases.

A primary requirement for existing stationary sources in nonattainment areas is the installation or retrofit of equipment with emission controls. A determination of what controls are required may be made on a case-by-case review of each facility. However, EPA has adopted guidelines setting a generic method of controls that will meet the requirements for specified industrial categories. The facilities which must install control equipment are determined based on: (a) the amount of pollution emitted by the facility; (b) the severity of the pollution problem in the nonattainment area; and (c) the industrial category of the facility. The emission limits are referred to as reasonably available control technology (RACT).

Mobile Sources

Mobile sources are classified as highway vehicles (cars, trucks, and motorcycles) and off-road engines such as snowmobiles, all-terrain-vehicles, marine engines, chain saws, and lawn mowers.

Despite current emissions controls, mobile sources of air pollution continue to be the largest single source of ozone-forming pollutants and carbon monoxide emissions. They account nationally for approximately one-half of ozone-forming pollutants, 90% of carbon monoxide in urban areas, and one-quarter of particulate matter emissions.

Vehicular pollution can be reduced through: (a) purifying the fuel; (b) reducing exhaust and evaporative emissions; (c) reducing vehicle travel; or (d) improving vehicle flow on the highway system. The Clean Air Act includes requirements for fuel content in polluted areas, new emission standards for vehicles and transportation control measures. Vehicular pollution control provisions include: (a) more stringent emission standards for automobiles, trucks and urban buses; (b) clean-fueled vehicle standards for fleets and cars in the most polluted areas; (c) required use of reformulated gasoline; and (d) vehicle emission inspection and repair requirements. Clean fuels, to be used in clean-fueled vehicle fleets, may include methanol, ethanol, or other alcohols (including any mixture containing 85% or more by volume of alcohol with gasoline), reformulated gasoline, certain diesel, natural gas, liquified petroleum gas, hydrogen or electricity.

Under federal law, in the most severely polluted areas, gasoline sold for vehicle use must be modified

to reduce emissions. The fuel required is dependent on the pollutant of concern. Federal law requires use of reformulated gasoline (RFG) in areas of the state experiencing significant ozone problems. The fuel must provide specified reductions in emissions of toxic air pollutants year round and summertime reductions in VOCs and NOx. The components of RFG must meet certain refining and processing requirements.

RFG contains oxygenates as a method of reducing carbon monoxide and toxics. In the past, oxygenates were additives such as ethanol or ethers such as methyl tertiary butyl ether (MTBE). In part due to concerns over ground water contamination, effective August 1, 2004, Wisconsin banned the use of MTBE as the oxygenate component in reformulated gasoline sold in the state. EPA subsequently revoked the requirement that RFG must contain oxygenates (additives) such as ethanol or MTBE.

In Wisconsin, the six counties of Kenosha, Milwaukee, Ozaukee, Racine, Washington, and Waukesha are subject to the reformulated gasoline requirements. The only way the requirement would be removed for these counties would be if Congress amends the Clean Air Act because the Clean Air Act amendments specifically require the use of RFG in the Milwaukee-Racine Consolidated Metropolitan Statistical Area. (The RFG requirement will not automatically end when the counties achieve attainment of the ozone standard.)

Phase 1 reformulated gasoline requirements were effective in January, 1995. Phase 2 RFG requirements were effective in January, 2000, and required further refinement of the components of reformulated gasoline to provide additional reductions in ozone pollutants. The Department of Commerce is responsible for testing the content of gasoline to determine if it meets federal requirements.

Under the eight-hour ozone standard designations effective in June, 2004, the six counties in severe nonattainment of the prior one-hour standard, and subject to requirements to use RFG, were designated as being in moderate nonattainment of the eight-hour standard. Sheboygan County was the only additional county designated as in moderate nonattainment of the eight-hour standard. The Governor could request EPA approval to make the sale of reformulated gasoline mandatory in Sheboygan County. (As of January 1, 2009, the Governor had not done so.)

The Clean Air Act Amendments of 1990 require certain centrally-fueled fleets of ten or more motor vehicles to operate clean fuel vehicles and use clean fuels. This generally involves the use of vehicles fueled with alternatives to petroleum such as natural gas and electricity.

Gasoline station operators located in moderate or worse ozone nonattainment areas are required to install gasoline vapor recovery systems on dispensing equipment (referred to as stage II vapor controls). Vapors emitted include toxic air pollutants, such as benzene, in addition to ozone-forming pollutants. Facilities selling less than 10,000 gallons per month and independent marketers selling less than 50,000 gallons per month are exempt.

The required installation of stage II controls was phased-in over 1993 through 1995. The state submitted the elements of its vapor recovery program to EPA as part of the state's 1992 SIP requirements. DNR's compliance program enforced the requirements that owners or operators install the required stage II equipment. DNR's current compliance efforts focus on the proper operation and maintenance of existing required systems.

For moderate or worse ozone nonattainment areas, the Clean Air Act requires the state to demonstrate that current vehicle usage, emissions, congestion levels and other factors are consistent with the levels used by the state for the purpose of demonstrating future attainment of air quality standards. If the current levels exceed the levels projected, then the state must implement transportation control measures as part of their overall air quality plan to

reduce emissions.

EPA adopted regulations for heavy-duty diesel engines for highway vehicles that went into effect with model year 2007 vehicles that came into the market in mid-2006. The EPA also adopted regulations effective June, 2006, that required the use of ultra-low sulfur diesel fuel in highway diesel fuel. The fuel must contain levels of sulfur 97 percent less than previous levels (a decrease from 500 parts per million to 15 ppm), and became available at gas stations in October, 2006.

Area Sources

The Clean Air Act does not include specific statutory requirements or deadlines that area sources must meet, except as necessary to obtain required emission reductions and demonstrate attainment. EPA establishes most area source controls. However, states have implemented area source controls as part of their emission reduction ozone attainment plans submitted to EPA.

EPA has regulated the volatile organic compound content of paints, stains, and architectural coatings used by area sources. The regulations vary depending on the type of coating and source using the coating.

Nonroad Engines

EPA began to adopt regulations for nonroad engines in 1995. The regulations affect a broad range of engine types, including recreational vehicles, industrial equipment, lawn and garden equipment, off-highway vehicles, construction equipment and farm equipment. In Wisconsin, these regulations primarily affect small engine manufacturing plants.

EPA regulations for heavy-duty nonroad diesel engines limit emissions of nitrogen oxides, hydrocarbons, carbon monoxide, and sulfur. Requirements and the implementation timeline vary depending on the type of engine or vehicle. The phase-in of the engine requirements began with the smallest engines for model year 2008, sold beginning in mid-2007. The emissions standards apply to all new engines sold in the United States and any imported engines manufactured after the standards begin. These engines include certain engines over 25 horsepower such as those used in forklifts, electric generators, airport baggage transport vehicles, certain farm and construction uses, warehouses, and ice-skating rinks. The sulfur content requirement for fuel for these engines dropped from approximately 3,000 parts per million to 500 parts per million in 2007 and will drop to 15 parts per million by 2010 for most off-road applications. Some of the largest engines and locomotives have a few additional years to comply.

EPA is phasing in emission standards for model year 2006 through 2012 vehicles for the exhaust of recreational vehicles such as snowmobiles, off-highway motorcycles and all-terrain-vehicles. Recreational marine diesel engines over 50 horsepower used in recreational boats began meeting phased emissions standards in 2006 through 2009, depending on the size of the engine. EPA is phasing in emission standards for marine diesel engines above 800 horsepower and locomotives between 2008 and 2014.

On September 4, 2008, EPA issued rules that require emission reductions for certain nonroad engines and equipment and marine engines and vessels. The rules require emissions reductions for small nonroad spark-ignition engines rated below 25 horsepower used in household and commercial applications, beginning with model year 2011 or 2012 (depending on the engine size). This would include engines used in lawnmowers, garden equipment, utility vehicles, generators, and other types of construction, farm, and industrial equipment. The rules also require emission reductions for marine spark-ignition engines and vessels, beginning with the 2010 model year. This would include outboard engines, personal watercraft, and inboard engines used in speedboats and recreational watercraft. The EPA rule announcement indicated that, upon full implementation, the new emission standards will result in a 35 percent reduction in hydrocarbon and nitrogen oxide emissions from the ex-

haust of new engines.

Air Toxics

EPA administers a separate regulatory framework for toxic substances not covered by national ambient air quality standards. Toxic substances can potentially cause significant effects at low concentrations in localized instances. They can cause or are suspected of causing cancer or other serious human health problems, or cause adverse environmental and ecological effects. Air toxics include certain heavy metals, chemicals and pesticides.

EPA is required to regulate 188 hazardous air pollutants (HAPs). Toxics are regulated through a two-phase strategy. The first phase is based on technology standards and requires industries to install maximum achievable control technology (MACT). The second phase of control will require facilities to adopt additional controls if the facilities have emissions remaining after MACT standards have been met which will create potentially harmful concentration of air toxics, termed residual risk.

Wisconsin actions related to adoption of emission controls on toxic air contaminants are discussed in the next chapter on state activities.

Required Controls

EPA has identified categories of sources that emit HAPs. Major sources within the categories are subject to regulation. A major source is a facility that may emit ten tons per year of any single HAP, or 25 tons per year of any combination of HAPs. In certain cases, facilities with lower emissions such as dry cleaners may be regulated. Requirements under an area source program will reduce toxic air emissions of the thirty most serious urban area source pollutants. Standards are also set for municipal waste incinerators and facilities handling chemicals whose accidental release would threaten public health or the environment.

EPA completed promulgation of maximum achievable control technology (MACT) standards for all major sources of the 188 HAPs in 2005. Facilities must generally achieve compliance within three years of promulgation of a standard. The last compliance date for major sources was October 1, 2008.

EPA is under a court order to complete standards for 50 area source categories by June 15, 2009. Facilities will be required to achieve compliance within three years. Examples of area source categories that will have to meet these new regulations include sources with industrial boilers, iron foundries, stationary combustion engines, plating and polishing operations, and surface coating of plastic parts.

Residual risk standards are to be set within eight years after a MACT standard is established for a source category (nine years after the first round of MACT standards). The first MACT standards were completed in the fall of 1993. As of the fall of 2008, EPA has issued residual risk standards for coke ovens, perchloroethylene dry cleaning solvent, industrial cooling towers, halogenated solvents, gasoline distribution, ethylene oxide sterilizers, magnetic tape, and hazardous organics. Of the eight promulgated residual risk standards, three require further controls by sources and five do not. Eight additional standards have been proposed, and would not require further controls.

While the MACT standards require the maximum achievable degree of emissions reduction, technological feasibility and cost are considered when setting the standards. Stricter controls are required for new facilities than for existing facilities. The controls may involve: (a) changes in equipment, design or operational methods; (b) process changes; (c) the substitution, reuse or recycling of materials; (d) work practice changes; (e) collection, capture, or treatment of pollutants released from a process, stack or other points; or (f) operator training and

certification. For example, reductions will likely be achieved by identifying and controlling routine small leaks of substances, involving valves, flanges, pumps, compressors, caps and seals.

EPA directly administers an early reduction program that allows an existing facility to receive a six-year extension to meet MACT standards if the facility achieves a 90% reduction in emissions (95% for hazardous particulates) prior to the time that the standard is proposed, for a total compliance period of ten years. No facilities in Wisconsin have opted for an extension under this program.

