PROPOSED RULEMAKING

ENVIRONMENTAL QUALITY BOARD

[25 PA. CODE CHS. 121 AND 126]

Diesel Vehicle Idling; and Auxiliary Power Systems

The Environmental Quality Board (EQB) proposes to amend Chapter 126 (relating to motor vehicle and fuels programs) by adding new Subchapters F and G (relating to diesel vehicle idling; and auxiliary power systems), as set forth in Annex A. The proposed rulemaking establishes an idling restriction of 5 minutes in a 60-minute period for diesel-powered commercial motor vehicles, with a number of exemptions. The proposed rulemaking also regulates the use of diesel-powered auxiliary power systems (APS) for diesel-powered commercial motor vehicles with model year 2007 and newer engines. The proposed rulemaking adds definitions to § 121.1 (relating to definitions) for "auxiliary power system," "commercial motor vehicle," "gross combination weight rating," "highway" and "idling."

This proposal was adopted by the Board at its meeting of October 16, 2007.

A. *Effective Date*

These amendments will go into effect upon final-form publication in the *Pennsylvania Bulletin*.

B. *Contact Persons*

For further information, contact Arleen Shulman, Chief, Mobile Sources Section, P. O. Box 8468, Rachel Carson State Office Building, Harrisburg, PA 17105-8468, (717) 787-9702 or Kristen Campfield Furlan, Assistant Counsel, Bureau of Regulatory Counsel, P. O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 787-7060. Information regarding submitting comments on this proposal appears in Section J of this preamble. Persons with a disability may use the AT&T Relay Service by calling (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This proposal is available electronically through the Department of Environmental Protection's website, www.depweb.state.pa.us.

C. *Statutory Authority*

The proposed rulemaking is being made under section 5 of the Air Pollution Control Act (APCA) (35 P. S. § 4005), which in subsection (a)(1) grants the Board the authority to adopt regulations for the prevention, control, reduction and abatement of air pollution, in subsection (a)(7) grants the Board the authority to adopt regulations designed to reduce emissions from motor vehicles and in subsection (a)(8) grants the Board the authority to adopt regulations to implement the Clean Air Act (CAA) (42 U.S.C.A. §§ 7401—7642).

D. *Purpose and Background*

The purpose of this proposed rulemaking is to establish restrictions on the idling of diesel-powered commercial motor vehicles and on the related use of certain APS to reduce exposure to harmful emissions and to help attain and maintain health-based air quality standards. The idling and APS use restrictions would provide air quality benefits to citizens in this Commonwealth, particularly those in areas where diesel-powered commercial motor vehicles congregate. Because idling of diesel-powered commercial motor vehicles consumes approximately 1 gallon of fuel per hour, vehicle owners and operators would not only realize cost savings by complying with this proposed rulemaking but would also contribute to the country's energy independence. With a Statewide regulation, operators of diesel-powered vehicles can easily identify where and when idling is restricted. Having a Statewide regulation should also discourage boroughs, townships, cities and counties from enacting their own idling restrictions.

On October 18, 2006, the Clean Air Board of Central Pennsylvania (CAB) filed a petition for rulemaking, requesting that the EQB adopt regulations to restrict the idling of commercial diesel-powered vehicles. The statement of policy in Chapter 23 (relating to Environmental Quality Board policy for processing petitions—statement of policy) establishes the procedures for the Department of Environmental Protection's response to rulemaking petitions. On January 17, 2007, the EQB accepted the CAB's petition for study. Notice of the EQB's acceptance of the petition was published at 37 Pa.B. 477 (January 27, 2007). Upon the EQB's acceptance of the petition, the Department had 60 days to prepare a report evaluating the petition, including whether the EQB should approve the action requested in the petition. In accordance with § 23.7 (relating to response to report), the Department provided a copy of the completed report to the petitioner for a 30-day response period. The petitioner submitted a response, after which the Department submitted a final report to the EQB. The Department's report recommended that the Department pursue a Statewide regulation restricting idling of diesel-powered commercial motor vehicles. On May 16, 2007, the EQB concurred with the Department's recommendation and directed that the Department develop a proposed regulation for consideration at the Board's September 2007 meeting.

The Department concurs with the petitioner's assessment of the impacts of diesel exhaust emissions. Diesel exhaust emissions have adverse health and environmental effects because they contribute to levels of particulates and ground-level ozone and have adverse health effects when individuals are exposed directly.

The United States Environmental Protection Agency (EPA) is responsible for establishing National Ambient Air Quality Standards (NAAQS) for six criteria pollutants considered harmful to public health and the environment: ozone, particulate matter, nitrogen oxides, carbon monoxide, sulfur dioxide and lead. The CAA established two types of NAAQS: primary standards set limits to protect public health; and secondary standards set limits to protect public welfare, including protection against visibility impairment, damage to animals, crops, vegetation and buildings.

In 1997, the EPA established more protective ozone and fine particulate primary and secondary NAAQS to protect public health and to ensure an adequate margin of safety. Fine particles or $PM_{2.5}$ (particles with a diameter of 2.5 micrometers or less) in the atmosphere are made up of a complex mixture of components. Some, like diesel particulate, are emitted directly into the air ("primary" sources) and others, such as sulfate and nitrate, form in the air as a result of various chemical reactions ("secondary" sources). The health effects associated with exposure to $PM_{2.5}$ are significant, and the evidence for these effects is compelling. Premature mortality, aggravation of existing

respiratory and cardiovascular disease, decreased lung function and asthma attacks have been attributed to exposure.