Accidental Releases

EPA administers a regulatory program to address accidental or catastrophic releases of highly toxic air emissions. EPA has identified a list of at least 100 extremely hazardous air pollutants, based on: (a) the severity of acute health effects; (b) the likelihood of accidental releases; and (c) the potential magnitude of human exposure. While DNR notifies the industrial facilities in the state of the federal regulatory requirements for the pollutants on the federal list, EPA administers the regulatory aspects of the program. Facilities are required to identify possible hazards and develop risk management plans to be submitted to EPA. A federal Chemical Safety and Hazard Identification Board investigates accidents and makes recommendations regarding accident prevention.

Urban Air Toxics Strategy

EPA completed a final urban air toxics strategy in July, 1999, that identified 33 priority air toxic pollutants (from the larger list of 188 HAPs) that pose the greatest threat to public health in urban areas. Since then, EPA has used it to develop emission standards for 50 area source categories required under the court order by June 15, 2009.

EPA has used the urban air toxics strategy to target reductions in the emission of these pollutants in urban areas from major industrial sources, smaller stationary sources and cars and trucks. EPA activities undertaken under the strategy include to set MACT standards for HAPs, issue some area source standards, develop local and community-based initiatives to focus on specific pollutants and community risks, conduct additional monitoring and research, and educate and obtain input from affected people about the strategy.

Permits

The Clean Air Act Amendments of 1990 require sources that emit air pollution to obtain a construction (new source) permit before beginning construction of the air pollution source and an operation permit to operate the source. A permit includes information about which pollutants are being released, establishes detailed limits on the emissions of air contaminants, establishes a maximum increase over a baseline of emissions and includes related requirements such as monitoring, recordkeeping and reporting. The permit incorporates requirements of the state implementation plans into specific requirements for an individual facility.

Types of activities that may require a permit include: (a) use of adhesives, paints, inks or other solvents that cause emissions of VOCs and HAPs; (b) fuel use (excluding electricity) that results in emissions of carbon monoxide, sulfur dioxide, NOx and some HAPs; and (c) grinding, sanding, welding, material handling or other activities that create dust or fumes that emit particulate matter and some HAPs. Types of businesses that may need a permit include: (a) metal parts coating or autobody refinishing; (b) food products and nondurable goods; (c) chemical, rubber and plastic products; (d) paper, printing and publishing; (e) lumber, wood products and wood furniture; (f) primary metals industry; (g) health services; (h) combustion sources; and (i) road paving material production.

EPA must administer an operation permit program if the state fails to do so. Wisconsin

administers an EPA-approved operation permit program that became effective in April, 1995. A federal operation permit is required for all facilities defined as major sources, many sources subject to a federal air toxics regulation, and many facilities subject to federal new source standards. Generally, major sources for operation permits include facilities that have the potential to emit any one of the following: (a) over 100 tons per year of any criteria pollutant or 25 tons per year of VOCs in severe nonattainment areas; (b) ten tons per year of any federal HAP; or (c) 25 tons per year of all combined federal HAPs.

The federal construction permit requirements vary depending on whether or not the facility is located in a nonattainment area. Facilities in nonattainment areas must meet more stringent standards. In areas that currently meet air quality standards, requirements are designed to prevent industrial growth from causing a significant deterioration of the air quality. Regulated major source facilities are required to install equipment with emission controls being generally used by industry for new construction. Generally, major sources for construction permits in areas which meet the air quality standards include facilities that have the potential to emit over 250 tons per year of any criteria pollutant, or over 100 tons per year in specified source categories.

Major new sources of air pollutants in nonattainment areas are subject to more stringent new source review requirements. Facilities must install equipment with emission controls based on a "lowest achievable emission rate" (LAER) standard. This standard is the most stringent control technology and is determined by: (a) the most stringent emission limitation achieved in practice within an industry; or (b) the most stringent emission limit contained in any state plan. In addition, facilities in nonattainment areas must provide specified offsets to proposed increased emissions. Offsets are emission reductions obtained from other sources of air pollution in the nonattainment area. The Clean Air Act Amendments of 1990 apply these requirements to smaller sources of pollution.

Certain industries are subject to emission limits for specific pieces of equipment. EPA is authorized to identify categories of industrial pollutant sources and establish specific emission standards for equipment used by that category. The emission standards are based on the best system of emission reduction achievable, taking into account: (a) the cost of achieving the reduction; (b) energy requirements; and (c) non-air quality health and environmental impacts. As EPA promulgates standards, DNR is required by state law to adopt those standards as administrative rules. These equipment standards are incorporated into air permits. The standards are referred to as new source performance standards.

EPA Rules

Mercury

Mercury is a toxic, persistent pollutant that accumulates in the food chain. Mercury emissions in the air fall onto the earth's surface through rain and snow and enter lakes, streams and other water bodies. Once it reaches the water, mercury turns into a toxic form that concentrates in fish and animal tissues. People are exposed to mercury primarily by eating fish. EPA has acted to cut emissions of mercury from large industrial sources.

EPA promulgated a clean air mercury rule (CAMR), effective May, 2005, that, for the first time, established federal mercury emission control requirements for new and existing coal-fired power plants. The rule established standards of performance for power plants, and created a market-based cap-and trade program. The rule includes phased deadlines of 2010 and 2018 for meeting a declining cap on mercury emissions that is set for each state. New coal-fired power plants, with construction that started on or after January 30, 2004, were required to

meet a standard of performance and the emission caps set for each state.

States were required to submit a plan to EPA by November, 2006, which described how the state would implement and enforce the mercury emission reduction requirements. In December, 2006, EPA issued a finding that 29 states and three territories, including Wisconsin, did not submit their plans by the November, 2006, deadline. There are no sanctions for states that did not submit a plan by the deadline. The Clean Air Act requires EPA to impose a federal plan to implement the rule if a state does not submit a plan.

In response to legal challenges, on February 8, 2008, the United States Court of Appeals for the District of Columbia vacated (voided) EPA's rule removing power plants from the Clean Air Act list of sources of hazardous air pollutants. At the same time, the Court vacated the clean air mercury rule as insufficiently stringent. On May 20, 2008, the Court denied EPA's petition for rehearing. In the fall of 2008, EPA was in the process of reviewing the mercury rule to determine when, and in what manner, to address mercury emissions from power plants.

Wisconsin action related to the federal and state mercury emission reduction rules is described in the next chapter on state air management activities.

Clean Air Interstate Rule

EPA issued the federal Clean Air Interstate Rule (CAIR) in March, 2005, to address the issue of emissions from power plants being transported through the air from one state to another in the eastern United States. CAIR covered 28 eastern states, including Wisconsin, and the District of Columbia. CAIR was intended to reduce interstate transport of ozone and fine particulate matter from power plants. It had a goal of reducing sulfur dioxide and nitrogen oxides emissions by up to 70 percent when fully implemented in 2015. CAIR included the establishment of individual state emissions budgets and an EPA-administered cap and trade system to cap power plant emissions.

In response to legal challenges, on July 11, 2008, the U.S. Court of Appeals for the District of Columbia vacated all of the Clean Air Interstate Rule. The Court ruled that EPA's approach of establishing regionwide emission caps with no state-specific quantitative contribution determinations or emissions requirements was fundamentally flawed. The Court retained the requirement that EPA reduce emissions from interstate transport.

Regional Haze

Regional haze regulations are intended to reduce emissions affecting air quality in national parks and require states to develop a Best Available Retrofit Technology (BART) rule that will reduce emissions from certain large stationary sources. In October, 2006, EPA finalized a regional haze rule that included requirements for an emissions trading program. States will submit haze plans and reports that show progress towards reducing haze as part of their particulate matter PM2.5 state implementation plans.

Acid Rain

Acid rain is formed when emissions of sulfur dioxide and nitrogen oxides undergo chemical changes in the atmosphere and return to the earth's surface as acid rain, causing damage to lakes, forests, other ecosystems, and buildings. Power plants are estimated to account for approximately two-thirds of sulfur dioxide and one-fourth of nitrogen oxide emissions. Emissions of these substances often travel hundreds of miles.

The Clean Air Act Amendments of 1990 focus on reducing national power plant emissions of sulfur dioxide from approximately 20 million to ten million tons annually in two phases, effective in 1995 and 2000. A power plant is allotted emissions allowances equal to the number of tons of sulfur dioxide it is allowed to emit. Power plants are given the option to reduce their emissions or acquire allowances

from other facilities to achieve compliance. An emissions cap requires the maintenance of achieved reductions.

Phase I requirements began in 1995 and applied to 111 power plants with a generating capacity and emissions rate above specified levels. Six Wisconsin plants were affected, including Edgewater, La Crosse/Genoa, Nelson Dewey, North Oak Creek, Pulliam and South Oak Creek. During Phase II, effective January 1, 2000, these plants were required to further reduce sulfur dioxide emissions, and in general, all power plants are subject to emissions allowance requirements. This phase establishes an annual cap on sulfur dioxide emissions nationally at 8.95 million tons, beginning in 2010, and reduces nitrogen oxides emission rates. Generally, new plants need to obtain allowances from existing plants or from EPA sales or auctions. Utilities may obtain additional emissions allowances from EPA by following EPA requirements.

The federal acid rain program also limits nitrogen oxides emissions. Limitations on nitrogen oxides emissions are based on the amount of fuel put into a boiler. The specific numerical nitrogen oxides limit is also dependent on the technical design category of the boiler.

Stratospheric Ozone Depletion

While Clean Air Act regulations work to reduce levels of ground-level ozone, and resulting detrimental health effects, ozone in the stratosphere (or upper atmosphere, approximately six to 30 miles above the earth) is considered beneficial. Stratospheric ozone filters the sun's harmful ultraviolet radiation. Depletion of stratospheric ozone increases ultraviolet radiation, and has been associated with harmful health effects and global climate change.

The federal Clean Air Act Amendments of 1990 required the phase-out of production and sale of chemicals that deplete stratospheric ozone. Federal stratospheric ozone regulations are implemented by EPA and are not delegated to the states. Some states, including Wisconsin, have implemented programs to protect stratospheric ozone.

Chlorofluorocarbons (CFCs) and several other chemicals have been identified as a cause of the destruction of the stratospheric ozone layer. CFCs drift into the upper atmosphere and release chlorine that destroys the ozone layer.

The 1990 Amendments banned nonessential CFC-containing consumer products, beginning in 1992 or 1994 depending on the type of product. Examples of banned products include party streamers, noise horns, noncommercial cleaning fluids for electronic and photographic equipment, aerosol products or other pressurized dispensers and plastic foam products.

The 1990 Amendments and subsequent federal law changes phased out the production and sale of most Class I chemicals by 2001. Examples of Class I chemicals are CFCs, halons, methyl chloroform, carbon tetrachloride and methyl bromide. In general, Class II chemicals will be restricted beginning in 2015 with a complete ban effective in 2030. The primary Class II chemical category is hydrochlorofluorocarbons (HCFCs), commonly used as a refrigerant, and considered significantly less damaging to the upper ozone layer than CFCs.

Since 1992, Class I and Class II substances must be recaptured and recycled. It is prohibited to knowingly vent refrigerants from household appliances, commercial refrigerators and air conditioners. Since 1994, substances contained in bulk in products must be removed prior to disposal of the products, and the products containing those substances must be equipped to facilitate recapture of the substances.