The NAAQS for $PM_{2.5}$ was established in 1997 at 15 micrograms per cubic meter on an annual basis and 65 micrograms per cubic meter over 24 hours. In 2004, the EPA designated eight areas in this Commonwealth, comprising all or part of 19 counties, as not attaining the NAAQS.

In October 2006, the EPA tightened the 24-hour $PM_{2.5}$ standard to 35 micrograms per cubic meter. Based on data from 2003—2005, all of the areas designated by the EPA in 2004 and several additional areas would violate the revised 24-hour standard. The Commonwealth plans submitted attainment and nonattainment designation recommendations to the EPA in December 2007 for the designation of specific nonattainment areas for the revised 24-hour standard; the EPA is anticipated to finalize those designations in December 2009 with an April 2010 effective date. Revisions to the State Implementation Plan (SIP) will be due to the EPA in April 2013.

The EPA and other agencies have evaluated the health effects of direct exposure to diesel particulate matter. The small size of diesel exhaust particles allows them to be drawn deeply into the lungs. Diesel particulates are, for the most part, even smaller than 2.5 micrometers. The EPA has said that long-term exposure to diesel particulate exhaust is likely to pose a lung cancer hazard. Exposure to diesel particulates has non-cancer and acute effects as well, including throat and eye irritation and inflammation, exacerbation of existing respiratory and allergic conditions, and exacerbated risk of heart attacks. Studies indicate children living near highways have more lung and breathing problems than other children. Children may also be exposed to more diesel exhaust inside diesel school buses, especially in idling buses that queue. People commuting to work in almost any mode of transportation along truck routes are exposed to high levels of diesel fine particulate matter.

Ground-level ozone, the other pollutant directly of concern in this rulemaking, is not emitted directly to the atmosphere but is formed by a photochemical reaction between volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) in the presence of sunlight. Heavy-duty vehicles contributed about 25% of all NO_x emissions in this Commonwealth in 2002. (Compared to gasoline-powered vehicles, diesel vehicles are not a significant source of VOCs.) Repeated exposure to ozone pollution may cause a variety of adverse health effects for healthy people and those with existing conditions, including difficulty in breathing, chest pains, coughing, nausea, throat irritation and congestion. It can exacerbate bronchitis, heart disease, emphysema and asthma, and reduce lung capacity. Ozone can aggravate asthma, causing more asthma attacks, increased use of medication, more medical treatment and more frequent visits to hospital emergency clinics. Ozone also has adverse effects on vegetation (forests and food crops) and, through deposition, contributes to pollution in the Chesapeake Bay.

The current ground-level ozone standard set by the EPA is 0.08 parts per million averaged over 8 hours. In 2004, the EPA designated 37 counties in this Commonwealth as 8-hour ozone nonattainment areas. Redesignation requests and maintenance plans for 32 counties and an attainment demonstration for the five-county Philadelphia Interstate Area (comprising Bucks, Chester, Delaware, Montgomery and Philadelphia Counties) are being processed by the EPA for approval as revisions to the State Implementation Plan. On June 20, 2007, the EPA proposed a more protective 8-hour ozone standard and is under court order to finalize the revised NAAQS by March 12, 2008. Recommendations for attainment and nonattainment areas must be submitted to the EPA in June 2009; final action by the EPA would be due in June 2010. The designations would take effect 60 days after the EPA publishes a notice in the *Federal Register*.

The Department estimates that diesel-powered commercial motor vehicles idle approximately 27.2 million hours a year in this Commonwealth. Idling during rest stops, at truck stops and rest areas accounts for nearly 78% of this total. Long duration idling (namely, idling lasting more than 15 minutes) amounts to about 22.3 million hours a year, 95% of which has been estimated to be due to truck travel rest. Some idling, such as that from individual vehicles idling at smaller facilities, may be difficult to quantify and has not been included.

The amount of idling by long-haul trucking is directly influenced by Federal requirements. The United States Department of Transportation's "hours of service" regulations include specific requirements for rest by truck drivers. Drivers may rest roadside or at truck stops, rest stops, motels or street locations near their loading or unloading points. During their rest periods, some drivers run their engines to operate heat and air conditioning or to avoid opening windows for their own personal security. Some drivers operate auxiliary equipment for comfort (such as for using a microwave oven or television) or to keep the engine warm in extreme temperatures. The habits of drivers may also play a significant role in how APS are used.

Technology exists to assist drivers in reducing idling during their rest periods. There are of two types: equipment provided on the vehicle (on-board or mobile) and equipment provided at parking spaces (stationary).

On-board bunk heaters, cab heaters and APS can provide climate control, engine warming and power to run household-type appliances. At present, much of this equipment is diesel-powered, but alternatives to diesel-powered APS are increasingly available. These smaller engines generally use about 1/10th the fuel that a main engine would use to idle. Costs per truck to have an APS range from less than $1,000 for a bunk heater to $10,000 for some APS capable of supplying power for all services when the main engine is off. While running these smaller engines reduces fuel use, running a diesel-powered APS on a vehicle with a model year (MY) 2007 or newer engine may result in more particulate emissions than running the main engine, because particulate filters reduce emissions from these newer main engines.

Stationary equipment or parking space electrification is also increasingly available throughout this Commonwealth and the United States. Electrification refers to a technology that harnesses an electrical system to provide the truck or locomotive operator with climate control and other needs, eliminating the need to idle the main engine. This Commonwealth currently has nine truck stops where stand-alone electrified parking spaces are available. The only additional equipment needed by the vehicle operator is an inexpensive window adapter to ensure that the service module fits securely. The service module itself provides climate control, electricity, Internet and telephone connections. Another stationary system provides plug-in stations only; truck operators need to have or rent supplementary connection equipment to operate heating, air conditioning and appliances.

While school buses may not contribute a large number of idling hours, they idle near children, and protection of children from unnecessary direct exposure to diesel par-

ticulate exhaust is important. Students who ride buses generally ride them every school day. The students may be exposed to diesel exhaust when school buses queue at pick-up and drop-off locations. Auxiliary equipment to heat or cool school buses is not available, but the EPA has found that there is no need for long-duration idling to warm up buses for either passenger or engine protection. Transit and tour buses face similar passenger comfort issues. Management strategies, such as providing lounges for bus drivers, can reduce idling; technology is not necessary.

It is estimated that highway vehicles will emit about 180,000 tons of NO_x and 3,250 tons of $PM_{2.5}$ in 2009. The heaviest trucks, which account for most of the idling, generally contribute 37% of the NO_x and 38% of the highway emissions. These estimates account for the cleaner technology required of MY 2007 and newer engines, using assumptions in the EPA's approved highway motor vehicle model, MOBILE 6.2. When this proposed regulation takes effect in 2009, it is estimated that idling emissions will account for about 3,325 tons of NO_x, 90 tons of VOCs and 60 tons of particulate matter per year. This estimate does not include an anticipated increase in idling hours from the present time because no Statewide data exists upon which to base the estimate. The benefits of this proposed rulemaking could be greater if hours spent in this Commonwealth in travel rest increase significantly. Assumptions about idling emissions were those provided by the EPA in its *Guidance for Quantifying and Using Long Duration Truck Idling Emission Reductions in State Implementation Plans and Transportation Conformity* (2004). The Department expects that, once the temperature exemption for trucks with sleeper berths expires, the proposed regulation would reduce diesel-powered commercial motor vehicles idling by half and that a corresponding 50% reduction of emissions would occur. Therefore, the Department estimates that the proposed rulemaking would reduce emissions by about 1,610 tons of NO_x, 45 tons of VOC and 30 tons of particulate matter once the temperature exemption expires.

Because the United States increasingly relies on imported fuel for transportation needs, reducing idling will contribute to the country's energy independence. Another benefit of reducing idling is the reduction of carbon dioxide (CO_2) emissions. The EPA estimates that idling heavy-duty vehicles can consume about one gallon of diesel fuel for every hour of idling time, adding more than a pound of CO_2, the major greenhouse gas (GHG). The idling of a typical long-haul truck contributes about 19 metric tons of CO_2 annually.

The experience of several other jurisdictions shows that involving property owners in enforcement and outreach is key to reducing idling, especially at locations associated with truck travel rest. This may be the case because drivers, who typically travel Nationally and even internationally, may not be aware of a state's rules and may have little incentive to pay the fines. To encourage assistance from property owners, some states reduce fines for facilities that post signs and take other steps to reduce idling. The Department will consider these and other approaches to obtaining compliance as this rulemaking proceeds, and specifically seeks comment on approaches to obtaining compliance.

Idling restrictions have been adopted by 14 states, the District of Columbia and many local jurisdictions, including this Commonwealth's two most populated urban areas, Philadelphia and Allegheny Counties. The Federal government does not regulate commercial highway diesel vehicle idling, and generally considers the regulation of these vehicles in use to be the prerogative of state government. In March 2006, recognizing that reducing unnecessary diesel vehicle idling would be a public health benefit and that a multiplicity of state and local rules was a "barrier to greater implementation of idling control technologies," the EPA released a model state idling law. (EPA Model State Idling Law, EPA420-S-06-001) The model was a result of five workshops across the country in which affected stakeholders participated.

In developing the proposed rulemaking, the Department considered the petitioner's suggested language, the EPA model law and the existing regulations of the Philadelphia and Allegheny County health departments.

The Department consulted with the Department of Transportation (PennDOT) during development of the proposed rulemaking, in accordance with section 5(a)(7) of the APCA (35 P. S. § 4005(a)(7)). The Department also consulted with the Pennsylvania State Police.

The Department consulted with the Air Quality Technical Advisory Committee (AQTAC) on the proposed rulemaking on July 26, 2007. The AQTAC concurred with the Department's recommendation to seek EQB approval of the proposed rulemaking. The Department also consulted with the Citizens' Advisory Council and the Small Business Compliance Advisory Committee.

This proposed rulemaking is reasonably necessary to achieve and maintain the 8-hour ozone and $PM_{2.5}$ NAAQS. The proposed regulations, if adopted, will be submitted to the EPA as a revision to the State Implementation Plan.

E. *Summary of Regulatory Requirements*

The proposed rulemaking adds definitions for the following terms to § 121.1 (relating to definitions): "auxiliary power system," "commercial motor vehicle," "GCWR-gross combination weight rating," "highway" and "idling."

The proposed definition of "auxiliary power system" describes equipment that may be installed on a vehicle in lieu of operating the main diesel engine.