CHAPTER 2

STATE AIR MANAGEMENT ACTIVITIES

DNR Air Management Organizational Structure

The implementation of air quality programs in Wisconsin is conducted by DNR's Bureau of Air Management in the Air and Waste Division, with support from staff in the Department's other programs. The Bureau of Air Management consists of seven sections in the central office in Madison. Air management staff in the five DNR regions perform permit review and issuance for new construction and existing sources, stack emission test plan approval, compliance inspections and enforcement, complaint investigation, inspection of asbestos demolition and renovation and industrial source emission inventory.

The seven sections are: (a) the Compliance and Enforcement Section coordinates the program's efforts to ensure that industry and others comply with clean air laws; (b) the Emission Inventory and Small Source Section manages DNR's process of obtaining annual reports of air emissions, and coordinates DNR's efforts related to asbestos abatement, refrigerant recovery, stage two vapor recovery and small sources emissions; (c) the Environmental Analysis and Outreach Section analyzes air quality issues, including air toxics, health issues and air quality, and provides public information and outreach; (d) the Monitoring Section plans and executes a program of monitoring air quality statewide; (e) the Permits and Stationary Source Modeling Section writes construction and operation permits for air pollution sources, negotiates permit conditions with industry representatives, and does computer modeling to determine how air pollutant emissions will affect air quality; (f) the Regional Pollutant and Mobile Source Section develops state implementation plans for major air pollutants such as ozone and fine particulate matter and develops plans and programs related to motor vehicles and motor vehicle fuels; and (g) the Management Section prepares budgets and workplans, administers grants, provides rule oversight, and handles finance, data and personnel management.

The air management program also has eight statewide standing teams to ensure consistency, monitor and evaluate program performance, involve DNR staff statewide and make policy recommendations related to the specific functions of the team. The teams include: (a) construction (new source review) permits; (b) operation permits; (c) compliance and enforcement; (d) stationary source emission inventory; (e) stationary source modeling; (f) air modeling field operations; (g) air monitoring technical support and data management; and (h) maximum achievable control technology (MACT).

DNR occasionally convenes Clean Air Act Task Force meetings to obtain input from potentially affected parties and agencies involved in the state's effort to meet federal air quality requirements. The Task Force was originally made up of 16 members appointed by the Secretary of DNR. In recent years, the Secretary has not reappointed members and the meetings have been conducted as public informational meetings.

DNR Funding

Appropriations

DNR is authorized a total of 173.5 positions for air management activities in 2008-09. Approximately half of the staff is located in the Madison central office and the other half is in the DNR regional offices (located in Eau Claire, Green Bay, Madison, Milwaukee, Rhinelander and Spooner). Table 1 lists funding and positions authorized for DNR air management programs. Within the Air and Waste Division, the Bureau of Air Management is authorized 159.75 permanent positions to conduct monitoring, permitting, planning and compliance activities. The Bureau of Cooperative Environmental Assistance is authorized 3.0 positions from stationary source air emission fees. The Air and Waste Division is authorized 3.0 positions from stationary source air emission fees for divisionwide program management.

The Division of Enforcement and Science is authorized 2.5 positions from air funding sources for law enforcement. The Division of Customer and Employee Services is authorized 0.50 position from air funding sources for legal, administrative and information technology services, and is authorized 4.75 positions from air funding sources for customer service and licensing, and communication and education strategy.

Table 1: 2008-09 DNR Air Management Authorized Funding and Positions

Source	Fund Source	Funding	Positions
Air and Waste Division, Bureau of Air Management			
Program Revenues			
Stationary Source Emission Fees	PR	$8,682,700	77.50
State Permit Source Fees	PR	1,320,900	10.00
New Source Construction Permit Fees	PR	2,267,300	19.50
Asbestos Abatement Fees	PR	464,100	2.00
Ozone-Depleting Substance Fees	PR	142,300	2.00
Other Program Revenues	PR	100,000	0.00
Federal Clean Air Grants*	FED	4,282,200	43.00
Petroleum Inspection Fund	SEG	1,428,800	5.00
General Fund	GPR	66,100	0.75
Subtotal Bureau of Air Management		$18,754,400	159.75
Air and Waste Division, Bureau of Cooperative Environmental Assistance			
Stationary Source Emission Fees	PR	272,200	3.00
Air and Waste Division, Management			
Stationary Source Emission Fees	PR	448,000	3.00
Division of Enforcement and Science			
Stationary Source Emission Fees	PR	107,400	1.00
Federal Clean Air Grants*	FED	132,500	1.50
Division of Customer and Employee Services			
Stationary Source Emission Fees	PR	446,300	3.75
Federal Indirect Cost Reimbursement	FED	375,900	0.00
Petroleum Inspection Fund	SEG	919,000	1.50
Total DNR Air Management Funding		$21,455,700	173.50

* The federal clean air grant amounts include funding from the U.S. Environmental Protection Agency.

Revenue Source Overview

The state's air management programs are funded from several sources, as shown in Table 2. Revenues for DNR air management programs from all sources (including state revenues and federal grant allocations) were approximately $18.1 million in 2006-07 and $19.9 million in 2007-08. Over 53% of revenues in the two-year period come from stationary source emissions tonnage fees. Almost 57% of air program positions are funded from air emission tonnage fees. Emission tonnage fees, along with federal Clean Air Act grants, the petroleum inspection fund and permit review fees account for over 94% of program funding. DNR also collects other air pollution fees related to asbestos inspections and the regulation of ozone depleting refrigerants.

Stationary Source Emissions Tonnage Fees

The Clean Air Act Amendments of 1990 require states to assess fees based on the tonnage of emissions generated by a facility. The fees may only be used for the implementation of Clean Air Act provisions.

Table 2: Revenues for DNR's Air Management Programs - 2006-07 and 2007-08

Source	2006-07 Revenue	2006-07 % of Total	2007-08 Revenue	2007-08 % of Total	Total 2006-07 and 2007-08	% of Total
Stationary Source Emission Fees*						
- Federally-Permitted Sources	$9,113,000	50.4%	$9,555,600	47.9%	$18,668,600	49.1%
- State-Permitted Sources	787,700	4.4	746,800	3.8	1,534,500	4.0
Federal Clean Air Act Grants	3,289,100	18.2	4,830,100	24.2	8,119,200	21.4
Petroleum Inspection Fund	2,206,400	12.2	2,337,800	11.7	4,544,200	12.0
Permit Review and Enforcement Fees	1,814,400	10.0	1,451,800	7.3	3,266,200	8.6
Asbestos Abatement Fees	332,600	1.8	370,100	1.9	702,700	1.8
Ozone-Depleting Substances Fees	124,600	0.7	143,400	0.7	268,000	0.7
General Purpose Revenue	49,000	0.3	64,500	0.3	113,500	0.3
Other Program Revenues	356,900	2.0	440,700	2.2	797,600	2.1
	$18,073,700	100.0%	$19,940,800	100.0%	$38,014,500	100.0%

*Additional emission fee revenues were collected by DNR and transferred to the Department of Commerce for administration of the Small Business Clean Air Assistance Program. These transfers totaled $227,800 in 2006-07 and $242,200 in 2007-08, for 2.0 positions.

States must demonstrate to EPA that the fees collected on emissions are adequate to cover the state's program costs associated with reducing the emissions of facilities being assessed the fees. States may place a cap on the tonnage of emissions that a fee is assessed on. States may adjust the fee rate annually based on the change in the consumer price index.

Wisconsin's air emissions tonnage fee system began with assessment of fees in 1992-93 for calendar year 1992 emissions. There is an annual cap of 5,000 tons per pollutant per facility, effective with 1999 emissions. For emissions between 1992 and 1998, the annual cap was 4,000 tons per pollutant per facility. Pollutants assessed the fees include the criteria pollutants (carbon monoxide is exempted), hazardous air pollutants, and other regulated pollutants under the Clean Air Act, such as ozone-depleting pollutants.

Table 3 shows the fee rate per ton of billable pollutants for the calendar years 1992 (assessed in 1992-93) through 2007 (assessed in 2007-08). The fees for 1994 through 1999 were adjusted according to changes in the consumer price index. 1999 Act 9 deleted the annual consumer price index adjustment for years after 2000 and included a one-time adjustment of $0.86 per ton. This fixed the fee rate at $35.71 per ton for 2000 and subsequent years. Table 3 also shows the number of billable tons of emissions for each year and the total emission fees assessed. Beginning in 2005, revenues from tons assessed for federally-regulated sources and for sources regulated under state, but not federal, regulations were placed in separate appropriations. The 2007-08 assessment of $8.9 million for calendar year 2007 emissions of 248,869 tons included $8.29 million for approximately 232,200 tons from federally-regulated sources and almost $600,000 for approximately 17,000 tons from sources regulated under state, but not federal, regulations.

Certain permit holders pay fixed one-time or annual fees in lieu of emission tonnage fees. These fees are described in subsequent sections on operation permits, registration permits and general permits.

In 2008-09, expenditure authority is provided for 100.25 positions from air emissions tonnage fees. This includes 98.25 PR DNR positions shown in Table 1, and two positions in the Department of Commerce, described in a later section on the small business clean air assistance program. The DNR positions (shown in Table 1) include 88.25 positions funded from air emissions tonnage fees for federally-regulated sources and 10.0 positions funded from air emissions tonnage fees for sources

Table 3: Stationary Source Emission Fee Rate and Billable Tons

Year of Emissions	Fee Rate Per Ton	Billable Tons	Emission Fees Assessed ($ millions)
1992	$18.00	278,607	$5.01
1993	29.30	279,638	8.19
1994	30.07	279,394	8.40
1995	30.92	285,291	8.82
1996	31.77	273.506	8.69
1997	32.65	291,184	9.51
1998	33.19	280,959	9.33
1999 *	33.80	289,154	9.77
2000 **	35.71	285,628	10.20
2001	35.71	276,354	9.87
2002	35.71	272,727	9.74
2003	35.71	272,766	9.74
2004	35.71	268,207	9.58
2005 ***	35.71	265,938	9.50
2006	35.71	254,423	9.09
2007	35.71	248,869	8.89

*Beginning in 1999, the emission fee cap increased from 4,000 to 5,000 tons per pollutant.

**1999 Act 9 eliminated the annual inflationary adjustment factor after 2000.

*** Beginning with emissions in 2005, the fee is paid for federally-regulated or state-regulated sources.

subject to state, but not federal, permitting requirements. Of the 98.25 DNR positions, 87.5 are located in the Bureau of Air Management, and the remaining 10.75 work in the Bureau of Cooperative Environmental Assistance, Air and Waste Division Management, Division of Enforcement and Science, and Division of Customer and Employee Services.

Table 4 lists the emissions tonnage fee assessed in 2007-08 for calendar year 2007 emissions, by type of pollutant. A total of 89 different pollutants can be billed. Of the 89 pollutants, Wisconsin facilities emitted and were assessed on 26 different pollutants. A total of 1,167 facilities had billable emissions of at least five tons and paid fees for the billable pollutants that they emitted. An additional 140 facilities paid fees deposited in the state sources emissions fee appropriation, including 44 permit exemptions, one general operation permit, and one registration permit. In Wisconsin, the largest volume of emissions is generated by larger utilities, paper-related industries and large chemical plants. A portion of the total emissions were assessed the emissions tonnage fee.

Table 4: Assessments for 2007-08 Stationary Source Emissions

Pollutant	Actual Tonnage (2007 Tons of Emissions)	Assessed Tonnage (2007 Billable Tons of Emissions)	Fiscal Year 2007-08 Assessed Revenues $35.71 / ton
Sulfur Dioxide	203,550	105,404	$3,763,994
Nitrogen Oxides	95,046	85,330	3,047,131
Particulate Matter	25,162	24,007	857,303
Volatile Organic Compounds (VOC)	29,897	28,167	1,005,848
Other Pollutants (HAP, CFC and TRS)	14,568	5,960	212,844
Carbon Monoxide	48,263	0	0
Total	416,486	248,869	$8,887,120*

* In addition, 44 facilities were charged $300 for a permit exemption, one facility paid $2,300 for a general operation permit, and 94 facilities paid $1,100 for a registration operation permit, and there were account adjustments. The $121,261 paid by these facilities, plus the revenues shown here, equal total 2007-08 assessments of $9,008,381.

Table 5 lists the total amount of emissions from Wisconsin stationary sources from 1998 through 2007, as reported under requirements of the state permit program. For 2007 emissions, 248,869 of the reported 416,486 tons, or 60%, of emissions were subject to the emissions tonnage fee. The main reasons for the difference between reported and billed emissions were that several electric utilities and paper mills had emissions of sulfur dioxide and nitrogen oxides that exceeded the 5,000 ton cap per pollutant, and that carbon monoxide is not subject to the fee. Other emissions, such as carbon dioxide, are not currently reported.

Federal Revenue

EPA provides the state with grants for general program operations associated with implementing Clean Air Act provisions, based on an agreed work plan between EPA and DNR. EPA also provides funds for specific purposes such as to purchase air monitors to determine ambient levels of particulate matter (PM2.5) in the air, to study air pollutants deposited in the Great Lakes and to monitor air toxics. DNR is authorized 44.5 permanent federal positions in 2008-09, of which 43.0 are in the Bureau of Air Management and the remaining 1.5

Table 5: Reported Air Emissions from Stationary Sources, 1998 Through 2007 (Tons Per Year)*

Calendar Year	Sulfur Dioxide	Nitrogen Oxides	Particulate Matter	Volatile Organic Compounds	Carbon Monoxide	Hazardous Air Pollutants	CFCs	TRS	Total
1998	289,352	166,821	28,865	43,317	50,865	20,963	73	701	600,957
1999	268,113	157,879	28,458	42,652	52,758	20,509	69	908	571,346
2000	256,718	186,389	29,786	41,501	69,712	17,451	75	677	602,309
2001	247,148	153,914	24,993	34,631	41,540	15,591	119	731	518,667
2002	250,458	142,038	25,499	33,736	45,822	19,400	114	935	518,002
2003	255,968	124,909	26,804	33,339	47,592	22,598	111	706	512,027
2004	252,112	119,090	26,990	32,697	51,206	28,883	87	636	511,701
2005	244,396	112,975	28,794	33,415	59,757	15,028	96	661	495,122
2006	230,316	100,394	26,840	31,290	49,220	15,702	95	1,405	455,261
2007	203,550	95,046	25,162	29,897	48,263	13,850	118	600	416,486

*Tonnage figures are based on reported emissions of regulated stationary sources.
CFCs = Chloroflorocarbons (CFC-12, HCFC-141B, and HCFC-22)
TRS = Total reduced sulfur, sulfur trioxide and hydrogen sulfide

are in the Division of Enforcement and Science.

Petroleum Inspection Fund

The segregated petroleum inspection fund receives revenues from the 2¢ per gallon petroleum inspection fee assessed on all petroleum products entering the state. The fund is primarily used for the petroleum environmental cleanup fund award (PECFA) program. Appropriations from the fund are used for air management activities related to mobile source pollution control, vapor recovery from fuel storage and distribution systems, pollution prevention and cooperative environmental assistance. DNR is authorized 6.5 petroleum inspection fund positions in 2008-09.

Permit Review Fees

DNR collects program revenue (PR) fees from source owners and operators who are required to obtain a permit for construction or modification of a facility. DNR uses the revenues for staff activities related to reviewing and issuing the permits. In 2008-09, DNR is authorized 19.5 positions for construction permit review activities. 2007 Act 20 also appropriated $1,048,700 in 2007-08 and $100,000 in 2008-09 from construction permit revenues for several air permit database system improvement activities. (This is included in the amounts shown in Table 1.)

Asbestos Abatement Fees

DNR collects asbestos inspection and permit exemption review fees from persons who perform asbestos abatement as part of nonresidential demolition and certain renovation activities. Persons must notify DNR before they perform asbestos abatement and must pay fees that have a statutory maximum of $400 for a combined asbestos inspection fee and construction permit exemption review fee if the combined square and linear footage of friable (readily crumbled or brittle) asbestos-containing material involved in the project is less than 5,000, or $750 if the combined square and linear footage is equal to or greater than 5,000.

DNR administrative rules effective July 1, 2005, authorize the Department to charge for the costs it incurs for laboratory testing for a nonresidential asbestos demolition and renovation project. The Department uses the revenues to administer asbestos abatement regulations in conformance with EPA requirements, to hire contractors to conduct inspections of asbestos abatement activities and to provide training. DNR is authorized 2.0 program revenue positions for asbestos abatement activities.

Ozone-Depleting Substances Fees

DNR collects annual registration fees from persons who remove ozone-depleting refrigerants (chloroflorocarbons or CFCs) from motor vehicles and appliances such as refrigerators and air conditioners during salvage operations. Annual fees are also collected from persons who transport appliances for salvage. These revenues are used to administer CFC regulations to ensure that CFC removal activities do not release CFCs into the air. DNR is authorized 2.0 program revenue positions for regulation of ozone depleting substances.

Other Program Revenues

DNR also receives program revenues from other state agencies. This primarily includes grants from the Wisconsin Department of Transportation (DOT) from funds provided under the federal Congestion Mitigation and Air Quality (CMAQ) program of the U.S. Department of Transportation. The CMAQ program funds projects in nonattainment areas that will reduce transportation-related emissions.

Air Permits

While federal requirements are generally only applicable to major sources, state law authorizes Wisconsin to also regulate minor stationary sources. However, the state regulations for minor sources are less stringent than the requirements for major sources. For example, minor sources are generally not required to install or retrofit equipment to control emissions, as is required of major sources. DNR administers a construction (or new source review) permit program and an operation permit program. Both permit types outline all of the air pollution requirements that apply to a source, including emission limits and operating conditions to ensure that the source is in compliance with federal and state air pollution requirements. DNR permit review staff are located in each of the five DNR geographic regions. They are assigned to permit sources within specific counties in the regions.

During 2003 through 2006, DNR undertook a permit streamlining initiative to make the air permitting process more efficient and more responsive to the economic development needs of the state, while maintaining protection of public health and the environment. In 2003 Wisconsin Act 118, a number of changes were made to the DNR construction permit and operation permit programs. Act 118 also created registration permits, general permits, and exemptions from certain permits. In 2005 Wisconsin Act 25, changes were made in fee and permit provisions. DNR also promulgated administrative rules to implement these provisions.

Construction Permits (New Source Review)

All new, modified, reconstructed, relocated or replaced air pollutant sources which are not exempt from construction permit requirements under administrative code Chapter NR 406 are required to obtain a construction permit before beginning construction. A construction permit allows a company to build, initially operate and test the air pollution source. The permit expires after 18 months and can have one 18-month extension under certain instances. The source is required to have a complete operation permit on file with DNR by the time the construction permit expires in order to continue operating the source.

Construction permit activities are funded from program revenue fees authorized in administrative rule NR 410. The fees for an individual source vary depending on situations such as the type of request, type of pollutant, whether emission testing is required, and whether the applicant requests expedited review.

In 2008-09, DNR is authorized $2,267,300 with 19.5 positions to administer the construction permit

program. In 2007-08, DNR collected $1,451,800 in construction permit fee revenues. The average fee was approximately $9,130 per permit.

DNR conducted an average of 191 construction permit reviews per year for new or expanded facilities in 2005-06 through 2007-08, including 212 in 2005-06, 203 in 2006-07 and 159 in 2007-08. Approximately four-fifths of the reviews are for facilities in attainment areas and one-fifth of the reviews are for facilities in nonattainment areas. DNR issued 3,469 construction permits between 1993 and December 16, 2008.

In 2007-08, DNR issued construction permits in an average of 76 days after the receipt of a complete application. It took an average of 143 days from the time of the initial receipt of the application to issuance of the permit. However, the time varies widely, depending on the size of the source, whether the applicant requests expedited review and whether a public hearing is held regarding the application.

DNR is generally required to process a construction permit within 180 days of receiving a completed application if there is no hearing, or 240 days if there is a public hearing. The time allowed for a construction permit for a minor source is typically 120 days after the application is complete if there is no hearing, or 180 days if there is a public hearing. The specific requirements follow.

After DNR receives a construction permit application, the Department has 20 days to provide the applicant with written notice of any additional information required to determine if the proposed construction, reconstruction, replacement or modification will meet state requirements. After the applicant provides the information, DNR has 15 days to notify the applicant whether the information satisfies the Department's request. The application is considered complete when the applicant satisfies the Department's request. A DNR air management permit reviewer then prepares an analysis of the complete application, evaluates the application to quantify the proposed emissions, identifies applicable emission limitations, analyzes the effect of the project on ambient air quality and prepares a preliminary determination on the approvability of the application. The DNR analysis and preliminary determination must be completed within 90 days after the application is considered complete for major sources, or within 30 days for minor sources.

A public notice and 30-day public comment period follows issuance of the preliminary determination. DNR may hold a public hearing if a hearing is requested within 30 days after DNR gives public notice if requested by a person who may be affected by the issuance of the permit, any affected state or EPA. DNR must hold the public hearing within 60 days after the deadline for requesting a hearing if the Department determines that there is a significant public interest in holding a hearing. DNR must issue or deny the construction permit within 60 days after the close of the comment period or public hearing, whichever is later.

Under 2003 Act 118, DNR was required to promulgate rules to exempt minor sources from the requirement to obtain a construction permit if the emissions from the sources do not present a significant hazard to public health, safety or welfare or to the environment. DNR promulgated administrative rule changes, effective June 1, 2007, that provide: (a) an exemption from construction permit requirements for certain facilities which have actual emissions of pollutants of less than certain specified levels (depending on the type of source), and which are not subject to additional control requirements such as federal hazardous air pollutant standards; and (b) an exemption from construction permit requirements for projects with specified maximum theoretical emissions. Examples of exempt sources are certain grain storage facilities, motor vehicle refinishing shops, graphic arts operations, and painting or coating operations. An $800 fee is charged for the construction permit exemption. In 2007-08, DNR issued five construction permit exemptions.

Under 2003 Act 118, DNR promulgated rules, effective June 1, 2007, to allow a person to begin

construction, reconstruction, replacement, or modification of a stationary source prior to issuance of a construction permit if the person shows that beginning the activity prior to the issuance of the permit is necessary to avoid undue hardship. Undue hardship could result from: (a) adverse weather conditions; (b) catastrophic damage of existing equipment; (c) a substantial economic or financial hardship that may preclude the project in its entirety; or (d) other unique conditions. Construction permit waivers allow a facility to begin on-site preparation such as site clearing, grading, dredging or landfilling prior to receiving a construction permit when necessary to avoid undue hardship. The Department is required to act on the waiver request within 15 days of receipt of the request. A statutory $300 fee is assessed for the waiver request. In 2007-08, DNR issued four of these waivers.