The proposed definition of "commercial motor vehicle" is adapted from the definition in 49 CFR 390.5 (relating to definitions). The proposed definition limits the scope of the proposed rulemaking to vehicles designed for or used on a highway that are above a certain weight or passenger capacity or carry hazardous materials in quantities requiring placarding. Vehicles covered by the definition of "commercial motor vehicle" would include most trucks used for business purposes, transit and tour buses and school buses. The definition is not intended to cover vehicles that would only otherwise be covered by the use of a separate engine for cargo refrigeration in the tractor portion of a tractor-trailer.

The proposed definitions of "GCWR-gross combination weight rating" and "highway" are the same as in 75 Pa.C.S. § 102 (relating to definitions).

The proposed definition of "idling" specifies that, for purposes of this subchapter, idling is operating a main propulsion engine of a vehicle without moving.

The proposed rulemaking adds § 126.601 (relating to applicability), which states that the diesel vehicle idling requirement applies to owners and operators of diesel-powered commercial motor vehicles and owners and operators of locations at which diesel-powered commercial motor vehicles load, unload or park. The locations af-

fected include, for example, warehouses, terminals, truck stops, other retail locations, schools, parking lots, rest areas and roadway rights-of-way. The proposed rulemaking would regulate idling at off-road sites by highway vehicles, but not by construction, agricultural or other off-road vehicles or equipment, or by locomotives, marine vessels or aircraft.

The proposed rulemaking adds § 126.611 (relating to idling restriction) to prevent persons subject to this subchapter from causing or allowing the engine of a commercial diesel vehicle to idle more than 5 minutes in any 60-minute period, except as provided in § 126.612 (relating to exemptions). This time limitation is in the EPA model law and was suggested by the petitioner. Most idling takes place in conjunction with truck travel rest at truck stops and rest stops, and the Department's study found that shared responsibility by facilities and vehicle owners and operators is essential to reduce idling effectively. Therefore, the provision has been written to include owners and operators of locations at which diesel-powered commercial motor vehicles load, unload or park.

The proposed rulemaking adds § 126.612, which describes a number of situations in which the idling restriction would not apply. These situations are listed as follows.

Section 126.612(a)(1) allows idling by vehicles equipped with sleeper berths when idling is necessary in cold or hot weather for purposes of driver comfort. The exemption expires on May 1, 2010, as suggested by the petitioner. The expiration provision is mirrored in the EPA model rule, and is designed to allow businesses the opportunity to identify, finance and install mobile idling reduction equipment before the exemption's expiration. Affordable idling reduction strategies already exist. Not only will they reduce air pollution from idling, but they also should reduce operating costs for diesel fleets by decreasing fuel use. The Department has had a financial assistance program for small businesses for pollution prevention and energy efficiency since July 2004 that can help these diesel vehicle owners purchase on-board idling reduction equipment. The exemption also recognizes that stationary idling reduction equipment, specifically electrified parking spaces, is available within this Commonwealth and is currently underutilized. Because using stationary idling reduction equipment is preferable to idling from a pollution perspective, the exemption would not apply if parking is available at an electrified parking space. The petitioner recommended allowing the temporary temperature exemption only if the vehicle was parked at a fleet trucking terminal, commercial truck stop or PennDOT designated rest area. The proposed language makes the temporary exemption available no matter where the vehicle is parked, but also restricts its applicability to occupied vehicles with sleeper berths, as in the EPA model rule.

Section 126.612(a)(2) allows idling for passenger buses with passengers onboard when idling is necessary to provide heating or air conditioning for the passengers. It allows a maximum of 15 minutes in a 60-minute period, in recognition that heating and cooling of a bus, rather than of a truck cab, takes longer. The exemption primarily is patterned after the EPA model rule. The petitioner suggested allowing idling for 10 minutes prior to passenger boarding; however, that could have been dependent upon too many schedule and passenger arrival variables. The petitioner suggested that idling be allowed any time passengers are on board; however, the EPA found that 15 minutes is a sufficient amount of time to condition a bus. The EPA model rule suggests that this exemption expire 5 years after a state implements a financial assistance program to allow bus owners to identify, finance and install equipment to replace idling. The Department has not proposed an expiration date for this exemption and is seeking comment on whether affordable idling reduction technology exists to cool a passenger bus adequately by means other than operation of the main engine.

Section 126.612(a)(3) allows idling when necessary for active loading or unloading of property or passengers. In most cases, idling is not necessary for active loading or unloading. Idling could be necessary when, for example, a facility requires a driver to remain inside the cab. The Department is seeking comment on whether to expand this exemption to include, for example: idling that is necessitated by a delay in loading or unloading due to an unforeseen facility-related problem during hot or cold weather; and, idling in specific situations in which vehicles are lining up to load or unload.

Section 126.612(a)(4) allows idling when necessary to operate work-related mechanical or electrical equipment. Examples include trash compaction equipment, mixing equipment for concrete trucks, lifts for cargo or passengers and straight truck refrigeration. The exemption does not apply when idling for cabin comfort or to operate nonessential on-board equipment.

Section 126.612(a)(5) allows idling when required by on-road traffic or other obstruction on the highway, a stop signal or the direction of an official directing traffic, since these are normally circumstances outside the driver's control. This exemption applies only to on-road traffic conditions and does not apply to queuing for loading or unloading. The Department is seeking comment on whether an exemption should be allowed for vehicles waiting to load or unload and how such an exemption should be worded, including conditions.

Section 126.612(a)(6) allows idling when idling is required as part of a State or Federal safety inspection. Idling must be necessary to perform the operations.