Owners or operators are exempt from paying a construction permit fee, but not from the requirement to obtain a construction permit, if the entire facility meets one of the following criteria: (a) is required to obtain an operation permit under state, but not federal, law, and is covered by a registration permit; (b) is required to obtain an operation permit under state, but not federal, law, and is covered by a general permit; or (c) is required to obtain an operation permit under state, but not federal, law, has obtained an operation permit, and has paid a one-time fee of $7,500 at any time before applying for the construction permit. As of December 16, 2008, no one has requested an exemption under this provision.

Operation Permits

Permits. DNR administers an operation permit program for stationary sources. EPA granted interim approval for Wisconsin administration of the program in March, 1995, and full approval effective November 30, 2001. The federal program is generally known as the Title V program, after the title of the federal Clean Air Act Amendments of 1990. DNR also administers an operation permit program for facilities that are required under state, but not federal, law to obtain a permit.

The same sources subject to construction permit requirements are required to file an operation permit application at the same time they file a construction permit application, unless they are exempt from operation permit requirements under administrative rule NR 407. For example, in January, 1998, DNR rules exempted certain grain handling facilities from obtaining operation permits. DNR issues federal operation permits (FOP) for major sources and federally-enforceable state operating permits (FESOP) for synthetic minor sources (an option for a major source that wants to reduce emissions enough to become a minor source).

After DNR receives an operation permit application, the Department has 20 days to provide the applicant with written notice of any additional information required to determine if the source, upon issuance of the permit will meet state requirements. After the applicant provides the information, DNR has 15 days to notify the applicant whether the information satisfies the Department's request. The application is considered complete when one of the following happens: (a) DNR notifies the applicant that the additional information provided by the applicant satisfies the Department's request; (b) if DNR does not indicate, within the required 20 days, that additional information is needed, 20 days after receipt of the application; or (c) if DNR indicates, within the required 20 days, that additional information is needed, but does not indicate within the required 15 days whether the additional information is deficient, 15 days after receipt of the additional information. A DNR air management permit reviewer then prepares an analysis of the complete application, and prepares a preliminary determination on the approvability of the application. (There is no statutory timeline for this review.)

A public notice and 30-day public comment period follows issuance of the preliminary determina-

tion. DNR may hold a public hearing if a hearing is requested within 30 days after DNR gives public notice, if requested by a person who may be affected by the issuance of the permit, any affected state or EPA. DNR must hold the public hearing within 60 days after the deadline for requesting a hearing if the Department determines that there is a significant public interest in holding a hearing. After the public hearing and comment period, DNR must issue or deny the operation permit, and submit it to EPA for approval if required by the Clean Air Act. If EPA objects to the issuance of the operation permit, DNR must revise the proposed permit as necessary to satisfy the objection.

The federal deadline for DNR issuance of federal operation permits for existing facilities was April, 1998, three years after EPA approval of the program. Few states met the EPA deadline for issuance of federal permits. DNR indicates that permit review and analysis has taken approximately twice as long as estimated early in the program. Prior to 2005, DNR required an average of approximately 250 to 300 hours per permit issuance instead of 120 estimated initially, and many complex permits required additional review time. In 2007 and 2008, the average time required for DNR to issue an initial or renewal permit was 211 hours.

DNR finished issuing all initial FOPs in December, 2004. DNR issued 592 initial FOPs as of December 16, 2008, and two new FOP applications were in the public comment phase. DNR issued 773 FESOPs as of December 16, 2008. The operation permit is issued for operations at the entire facility and is valid for five years.

As of December 16, 2008, DNR issued 532 renewal FOPs and FESOPs out of 902 applications received. In addition to the FOPs and FESOPs, DNR issues state operation permits (SOP) for minor sources not subject to federal permit requirements. Examples of minor sources are some rock crushers, drycleaners and smaller boilers. As of December 16, 2008, 93 SOPs were issued and 562 (86%) were being reviewed.

DNR is required to notify an applicant for an operation permit, before issuing the permit, of any proposed emissions monitoring requirement for the permit. The applicant may choose to demonstrate that the proposed monitoring requirement is unreasonable. If the Secretary of DNR determines that the monitoring requirement is unreasonable, the Department may not impose the monitoring requirement. In August, 2006, the Department began making available a conflict resolution process on technical issues related to permit applications. As of December, 2008, the process had been used twice.

DNR promulgated rules, effective June 1, 2007, to exempt minor sources from the requirement to obtain an operation permit if the emissions from the sources do not present a significant hazard to public health, safety or welfare or to the environment. Examples of exempt sources are painting or coating operations, graphic arts operations, motor vehicle refinishing shops, certain dry cleaning operations, gasoline dispensing facilities, grain storage facilities, grain processing facilities, and facilities with less than specified maximum theoretical emissions.

Operation Permit Fees. There are 87.5 operation permit related Bureau staff funded from emissions tonnage fee revenues, including 77.5 staff related to federally-required permit activities and 10.0 staff for activities related to operation permit issuance for sources that are required under state, but not federal, law to obtain a permit. During 2008-09, DNR is allocating 70.5 of the 77.5 staff related to federally-required operation permit (assuming an average vacancy of 7.0 positions) to activities related to permit review and approval, modeling, supervision, and administrative processing of permits, and for other Title V program implementation activities performed by the Bureau such as compliance, emissions inventory, permit streamlining, and administrative support. During 2008-09, DNR is allocating 8.0 of the 10.0 staff related to state-regulated operation permits to activities related to permit review and approval (and holding

2.0 positions vacant).

Prior to calendar year 2005, stationary sources that were required to obtain an air operation permit were required to pay an air emissions tonnage fee of $35.71 per ton for billable emissions of at least five tons. Under 2005 Act 25, changes were made in the operation permit fee structure. The Air and Waste Division stationary source emission fee appropriation was split into two, effective for fees assessed as of January 1, 2006: (a) one for revenues from stationary sources that are required to obtain an operation permit under the federal Clean Air Act; and (b) a new state permit sources appropriation for sources that are required to obtain an operation permit under state law, but not under federal law.

The statutes require that the fees deposited in each of the two appropriations be used for the following: (a) the costs of reviewing and acting on applications for operation permits; (b) implementing and enforcing operation permits except for court costs or other costs associated with an enforcement action; (c) monitoring emissions and ambient air quality; (d) preparing rules and materials to assist persons who are subject to the operation permit program; (e) ambient air quality modeling; (f) preparing and maintaining emission inventories; (g) any other direct and indirect costs of the operation permit program; and (h) costs of any other activities related to stationary sources of air contaminants.

Sources that are required to obtain an operation permit under federal law continue to pay an annual air emissions tonnage fee of $35.71 per ton, and the fees are deposited in the federal sources appropriation. An owner or operator of a stationary source for which an operation permit is required under state law but not federal law, may elect to pay a one-time fee of $7,500 for a year if the facility is not covered by a registration permit or general permit. The emissions tonnage fee of $35.71 per ton would be required in all other years. If the owner or operator pays the $7,500 fee in any year before applying for a construction permit, the source is exempt from paying a construction permit fee. (In 2007-08, the average construction permit fee was approximately $9,130.)

The owner or operator of a stationary source that is exempt from the requirement to obtain an operation permit pays a fee of $300 per year if the stationary source had actual emissions of a regulated pollutant in excess of three tons in the preceding year.

Table 6 shows the operation permit fees assessed in 2006-07 for calendar year 2006 permits and 2007-08 for calendar year 2007 permits, by type of permit source. Fees for the federal operation permit are deposited in the federal sources appropriation. Fees for the other types of permits are deposited in the state sources appropriation.

General Permits

Under 2003 Act 118, DNR promulgated administrative rules, effective September 1, 2005, for the issuance of general operation permits (NR 407) and general construction permits (NR 406) for similar categories of stationary sources. The rules: (a) must include criteria for identifying eligible categories of sources and permit requirements; and (b) may exempt persons who qualify for a general operation permit from a construction permit.

As of December 16, 2008, DNR had issued four general permits to cover almost all nonmetallic mineral processing facilities, printers, asphalt plants, and crushers. A total of 370 owners or operators of stationary sources have been issued a general permit as of December 16, 2008.

Within 15 days after DNR receives an application for coverage under a general permit, the Department is required to provide one of the following to the applicant: (a) written notice that the source qualifies for coverage under the general permit; (b) a written description of any information that is missing from the application for the permit;

Table 6: Operation Permit Fees by Permit Type 2006-07 and 2007-08

Permit Type Assessed *	2006-07 Number of Permit Type	2006-07 Assessed Revenues	2007-08 Number of Permit Type	2007-08 Assessed Revenues
Federal Operation Permit	436	$8,471,409	417	$8,294,800
Federally Enforceable State Operation Permit	442	370,843	382	340,700
State Operation Permit	210	159,250	207	164,100
General Operation Permit - Fee	0	0	1	2,300
General Operation Permit - Tonnage	117	80,463	150	85,600
Registration Operation Permit – Fee	29	31,900	94	103,400
Registration Operation Permit – Tonnage	0	0	11	4,300
Exemption from Operation Permit	46	13,800	44	13,200
Total	1,280	$9,127,665	1,306	$9,008,400

*All permit types pay an operation permit fee of $35.71 per ton of certain emissions, except: (a) general operation permit holders pay $2,300 in the first year, and $35.71 per ton thereafter; (b) registration operation permit holders pay $1,100 in the first year, and $35.71 per ton thereafter; and (c) sources exempt from an operation permit pay a $300 annual fee.

or (c) a written notice that the source does not qualify for the general permit.

A source is subject to a general operation permit fee of $2,300 for the first year that the entire facility is covered under a general permit. In subsequent years, the facility is subject to the $35.71 per ton emissions fees. The fees are deposited in the state stationary sources appropriation. A source with a general permit does not pay construction permit fees, but would be subject to general construction permit requirements.

Registration Permits

Under 2003 Act 118, DNR promulgated administrative rules, effective September 1, 2005, for the issuance of registration operation permits (NR 407) and registration construction permits (NR 406) that authorize construction or operation, or both, of stationary sources with low actual or potential emissions. As of December 16, 2008, DNR had issued 266 registration permits.

An owner or operator may apply for a registration permit if the source has actual emissions of less than 25 tons per year of each criteria pollutant, and slightly different thresholds for certain printing facilities. Facilities can not be subject to any case-by-case determinations of emissions limits such as best available control technology or lowest achievable emission rates under federal and state rules. Sources which qualify for a registration permit are exempt from the requirement to obtain a construction permit.

Within 15 days after DNR receives an application for coverage under a registration permit, the Department is required to provide one of the following to the applicant: (a) written notice that the source qualifies for coverage under the registration permit; (b) a written description of any information that is missing from the application for the permit; or (c) a written notice that the source does not qualify for the registration permit.

A source is subject to a registration operation permit fee of $1,100 for the first year that the entire facility is covered under the registration permit. In subsequent years, the facility is subject to the $35.71 per ton emissions fees. The fees are deposited in the state stationary sources appropriation. A source with a registration permit does not pay construction permit fees, but is subject to registration construction permit requirements.

Monitoring

DNR operates a statewide air monitoring program to: (a) determine the ambient air quality levels statewide; (b) identify areas where air quality standards are not being achieved; (c) measure the environmental impact of air pollutants; and (d) evaluate the effectiveness of efforts and control strategies to improve air quality. Data from the monitoring networks is collected and analyzed to ensure quality and used for air quality reporting and planning purposes.

DNR operates several networks of air quality monitors at numerous permanent sampling sites throughout the state. During 2008, DNR operated 39 monitoring sites throughout the state. At most of the sites, DNR collected data on several different pollutants. In addition, DNR processed data collected by others at 12 other sites. In 2008, DNR collected data on: (a) ozone at 31 monitoring sites; (b) PM2.5 (fine particulate matter) at 20 sites, 13 of which collected continuous data on PM2.5 concentrations; (c) PM10 at three sites; (d) nitrogen oxide at three sites); (e) sulfur dioxide at three sites; (f) carbon monoxide at one site; and (g) toxic air pollutants at four sites.

Monitors at 20 PM2.5 monitoring stations collect a discreet sample for a 24-hour period from midnight to midnight, every third day or every sixth day, according to a nationwide sampling schedule. The filter is collected after the 24-hour period and analyzed to determine the average PM2.5 reading. No sampling is performed during the two or five day interim period until a new filter collects another 24-hour PM2.5 reading on the third or sixth day. In addition, continuous PM2.5 monitors are located at 13 of the 20 monitoring locations and provide continuous measurement of the PM2.5 concentrations at those stations 24 hours a day, seven days a week. Measurements from the continuous PM2.5 monitors are updated and reported hourly on the DNR Air Management program web site.

DNR air monitoring efforts in 2008 included to: (a) accomplish its goal of expanding the network of continuous PM2.5 monitors from 12 (in 2006) to 13; (b) implement the PM2.5 monitoring network and monitoring to answer questions about visibility and regional haze issues; (c) perform continuous monitoring of fine particulates and other pollutants to aid in calculating the air quality index DNR uses to inform the public about ambient air quality on a daily basis; (d) maintain the posting of monitoring data on the DNR web site on an hourly basis, so that people who are most likely to be affected by air pollution, such as families with asthmatic children, could take actions to minimize the impacts of air pollution on their health; and (e) operate atmospheric deposition monitors.

Ozone monitoring is providing the data used to determine attainment status for the ozone standards and provides specialized information on days where ozone levels exceed standards. DNR performs an annual review of monitoring locations every January, solicits public comment and submits a monitoring plan to EPA.

In addition to the air quality monitors, DNR performs other monitoring activities. The Department operates a network of 30 meteorological stations, which are used to evaluate the impact of weather on the ambient concentrations of pollutants being monitored. DNR also performs atmospheric deposition monitoring as part of the Department's participation in the National Atmospheric Deposition Program. The program is a collaborative research effort of several states, federal agencies, and non-governmental research organizations. DNR operates and maintains seven precipitation monitors and six mercury deposition monitoring sites.

DNR also collects air quality samples for the U.S. Department of Homeland Security biowatch program. The details of that activity are classified.

Compliance and Enforcement

EPA has delegated compliance and enforcement responsibilities related to Clean Air Act provisions in Wisconsin to DNR. DNR performs activities such as to: (a) inspect stationary sources to ensure compliance with emission limits, permit restrictions and operating requirements; (b) review stack emissions test results or witness stack tests to determine if a source is in or out of compliance; (c) investigate complaints received from citizens; and (d) take enforcement action when necessary to obtain compliance. The Department also submits a variety of compliance data to EPA to assist in maintaining a national database of air program compliance and enforcement information.

Table 7 shows the number of inspections made by DNR's Air Management program at Wisconsin facilities in 2004-05 through 2007-08. The enforcement process includes issuance of a letter of noncompliance or a notice of violation for more serious violations. While DNR does not track the number of various types of violations, examples of violations are failure to submit a report, failure to construct or operate according to the permit, failure to obtain a permit before construction or operation, failure to monitor, or failure to submit compliance certification information, failure to notify DNR before removing asbestos, violations of emissions requirements for particulate matter or volatile organic compounds, and open burning.

Table 7: Inspection and Compliance, 2004-05 Through 2007-08

Fiscal Year	Number of Inspections	Noncompliance Rate	Letters of Noncompliance	Notices of Violation
2004-05	299	25%	102	185
2005-06	376	29	80	209
2006-07	402	20	73	151
2007-08	418	20	58	154

State Implementation Plan Development

During the 1990s, Wisconsin submitted a series of revisions or modifications to the state implementation plan (SIP) to EPA in accordance with a series of federal requirements. DNR continually develops plans and promulgates rules to implement the SIP.

Under Wisconsin law, DNR is required to adopt revisions to the SIP that conform to the Clean Air Act. The state SIP may vary from the federal requirements if the Governor determines that: (a) the measures are part of an interstate ozone control strategy; or (b) the measures are necessary in order to comply with percentage emission reductions required under the Clean Air Act.

DNR may not submit a state implementation plan to EPA that includes a control measure or strategy that imposes or may result in regulatory requirements unless the Department has first promulgated the control measure or strategy as an administrative rule. DNR must submit a state implementation plan to the Legislature for review at least 60 days before the Department is required to submit the SIP to EPA. DNR is required to submit, to the standing committees of the Legislature with jurisdiction over environmental matters, a report that describes the proposed plan and contains all of the supporting documents that the Department intends to submit to EPA with the plan. If, within 30 days after DNR provides the report, the chairperson of a standing committee to which the report was provided submits written comments on the report to the Department, the Department Secretary is required to respond to the chairperson within 15 days of receipt of the comments. The provision does not require legislative approval before DNR issues its list or recommendation, or before the Governor makes a submission to EPA.

The statutes authorize DNR to use the administrative rule process in developing and implementing SIP modifications. DNR has implemented changes related to: (a) permitting requirements; (b) fee assessment; (c) technology standards applied to stationary sources; (d) standards applied to mobile sources; (e) area source controls; (f) monitoring requirements; and (g) all other modifications to the current SIP resulting from the federal Clean Air Act Amendments.

DNR uses extensive computer modeling to develop portions of the SIP, identify the mix of controls and programs most effective in reducing emissions, move the state toward attaining air quality standards and bring the state's nonattainment areas into attainment by federal deadlines. Data on numerous variables that impact air quality, including air monitoring station data, vehicle miles traveled, economic growth factors, emission levels of various ozone sources, and several other data sources are used to simulate the actual air quality environment in a nonattainment area. Once the actual environment is simulated, the computer is able to predict how a given control measure or program will reduce ozone pollutant emissions and overall ozone levels in the nonattainment area.

Rate-of-Progress Demonstration Plan

DNR submitted a series of rate-of-progress state implementation plan revisions to EPA which demonstrated the state had achieved required milestones of reducing VOC emissions from stationary, mobile and area sources from the 1990 base level of emissions through 2007. EPA approved the rate-of-progress plans. DNR does not need to submit additional rate-of-progress plans.

Interstate Cooperative Efforts

Wisconsin has worked with neighboring states since 1989 to study regional air quality issues and to respond to issues related to the transport of emissions by wind from one area to another. Regional transport of air pollutants can be partially responsible for violations of air quality standards in other areas of the country.

The Lake Michigan Air Directors Consortium (LADCO) was organized by Wisconsin, Illinois, Indiana, Michigan, and EPA in 1989 to implement a major study of regional ozone pollution and how best to control it in the Lake Michigan region. Ohio has since officially joined as a LADCO state. LADCO is comprised of a Board of Directors (the state air program directors), a technical staff and several workgroups. The member states and LADCO staff cooperate on technical assessments and studies of regional air quality problems such as ozone, fine particles, regional haze and air toxics. LADCO also provides a forum for the states to discuss regional air quality issues.

In 2007 and 2008, Wisconsin continued to work with LADCO, federally-recognized Indian tribes, the U.S. Park Service, the U.S. Forest Service, and the U.S. Fish and Wildlife Service to develop a comprehensive plan to address issues related to ozone, PM2.5 and haze. The agencies are assessing regional control programs that could address all of these air quality issues at once, instead of addressing one pollutant and one area at a time. The agencies are also developing a 2008 base emissions inventory, analyzing data, conducting research, and building computer models that will be used to prepare state implementation plans in the LADCO states.

Wisconsin is working with LADCO states and the states of Minnesota, Iowa, North Dakota, and Michigan on haze regulations. LADCO developed a technical document related to haze regulation and the Clean Air Interstate Rule. Since the CAIR was vacated by court action in July, 2008, LADCO, Wisconsin and surrounding states have been waiting for guidance from EPA for future action.

Deadlines

Wisconsin is required to submit a state implementation plan to EPA for attainment of the

2008 eight-hour ozone standard three years after EPA makes the final nonattainment designations in 2010. Wisconsin is required to submit a state implementation plan for attainment of the 2008 PM2.5 standards three years after nonattainment designations become final in the spring of 2009.

Adoption of Federal Air Quality Standards and Nonattainment Areas

Air Quality Standards

Under state statutes, DNR must take certain actions before the state adopts ambient air quality standards. If EPA adopts an air quality standard, the statutes require DNR to promulgate by administrative rule a similar standard. The state standard may not be more restrictive than the federal standard.

If EPA modifies an air quality standard that was in effect in 1980, DNR is required to modify the corresponding state standards unless the Department finds that the modified standard would not provide adequate protection for public health and welfare. DNR is only allowed to make this finding if the finding is supported with written documentation that includes specific information related to: (a) a public health risk assessment; (b) an analysis of population groups subjected to the air contaminant; (c) an evaluation of options for managing the risk; and (d) a comparison of the proposed standard with standards in Illinois, Indiana, Michigan, Minnesota, and Ohio.

If EPA does not adopt an air quality standard for an air contaminant, DNR may promulgate a state ambient air quality standard if the Department finds the standard is needed to provide adequate protection for public health or welfare, and if DNR provides specific written documentation to support its finding, including the four components described above.

Nonattainment Areas

Under 2003 Act 118, statutory modifications were made to the process by which the DNR identifies counties as part of nonattainment areas. After February 6, 2004, DNR may not identify a county as part of a nonattainment area under the Clean Air Act if the concentration of an air contaminant in the atmosphere in that county does not exceed the ambient air quality standard, unless the county is required to be designated under the Clean Air Act. For example, the Clean Air Act might require that all of a metropolitan statistical area must be designated, so a county within the metropolitan area might not have air quality standard exceedences but might have to be identified as part of a federal nonattainment area.

Further, DNR is required, when it issues documents which define or list specific nonattainment areas or which recommend that areas be designated as nonattainment areas, to hold a public hearing. The Department is required to provide notice at least 30 days prior to the public hearing, provide opportunity for comment at the public hearing, and receive written comments for 10 days after the close of the hearing. DNR may not issue the documents which define, or list, or recommend nonattainment areas, until at least 30 days after the public hearing.

At least 60 days before the Governor is required to make a submission to EPA on a nonattainment designation, the Department is required to provide a report to the Legislature's environment committees. The report must contain a description of any area proposed to be identified as a nonattainment area and supporting documentation. If within 30 days after DNR submits the report to the legislative committees, the chairperson of the committee submits written comments on the report to DNR, the DNR Secretary must respond to the chairperson in writing within 15 days of receipt of the comments. The provision does not require legislative approval before DNR issues its list or recommendation, or before the Governor makes a submission to EPA. Although EPA designated six Wis-

consin counties as in nonattainment of the PM2.5 standard, the review procedures above were not utilized since the Governor's December, 2007, recommendation to EPA did not recognize any counties as in nonattainment.