Section 126.612(a)(7) allows idling when idling is required for maintenance, servicing or repair of the vehicle, and for diagnostic operations for maintenance, servicing or repair. Idling must be necessary to perform the operations.

Section 126.612(a)(8) allows idling when necessary to operate defrosters, maintain temperature or refrigerate cargo to prevent a health or safety emergency or during the period in which equipment is being installed to prevent such an emergency. It also allows idling if required by Federal, State or local safety regulations.

Section 126.612(a)(9) allows idling of vehicles when necessary for vehicles being used in emergency or training situations. It does not allow idling while the vehicle is not acting in emergency or training mode.

Section 126.612(a)(10) allows idling for an armored vehicle when idling is necessary while a person remains inside to protect the security of the cargo.

Section 126.612(a)(11) allows idling by a school bus during queuing for the sequential discharge or pickup of students when idling is necessary because the physical configuration of the school or the school's surrounding streets does not allow for stopping. This exemption is likely to be useful in limited situations, such as some urban settings, in which there may be no reasonable alternative to idling.

While several of these exemptions were identified in the EPA's report on its model law development as "common sense," participants in the EPA's process felt it was important to articulate the exemptions to ensure appropriate interpretation and enforcement by enforcing officials. Even though some of these exemptions were not included in the petitioner's suggested regulation, they have been included in this proposed rulemaking. They include portions of paragraph (4), all of paragraphs (6) and (10) and subsection (c) discussed as follows.

Section 126.612(b) allows idling for vehicles displaying a label indicating that the NO_x emissions from the vehicle are low enough that the vehicle is allowed to idle without restriction in California. This subsection does not require that a vehicle's emissions meet California's standards applicable to unrestricted idling; it simply allows an exemption if they do.

Section 126.612(c) allows idling if idling is due to mechanical difficulties over which the driver has no control. These situations are rare. An example would be a problem with the alternator. If the regulation were enforced against a driver, the enforcement action would be abandoned if the driver demonstrated within the specified time limits that the claimed mechanical problem existed and was fixed. Participants in the EPA's model law development suggested that a requirement to submit paperwork to the enforcing agency would prevent abuse of this exemption.

Section 126.612(d) allows a local government or local air authority with idling regulations predating the adoption of this proposed rulemaking as a final rulemaking to approve alternative compliance plans for bus terminals to minimize idling.

Proposed Subchapter G (relating to auxiliary power systems) would ensure that emission reductions realized from the proposed rulemaking continue as MY 2007 and newer heavy-duty engines become more prevalent in vehicles traveling in and through this Commonwealth. Engines that are MY 2007 and newer are required by both the EPA and the California Air Resources Board (CARB) to control particulate emissions to very low levels. Diesel engine and vehicle makers have chosen to meet the 2007 engine requirements primarily by using particulate filters and other equipment to remove the particulates from the engines' exhaust. These filters are normally installed in the exhaust system of the main engine. APS that are powered by small diesel engines have their own exhaust systems. Even though these small engines use about 1/10th the fuel of the main propulsion engine, they generally emit more particulate matter per hour than the main engine. Vehicle fleet operators might choose to purchase these smaller engines as an idling alternative despite the higher particulate emissions because of the fuel savings. Therefore, proposed Subchapter G requires the exhaust of APS used on vehicles with MY 2007 or newer engines to be routed through the main engine's exhaust system upstream of the particulate filter. In practice, this is generally done in ways that are visible to an enforcing official without opening the engine or cabin compartment. The Department is seeking comment on the implications of this provision for vehicle owners and manufacturers.

According to a survey conducted by the American Trucking Associations, almost one-half of all vehicles with sleeper berths in the country may be driven in California, and therefore, will have to be prepared to comply with California's idling and APS use regulations. CARB allows alternatives to rerouting the exhaust of the APS. CARB also provides that these systems be labeled so that idling enforcement officials can easily identify vehicles that are compliant through use of these alternatives. The proposed rulemaking provides that the APS, if labeled according to California requirements, may operate in Pennsylvania when used on vehicles with MY 2007 or newer engines. The proposed rulemaking does not regulate the use of APS on vehicles with MY 2006 or older engines.

F. *Benefits, Costs and Compliance*

Benefits

Citizens in this Commonwealth will benefit from reduced direct exposure to diesel emissions produced by idling commercial motor vehicles. Reduced diesel emissions will also assist the Commonwealth in maintaining the fine particulate and ground-level ozone standards. However, more air pollution from idling is produced in some counties than others because of the concentration of travel rest facilities. These counties will benefit more. For instance, idling trucks in Cumberland and Luzerne Counties produce about 20% of all idling emissions in this Commonwealth.

When this regulation takes effect in 2009, it is estimated that idling emissions will account for about 3,325 tons of NO_x, 90 tons of VOC and 60 tons of particulate matter per year. This estimate does not include an anticipated increase in idling hours from the present time because no Statewide data exists upon which to base the estimate. The benefits of this proposed rulemaking could be greater if hours spent in this Commonwealth in travel rest increase significantly. Assumptions about idling emissions were those provided by the EPA in its *Guidance for Quantifying and Using Long Duration Truck Idling Emission Reductions in State Implementation Plans and Transportation Conformity* (2004). The Department expects that, once the temperature exemption expires, the proposed regulation would reduce diesel-powered commercial motor vehicles idling by half and that a corresponding 50% reduction of emissions would occur. Therefore, the Department estimates that the proposed rulemaking would reduce emissions by about 1,610 tons of NO_x, 45 tons of VOC and 30 tons of particulate matter once the temperature exemptions for trucks with sleeper berths expires.