EPA Notice of Deficiency

On March 4, 2004, EPA published a Notice of Deficiency (NOD) for the Wisconsin federal Title V air operating permit program, in which EPA determined that the state's program did not comply with the Clean Air Act. Wisconsin was required to fully address the deficiencies identified by EPA by September 4, 2005 (18 months after the NOD was published), or face sanctions. EPA could impose the following sanctions: (a) withdraw federal approval for Wisconsin to administer the operating permit program and assume federal responsibility for administering the program; (b) reduce federal highway aids to the state; and (c) place more stringent requirements on industrial sources in the southeastern Wisconsin ozone nonattainment area.

EPA's NOD identified several deficiencies in the Wisconsin program, including related to: (a) ensuring fees were sufficient to cover the costs of the state's Title V program; (b) ensuring Title V program funds were used solely for Title V permit program costs; (c) failing to issue operating permits to all of the required regulated sources within the time required by the Clean Air Act; and (d) failing to properly implement its Title V program in several respects.

On August 18, 2005, DNR submitted Wisconsin's official response that described DNR's actions to: (a) finish processing all federal operation permits by December 30, 2004, eliminating the backlog that EPA had identified in the NOD; (b) ensure elimination of the backlog of federally enforceable state operation permits by December 31, 2005; (c) finalize administrative rules for use of general permits and registration permits (which went into effect September 1, 2005); (d) provide funds for information technology improvements to further streamline the air permitting system (done in the 2005-07 budget); (e) separate the air operation permit fee appropriation into a separate Title V federally-regulated sources appropriation and a non-Title V state sources appropriation (done in the 2005-07 budget); and (f) provide adequate staffing and funding levels to operate a Title V program.

On February 16, 2006, EPA formally determined that Wisconsin had resolved each of the deficiencies identified in the NOD for Wisconsin's operation permit program. EPA further determined that the removal of the NOD status meant that EPA would not invoke sanctions against the program and would not administer any portion of the state's operation permit program.

State Actions Related to Air Toxics

Hazardous Air Pollutant Rule

Prior to 1990, Wisconsin adopted several provisions related to the control of the emission of toxic air contaminants. As a result, until 2004, 437 toxic chemicals were regulated under state law. The state list partially overlapped with the federal list of 188 hazardous air pollutants (HAPs).

Administrative code changes in chapter NR 445, known as the hazardous air pollutant rule, effective July 1, 2004, regulate 535 substances. No state rule exists for 27 toxics on the federal list but the state enforces the federal standard for these toxics. Under NR 445, facilities must identify air toxics emitted by the facility, quantify emissions, and reduce or control emissions under specified conditions. The rule created a category of sources called incidental emitter, which includes most non-manufacturers

and those manufacturers that emit less than three tons per year of volatile organic compounds and less than five tons per year of particulate matter.

Under the rule, facilities must exercise due diligence, defined as a reasonable investigation of likely sources of air emissions. Facilities that exercise due diligence and meet applicable compliance requirements for the identified emissions, are granted what is termed "safe harbor." That is, the facilities will not be penalized if it is subsequently discovered that they emit a regulated substance over threshold levels.

Under NR 445, new compliance requirements are written into the operation permit during the normal permit renewal or issuance cycle (typically five years). DNR evaluates compliance with NR 445 requirements during normal inspections of facilities. Facilities were required to come into compliance with NR 445 requirements between June 30, 2006, and June 30, 2007, depending on when the facility was built. Certain agricultural sources have until July 31, 2011, to demonstrate compliance with the rule.

DNR believes the compliance deadlines have generally been met by all facilities, and is not aware of any facilities that are not in compliance with NR 445 requirements. DNR is currently in the process of placing air toxics operational restrictions into facility permits during revision or renewal of permits.

Voluntary Emission Reduction Registry

In 1999 Act 195, a voluntary emission reduction registry program was enacted. DNR promulgated administrative rule NR 437, effective November 1, 2002, to implement the program. On June 30, 2004, the Department began to register emissions reductions or avoided emissions of greenhouse gases and criteria air contaminants or carbon sequestration, if they were not required by law. Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexa-fluoride or any other gas that traps heat in the atmosphere. Air contaminants include particulate matter, mercury, lead and the ozone precursors nitrogen oxides and volatile organic compounds. Carbon sequestration is the establishment or enhancement of a carbon reserve, which is a system that takes in and stores more carbon from the atmosphere than it releases to the atmosphere.

NR 437 establishes protocols for quantifying baseline emissions, that is, the average annual amount or rate of a greenhouse gas or air contaminant emitted before an emission reduction or avoidance action is taken, or the amount of carbon stored before a carbon sequestration project is undertaken. As of September, 2008, 17 companies and government programs have registered almost 38 million tons of emission reductions, of which 99% are carbon dioxide tons. Over 36 million tons of the registered emission reductions are carbon dioxide tons registered by utilities.

Asbestos Abatement

DNR is responsible for administering asbestos abatement regulations in conformance with EPA requirements. Persons who perform demolition or certain renovations including the removal of asbestos-containing material must follow asbestos abatement regulations to minimize the release of asbestos fibers into the air. Renovations are subject to DNR asbestos regulations if the amount of asbestos-containing materials exceeds minimum thresholds specified in administrative code. People must use a company or person certified by the Department of Health Services to perform asbestos investigation and abatement. Persons must notify DNR at least 10 days before they perform asbestos abatement, and must pay fees for asbestos inspection and construction permit exemption.

DNR received 2,660 notifications for asbestos abatement and demolition projects in 2006-07 and 2,653 in 2007-08. DNR staff, and counties and municipalities under contract with DNR, inspected approximately 400 asbestos abatement projects in 2006-07 before and after abatement activities, and inspected 426 projects in 2007-08.

DNR reviews the notices for compliance with EPA requirements. DNR maintains a notification database that EPA created but no longer requires states to use, in order to work with building owners and companies to meet the 10-day notification requirement, allow for DNR inspection of projects, and allow for follow up on complaints. DNR received EPA funding in 2008 to help convert the notification system to an Internet-based system.

DNR is authorized to initiate enforcement action against persons who do not comply with asbestos abatement regulations. The Department may also issue citations for violations of a small number of asbestos abatement laws.

Ozone-Depleting Refrigerants

Wisconsin administers three programs to reduce emissions of ozone-depleting refrigerants (CFCs). The Department of Agriculture, Trade and Consumer Protection administers rules, effective in 1991, related to the: (a) installation, repair, and servicing of mobile air conditioners and refrigerated trailer systems; (b) recycling of CFCs removed from mobile air conditioners; and (c) the labeling of ozone-depleting substances. The Department of Commerce administers rules, effective in 1992, related to the installation or servicing of stationary refrigeration equipment. DNR administers rules, effective in 1993, related to the disposal of any equipment containing ozone-depleting refrigerants.

The three state programs prohibit knowing or negligent releases of ozone-depleting refrigerants. The federal Clean Air Act provisions on stratospheric ozone are somewhat more comprehensive than Wisconsin law but the two laws are generally consistent.

Mercury Emissions

DNR promulgated state mercury emission rule changes in administrative code Chapter NR 446, effective October 1, 2004, that applies to air contaminant sources which emit mercury. DNR promulgated NR 446 changes effective December 1, 2008, related to mercury emissions from coal-fired power plants. The seven regulated utilities under the December 1, 2008, changes are Dairyland Power Cooperative, Madison Gas and Electric Company, Manitowoc Public Utilities, Northern States Power of Wisconsin, We Energies, Wisconsin Power and Light Company, and Wisconsin Public Service Corporation.

NR 446 establishes a method for calculating baseline mercury emissions for calendar years 2002, 2003, and 2004. Large major electric utilities are required to reduce their mercury emissions to no more than 60% of the baseline mercury emissions beginning January 1, 2010. These plants have a capacity of 150 megawatts (MW) and greater, and include Dairyland Power Cooperative, We Energies, Wisconsin Power and Light Company, and Wisconsin Public Service Corporation. NR 446 also establishes requirements and methods for reporting annual mercury emissions by major utilities.

By January 1, 2015, existing large coal-fired power plants must achieve a 90% mercury emission reduction or limit the concentration of mercury emissions to 0.0080 pounds of mercury per gigawatt-hour of electricity produced. By the same date, small coal-fired power plants (with capacity greater than 25 MW and less than 150 MW) must reduce their mercury emissions to a level defined as best available control technology (BACT).

The December 1, 2008, revisions to NR 446 provide large power plants with a multipollutant reduction option under which they may delay the 90% mercury reduction requirement for up to six years (to 2021) if they also achieve certain reductions in nitrogen oxides and sulfur dioxide.

As of January 1, 2009, there is no federal mercury emission limit because the courts vacated the federal rule in February, 2008.

Governor's Task Force on Global Warming

The Governor convened a Task Force on Global Warming through issuance of an executive order in April, 2007. The Governor directed that the Task Force have the following mission: (a) present viable, actionable policy recommendations to the Governor to reduce greenhouse gas emissions (such as carbon dioxide, nitrous oxide, and methane) in Wisconsin and make Wisconsin a leader in implementation of global warming solutions; (b) advise the Governor on ongoing opportunities to address global warming locally while growing the state's economy, creating new jobs, and utilizing an appropriate mix of fuels and technologies in Wisconsin's energy and transportation portfolios; and (c) identify specific short-term and long-term goals for reductions in greenhouse gas emissions in Wisconsin that are, at a minimum consistent with Wisconsin's proportionate share of the reductions that are needed to occur worldwide to minimize the impacts of global warming. DNR and the Public Service Commission (PSC) staffed the Task Force.

The Governor directed DNR, with the assistance of the Public Service Commission, to establish an inventory of greenhouse gas emissions by sector and source type in Wisconsin, and to estimate the same emissions for the year 1990. While sources of air emissions have not been required to report greenhouse gas emissions, DNR reported to the Task Force that state greenhouse gas emissions were estimated at approximately 105.9 million metric tons of carbon dioxide equivalent in 1990, and increased at an annual average rate of 1.2 percent to 123.1 million metric tons of carbon dioxide equivalent in 2003.

In July, 2008, the Task Force on Global Warming submitted a final report to the Governor. The Task Force recommended the following goals for reducing greenhouse gas emissions: (a) a return to 2005 emission levels no later than 2014; (b) a 22% reduction from 2005 levels (to be approximately equal to 1990 levels) by 2022; and (c) a 75% reduction from 2005 levels by 2050.

The Task Force recommended several overall policies and over 50 detailed policies in the utility, transportation, agriculture, forestry and industry sectors. In addition, the Task Force recommended support for a federal or regional greenhouse gas cap and trade program. Recommendations relate to the following policy areas:

1. Overall policies include: (a) ensure ongoing greenhouse gas emission reduction effectiveness; (b) establish a comprehensive initiative to support voluntary long term greenhouse gas emission reductions; and (c) provide research and development funding.

2. Policies related to the utility sector include: (a) increase energy conservation and efficiency to minimize waste and help achieve energy independence; and (b) increase research and development related to renewable resources and cleaner electric generation technologies.

3. Policies related to the transportation sector include: (a) reduce greenhouse gas emissions through vehicle technologies; (b) reduce the carbon content of the fuel used for transportation; and (c) use mass transit funding and community development to reduce vehicle miles driven.

4. Policies related to the agriculture and forestry sectors would decrease emissions, especially of methane, and increase the state's carbon sequestration capacity (the process through

which plant life removes carbon dioxide from the atmosphere and stores it in biomass such as wood and plants).

5. Policies related to industry would include several voluntary programs, supported by incentives, to reduce direct emissions from industrial activities.

6. Development of a federal cap and trade program would establish a maximum limit on carbon dioxide emissions, and a system for placing a value on emission allowances that can be purchased or sold.

7. Other policies would decrease greenhouse gas emissions through: (a) coordination of water conservation programs with energy efficiency programs; (b) increase recycling of wood waste, paper, electronics, food waste, and materials under existing recycling programs.

Other DNR Activities

Air Quality-Related Voluntary Initiatives

DNR air program staff work with other organizations in developing several voluntary initiatives intended to improve air quality. Some examples of the initiatives that DNR worked on during the 2007-09 biennium are:

1. The Wisconsin Partners for Clean Air program in southeastern Wisconsin seeks voluntary actions by business and government organizations to reduce emissions that cause ground level ozone by approximately two tons per summer day of ozone-related emissions.

2. A diesel school bus retrofit program in southeastern Wisconsin is using EPA-approved technologies to retrofit diesel school buses to reduce emissions of VOCs, NOx, particulates, air toxics and carbon monoxide. A federal CMAQ grant and Wisconsin DOT funds were used to assist in retrofitting equipment in 800 school buses in eastern Wisconsin to reduce emissions.

3. DNR also received a CMAQ grant to install 50 advance truck stop electrification units at a truck stop in southeastern Wisconsin, which allows drivers to plug in their trucks rather than idle the diesel engines to obtain heat, air conditioning and power when stationary.

4. DNR has worked with auto, scrap and waste recyclers to reduce mercury emissions by removing auto mercury switches or other mercury-containing devices prior to crushing or shredding.

5. DNR has worked with communities to reduce use of mercury-containing products.

6. The Environmental Cooperation Pilot Program, and the successor Green Tier program, encourage regulated facilities to achieve superior environmental performance by offering regulatory flexibility through negotiated agreements.

7. DNR participated in the development of an award program to recognize hot mix asphalt facilities that achieve environmental excellence, including emissions and odor control.

8. DNR has worked with the dry cleaning industry to improve environmental performance, reduce air emissions, and simplify the reporting of emissions.

9. DNR continues to work with several public and private partners on an initiative called "Cleaner Air Faster" to retain attainment status for counties at risk of exceeding ozone and particulate matter standards. The voluntary efforts focus on Dane, Jefferson, and Fond du Lac Counties, with additional outreach in Brown and Milwaukee Counties. During 2007-09, DNR worked with partners to implement over $1,000,000 in EPA and other grant funding obtained in 2005-07 to install

lower-emission mufflers on diesel-powered school buses, off-road vehicles, and waste hauling vehicles, to reduce emissions at convenience stores, and to seek commitments to voluntarily reduce emissions on days that are forecast to have increased emissions.

Gasoline Vapor Recovery Grants

In addition to federal requirements for gasoline station operators located in moderate or worse one-hour ozone nonattainment areas to install stage II vapor recovery systems on gasoline dispensing equipment, Wisconsin also requires the installation of gasoline vapor recovery systems at larger facilities statewide. This requirement is based on the control of toxic emissions associated with gasoline vapors.

DNR operated a grant program, funded from the segregated petroleum inspection fund, to reimburse most of the costs of the design, acquisition and installation of Stage II equipment at fuel dispensing facilities in ozone nonattainment areas in eastern and southeastern Wisconsin. The grant program was not a requirement of the Clean Air Act. DNR paid grants under the program between 1995-96 and 1998-99. Vapor recovery grants reimbursed actual expenditures based on the type of vapor recovery system installed, with a maximum grant of $37,250. The program provided approximately $19.9 million in grants to 733 fuel-dispensing facilities.

Acid Rain

Wisconsin enacted significant controls in 1985 Act 296 to reduce acid rain. This law required Wisconsin's major electric utilities to meet average annual emission limits, beginning in 1993, and set annual goals for emissions of sulfur dioxide and nitrogen oxides that have resulted in a 63% reduction in sulfate emissions from 1980. The annual goal for sulfur dioxide emissions after 1992 is 250,000 tons from major utility sources and 75,000 tons from other large sources. As shown in Table 5, total sulfur dioxide emissions reported in the state were 244,396 tons in 2005, and 203,550 tons in 2007. DNR reported that, in 2005 (the most recent year of published data), major utilities reported 168,633 tons of sulfur dioxide emissions, and other large sources reported 56,178 tons.

Wisconsin's effort to reduce acid rain has primarily been through the reduction of sulfur dioxide emissions from stationary sources. Coal-burning electrical utilities account for most of the sulfur dioxide pollution in Wisconsin. Pulp and paper mills are also major contributors with natural and other sources emitting smaller amounts.

Wisconsin's utilities affected under Clean Air Act Amendment Phase I requirements generally will have excess sulfur dioxide emission allowances and are in a position to make use of the emissions trading provision of the Act. Utilities in Wisconsin have sold emissions allowances under these provisions.

Activities of Other Agencies

Motor Vehicle Inspection and Maintenance

Wisconsin's motor vehicle inspection and maintenance program, in operation since 1984, requires that most vehicles in southeastern Wisconsin be inspected to ensure that they comply with emission standards and that pollution control equipment is operational. The state Department of Transportation (DOT) administers the program through a contract with a private firm, while DNR sets the emission standards. Currently, the program operates in the state's seven moderate nonattainment counties under the eight-hour ozone standard (Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha). If these counties are redesignated as attainment areas in the future, the state will likely still be required to administer a vehicle emissions inspections program, since the Clean Air Act Amendments of 1990 require that the state submit a plan to EPA for maintaining the attain-

ment status upon such redesignation.

Vehicles are required to be tested every other year, beginning in the third year after the vehicle's model year, and, for vehicles more than five years old, upon a change of ownership. There is no fee paid by the vehicle owner for the test, although vehicle owners are responsible for the cost of any required repairs. Vehicles that fail an emissions test must be repaired and pass a subsequent test.

Beginning on July 1, 2008, the program requirements were changed to exempt vehicles of model year 1995 and earlier. Prior to this change, most passenger vehicles of model year 1968 and later were subject to testing. This change is expected to reduce the volume of tests conducted from about 750,000 in 2007-08 to about 500,000 in 2008-09.

Two other program changes, however, will subject other vehicles to testing that had previously been exempt. First, diesel-powered vehicles under 14,000 pounds of model year 2007 and later will be subject to testing, beginning in 2010 (third year after model year). Second, gasoline-powered vehicles between 10,000 pounds (the prior maximum weight) and 14,000 pounds will be subject to testing, also beginning with model year 2007. Vehicles that are not required to be registered for highway use and motorcycles and mopeds continue to be exempt.

The elimination of vehicles older than model year 1996 from the program allows all vehicles to be tested with on-board diagnostic computer equipment that has been required for all new cars since that year. Previously, older vehicles had to be tested with the engine running, using a rolling device that was used to simulate driving conditions. Since the computer test generally takes less time than the running test and can potentially be done using alternative testing methods, the costs of the program are expected to decrease, beginning in 2009-10.

DOT paid the testing contractor $13.3 million in 2007-08 and $11.0 million in 2008-09 from a transportation fund appropriation.

Small Business Clean Air Assistance Program

The Department of Commerce program provides confidential, and non-regulatory services to small businesses (employing 100 or fewer individuals). Clean air specialists work as a liaison between small businesses and state (such as DNR) and federal (such as EPA) regulating agencies. Clean air staff develop publications, answer compliance questions, conduct on-site consultations, respond to regulatory inquiries, coordinate environmental compliance workshops, and direct businesses to other technical assistance providers. Staff also administer the Diesel Truck Idling Reduction Grant Program. Commerce is appropriated base level funding of $238,500 PR in 2008-09 and 2.0 PR positions, and $72,100 SEG and 1.0 SEG position for administration. The source of program revenue is emissions tonnage fees that are collected by DNR from federally-regulated sources. The SEG funding is from the petroleum inspection fund.

Diesel Truck Idling Reduction Grant Program

In 2005 Wisconsin Act 25, a diesel truck idling reduction grant program was created in Commerce to provide financial assistance to common, contract and private motor carriers in the purchase and installation of idling reduction technology. The main goals of the program are to help Wisconsin motor carriers reduce air pollution emissions and fuel consumption. The program is appropriated $2 million in each of 2007-08 and 2008-09 from the segregated petroleum inspection fund. [Further information about the program can be found in the Legislative Fiscal Bureau Informational Paper entitled, "State Economic Development Programs Administered by the Department of Commerce."]

Reports

2004 Legislative Audit

In February, 2004, the Legislative Audit Bureau (LAB) completed an evaluation of the DNR's air management programs. The LAB made several recommendations related to the following topics: (a) annual emission fees billing; (b) operation permit issuance backlog; (c) operation permit program streamlining activities; (d) operation permit review and issuance procedures; (e) the expedited review process for construction permits; (f) the facility inspection process; (g) compliance with federal policy; (h) procedures to track compliance certification submission dates; (i) procedures to identify all after-the-fact permits issued and take appropriate enforcement action; (j) additional performance measures; and (k) improvements in its data systems.

In response to an LAB recommendation, DNR submitted a September 1, 2004, report to the Joint Legislative Audit Committee that included information about ongoing initiatives DNR had undertaken to address LAB recommendations. Some of the DNR actions included to: (a) correct emission fees billing errors; (b) assign staff located outside of the Southeast Region to review operation permits in the Southeast Region; (c) implement operation permit streamlining changes; (d) implement permit procedure improvements; (e) review and plan to implement construction and operation permit program changes made by 2003 Act 118; (f) update its inventory of facilities subject to federal inspection policies and improve inspection selection priorities; (g) identify database modifications necessary to better track compliance; and (h) modify the tracking system for construction permits for compliance follow up.

2003 Act 118

Under 2003 Act 118, DNR was directed to submit reports to the Legislature's committees on the environment.

September, 2004, Report. DNR's required September, 2004, report summarized the Department's efforts on air permit streamlining, and described elements it would include in its streamlining efforts.

March, 2005, Report. DNR's required March, 2005, report described the Department's activities related to: (a) identification of DNR administrative rules that were included in the state implementation plan approved by EPA but did not need to be in the SIP; (b) actions taken and planned to improve emission test methods, compliance calculations for emissions monitoring; (c) development of streamlined permit application forms; and (d) information technology improvements proposed in the Governor's 2005-07 budget. (The 2005-07 biennial budget provided $1,672,000 for information technology and permit streamlining improvements.)

2005 Act 25

Under 2005 Act 25, DNR was directed to submit a report by December 15, 2006, to the Joint Committee on Finance, related to implementation of 2003 Act 118, and the status of development of various types of permits.

DNR's report to the Joint Committee on Finance, included information about: (a) changes made to implement permit exemptions, general construction permits and general operation permits, registration construction permits and registration operation permits, construction permit waivers and combined construction and operation permits; (b) information technology improvements made to the permit system; (c) the numbers of various types of facilities that would be subject to operation permits under state law, but not federal law; (d) the process by which DNR eliminated the operation permit backlog; and (e) a workload analysis and fee analysis that was submitted to EPA as part of the Department's response to the EPA NOD in 2005.