Because the United States increasingly relies on imported fuel for transportation needs, reducing idling will contribute to the country's energy independence. Another benefit of reducing idling is the reduction of CO_2 emissions. The EPA estimates that idling heavy-duty vehicles can consume about 1 gallon of diesel fuel for every hour of idling time, adding more than a pound of CO_2, the major GHG. The idling of a typical long-haul truck contributes about 19 metric tons of CO_2 annually.

Vehicle operators, the people in the closest proximity to diesel exhaust, will benefit most, particularly drivers of long-haul vehicles. In addition to cleaner air, the noise of their sleeper berth should decrease if power is supplied by an alternative idling technology. This should lead to a more rested truck driver. The National Transportation Safety Board has cited fatigue as a major cause of accidents in which long-haul trucks are involved. Nearly 500,000 trucks in the nation are dedicated to long-haul trips. Since trucking companies need to replace truck drivers constantly due to high turnover rates, more truck operators would be affected than there are number of trucks. It is possible that most, if not all, long-haul drivers will idle in this Commonwealth at some time. Including bus drivers and local drivers in this Common-

wealth, there are nearly 1 million drivers who may benefit through reduced exposure to diesel emissions.

The proposed rulemaking can provide consistency in idling regulations in this Commonwealth for the industry, as well as encourage consistency in other states in which Pennsylvania vehicles may idle. The Commonwealth's adoption of this proposed rulemaking will make it difficult for most long-haul trucks across the nation to avoid complying with idling regulations, since most long-haul trucks in the nation are likely to travel through this Commonwealth. The Commonwealth's adoption of the proposed rulemaking will encourage more vehicle operators across the country to invest in long-term, permanent alternatives to idling and, when installing APS on vehicles with MY 2007 or newer engines, to ensure that the APS usage will be less polluting.

Compliance Costs

Savings due to this proposed rulemaking are expected to exceed the costs in 2011, and by 2012 the regulated community will see a payback of their initial investment in equipment that would replace idling for travel rest. The overall benefit to the regulated community in the first 5 years of this program (2009—2015) should total at least $163 million. The costs associated with the regulation are investments in equipment to provide climate control and electrical power without idling the main engine, primarily during required periods of rest. While this proposed rulemaking would apply to more vehicles than just trucks with sleeper cabs, shorter-haul vehicles, transit buses and school buses are not likely to invest in the equipment. The savings are directly attributable to decreases in fuel use. The anticipated decreases in fuel use could reduce revenue to the Commonwealth diesel fuel vendors (truck stops and other retail outlets) by as much as $14 to $22 million per year. In addition a corresponding reduction in contributions to the Commonwealth Motor License Fund would result in a $2-3 million decrease in revenue for the Commonwealth.

Compliance Assistance Plan

The Department plans to educate the regulated community through associations of truck and bus fleet operators, the industry media (including newsletters and radio stations serving the trucking community), large truck stops and operators of other locations where vehicles idle. The information provided would include information about the idling restrictions and financial assistance programs that may be available through this Commonwealth and the Federal government for purchase or lease of mobile idling reduction equipment. At present, these financial assistance programs are available for small businesses.

Paperwork Requirements

This proposed rulemaking creates no new paperwork for the regulated community at large, with one exception. Violating vehicle operators who wish to claim the exemption under § 126.612(c) would have to submit timely documentation of a repair to the enforcing agency.

G. *Pollution Prevention (if applicable)*

The Federal Pollution Prevention Act of 1990 established a National policy that promotes pollution prevention as the preferred means for achieving state environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally-friendly materials, more efficient use of raw materials, and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to facilities that permanently achieve or move beyond compliance. This proposed rulemaking prevents pollution by either requiring a pollution source (namely, vehicle engines) to be shut off and by encouraging the use of alternative, less polluting equipment when idling is necessary.

H. *Sunset Review*

This proposed rulemaking will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulations effectively fulfill the goals for which they were intended.

I. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on December 21, 2007, the Department submitted a copy of this proposed rulemaking to the Independent Regulatory Review Commission (IRRC) and the Chairpersons of the House and Senate Environmental Resources and Energy Committees. In addition to submitting the proposed rulemakings, the Department has provided IRRC and the Committees with a copy of a detailed Regulatory Analysis Form prepared by the Department. A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act, IRRC may convey any comments, recommendations or objections to the proposed rulemakings within 30 days of the close of the public comment period. The comments, recommendations or objections shall specify the regulatory review criteria that have not been met. The Regulatory Review Act specifies detailed procedures for review of these issues by the Department, the General Assembly and the Governor prior to final publication of the regulations.

J. *Public Comments*

Written Comments. Interested persons are invited to submit comments, suggestions or objections regarding the proposed rulemaking to the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477 (express mail: Rachel Carson State Office Building, 16th Floor, 400 Market Street, Harrisburg, PA 17101-2301). Comments submitted by facsimile will not be accepted. Comments, suggestions or objections must be received by the Board by March 17, 2008. Interested persons may also submit a summary of their comments to the Board. The summary may not exceed one page in length and must also be received by March 17, 2008. The one-page summary will be provided to each member of the Board in the agenda packet distributed prior to the meeting at which the final regulation will be considered.

Electronic Comments. Comments may be submitted electronically to the Board by completing and submitting the online form at www.depweb.state.pa.us/RegComments by March 17, 2008. If an acknowledgement of electronic comments is not received by the sender within 2 working days, the comments should be retransmitted at the Department's listed website to ensure receipt.

K. *Public Hearings*

The EQB will hold three public hearings for the purpose of accepting comments on this proposal. The hearings will be held as follows:

February 12, 2008 1 p.m.	Lehigh County Government Center 17 South Seventh Street Allentown, PA 18101-1614

February 13, 2008 3 p.m.	Department of Environmental Protection Rachel Carson State Office Building Room 105 400 Market Street Harrisburg, PA 17105
February 15, 2008 1 p.m.	Department of Environmental Protection Southwest Regional Office Waterfront A and B Conference Room 400 Waterfront Drive Pittsburgh, PA 15222

Persons wishing to present testimony at a hearing are requested to contact the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477, (717) 787-4526, at least 1 week in advance of the hearing to reserve a time to present testimony. Oral testimony is limited to 10 minutes for each witness. Witnesses are requested to submit three written copies of their oral testimony to the hearing chairperson at the hearing. Organizations are limited to designating one witness to present testimony on their behalf at each hearing.

Persons in need of accommodations as provided for in the Americans With Disabilities Act of 1990 should contact the Environmental Quality Board at (717) 787-4526 or through the Pennsylvania AT&T Relay Service at (800) 654-5984 (TDD) to discuss how the Department may accommodate their needs.

KATHLEEN A. MCGINTY,
Chairperson

Fiscal Note: 7-422. (1) Motor License Fund; (2) Implementing Year 2007-08 is $0; (3) 1st Succeeding Year 2008-09 is $0; 2nd Succeeding Year 2009-10 is $0; 3rd Succeeding Year 2010-11 is $2,050,000; 4th Succeeding Year 2011-12 is $3,058,000; 5th Succeeding Year 2012-13 is $3,058,000;

General Fund Environmental Program Management	*Clean Air Fund Mobile and Area Facilities*
(4) 2006-07 Program—$36,868,000	$13,061,000
2005-06 Program—$37,049,000	$8,231,000
2004-05 Program—$37,594,000	$8,144,000

(8) recommends adoption.

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

ARTICLE I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

SUBPART C. PROTECTION OF NATURAL RESOURCES

ARTICLE III. AIR RESOURCES

CHAPTER 121. GENERAL PROVISIONS

§ 121.1. Definitions.

The definitions in section 3 of the act (35 P. S. § 4003) apply to this article. In addition, the following words and terms, when used in this article, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

***Auxiliary power system*—A device installed on a commercial motor vehicle to provide electrical, mechanical or thermal energy to the primary diesel engine or the cab, sleeper berth or bus passenger compartment as an alternative to idling the primary diesel engine.**

* * * * *

***Commercial motor vehicle*—A self-propelled motor vehicle used on a highway to transport passengers or property when the vehicle meets one or more of the following conditions:**

(i) The vehicle has a gross vehicle weight rating or gross combination weight rating, or gross vehicle weight or gross combination weight, of 4,536 kg (10,001 pounds) or more, whichever is greater.

(ii) The vehicle is designed or used to transport more than 8 passengers, including the driver, for compensation.

(iii) The vehicle is designed or used to transport more than 15 passengers, including the driver, and is not used to transport passengers for compensation.

(iv) The vehicle is used in transporting material found by the Secretary of the United States Department of Transportation to be hazardous under 49 U.S.C. § 5103 (relating to general regulatory authority) and transported in a quantity requiring placarding under regulations prescribed by the Secretary of the United States Department of Transportation under 49 CFR, Subtitle B, Chapter I, Subchapter C (relating to hazardous materials regulations).

* * * * *

***GCWR—Gross combination weight rating*—The value specified by the manufacturer as the loaded weight of a combination motor vehicle.**

* * * * *

***Highway*—The entire width between the boundary lines of every way publicly maintained when any part of the way is open to the use of the public for purposes of vehicular travel. The term includes a roadway open to the use of the public for vehicular travel on grounds of a college, university, public or private school, or public or historical park.**

* * * * *

***Idling*—For purposes of Chapter 126, Subchapter F (relating to diesel vehicle idling), the operation of the main propulsion engine of a commercial motor vehicle while the vehicle is stationary. (Editor's Note: An unrelated definition of this term is expected to be published for comment in the *Pennsylvania Bulletin* later in a proposed amendment to Chapter 129 (relating to standards for sources) concerning glass melting furnaces. The later of these two rulemakings to be published as a final rulemaking will include both definitions).**

* * * * *

(*Editor's Note*: Subchapters F and G are new and are printed in regular type to enhance readability.)

CHAPTER 126. MOTOR VEHICLE AND FUELS PROGRAMS

Subchapter F. DIESEL VEHICLE IDLING

GENERAL PROVISIONS

Sec.
126.601. Applicability.

RESTRICTIONS ON DIESEL VEHICLE IDLING

GENERAL PROVISIONS

§ 126.601. Applicability.

This subchapter applies to owners and operators of diesel-powered commercial motor vehicles and owners and operators of locations at which diesel-powered commercial motor vehicles load, unload or park.

RESTRICTIONS ON DIESEL VEHICLE IDLING

§ 126.611. Idling restriction.

No person subject to this subchapter may cause or allow the engine of a diesel-powered commercial motor vehicle to idle for more than 5 minutes in a 60-minute period, except as provided in § 126.612 (relating to exemptions).

§ 126.612. Exemptions.

(a) A diesel-powered commercial motor vehicle may idle beyond the time allowed in § 126.611 (relating to idling restriction) for one or more of the following reasons:

(1) When idling is necessary for an occupied vehicle equipped with a sleeper berth compartment to operate air conditioning or heating during a rest period and the outside temperature at the location of the vehicle is less than 40° F or greater than 75° F. This exemption expires May 1, 2010. This exemption does not apply if the vehicle is parked at a location equipped with stationary idle reduction technology that is available for use.

(2) When idling is necessary for a passenger bus to provide heating or air conditioning when nondriver passengers are onboard. For the purposes of this exemption, the bus may idle for up to 15 minutes in a 60-minute period.

(3) When idling is necessary for active loading or active unloading of property or passengers.

(4) When idling is necessary for a vehicle to operate work-related mechanical or electrical operations other than propulsion.

(5) When a vehicle must remain motionless because of one or more of the following:

(i) Traffic or other obstruction on the highway.

(ii) An official traffic control device or signal.

(iii) The direction of a uniformed police officer or other person authorized to direct traffic under 67 Pa. Code § 101.2 (relating to persons authorized to direct traffic).

(6) When idling is necessary as part of a State or Federal inspection to verify that all equipment is in good working order, provided idling is required as part of the inspection.

(7) When idling is necessary for maintenance, servicing, repairs or diagnostic purposes, provided idling is required for this activity.

(8) When idling is necessary to operate defrosters, heaters, air conditioners or cargo refrigeration equipment, or to install equipment, to prevent a safety or health emergency and not for the purpose of a rest period, or as otherwise required by Federal or State motor carrier safety regulations or local requirements.

(9) When idling is necessary for a police, fire, ambulance, public safety, military or other vehicle while being used in an emergency or training capacity.

(10) When idling is necessary for an armored vehicle while a person remains inside the vehicle to guard the contents.

(11) When idling by a school bus during queuing for the sequential discharge or pickup of students is necessary because the physical configuration of a school or the school's surrounding streets does not allow for stopping.

(b) The restriction on idling in § 126.611 does not apply to a vehicle that has a model year 2007 or newer engine and exhibits a label issued by CARB under 13 CCR 1956.8(a)(6)(C) (relating to exhaust emissions standards and test procedures—1985 and subsequent model heavy-duty engines and vehicles) showing that the vehicle's engine meets an optional NOx idling emission standard.

(c) A person will not be considered in violation of § 126.611 for idling that exceeds 5 minutes in a 60-minute period if each of the following occurs:

(1) The vehicle owner or operator asserts at the time of the exceedance that the vehicle idled more than 5 minutes in a 60-minute period due to a mechanical problem over which the driver had no control.

(2) The vehicle owner or operator demonstrates to the Department or other enforcing agency within 10 business days of exceeding the idling restriction that the mechanical problem has been identified and repaired.

(d) A county, city, town, township, borough or local air authority with idling regulations in existence before _____ (*Editor's Note*: The blank refers to the effective date of adoption of this proposed rulemaking.) may approve alternative compliance plans for bus terminals to minimize idling.

Subchapter G. AUXILIARY POWER SYSTEMS

§ 126.701. Applicability.

This subchapter applies to owners and operators of diesel-powered commercial motor vehicles with a model year 2007 or newer engine.

§ 126.702. Auxiliary power system.

For a diesel-powered commercial motor vehicle with a model year 2007 or newer engine, an auxiliary power system powered by a diesel-powered internal combustion engine may only be used in this Commonwealth if its exhaust is routed through the exhaust system of the main propulsion engine. This requirement does not apply if the vehicle or auxiliary power system exhibits a label issued by CARB under 13 CCR 2485(c)(3)(A)(1) (relating to airborne toxic control measure to limit diesel-fueled commercial motor vehicle idling) for the auxiliary power system.

[Pa.B. Doc. No. 08-45. Filed for public inspection January 11, 2008, 9:00 a.m.]

[25 PA. CODE CH. 93]
Triennial Review of Water Quality Standards

The Environmental Quality Board (Board) proposes to amend Chapter 93 (relating to water quality standards) to read as set forth in Annex A. This proposal was adopted by the Board at its meeting of October 16, 2007.

A. *Effective Date*

These proposed amendments will be effective upon publication in the *Pennsylvania Bulletin* as final-form rulemaking.

B. *Contact Persons*

For further information contact Richard H. Shertzer, Chief, Division of Water Quality Standards, Bureau of Water Standards and Facility Regulation, 11th Floor, Rachel Carson State Office Building, P. O. Box 8467, (717) 787-9637 or Michelle Moses, Assistant Counsel, Bureau of Regulatory Counsel, 9th Floor, Rachel Carson State Office Building, P. O. Box 8464, Harrisburg, PA 17105-8464, (717) 787-7060. Persons with a disability may use the AT&T Relay Service by calling (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This proposal is available electronically through the Department of Environmental Protection's (Department's) website, www.depweb.state.pa.us. (DEP Keywords "Public Participation; Participate;" then choose "proposals currently open for comment.")

C. *Statutory Authority*

These proposed amendments are made under the authority of sections 5(b)(1) and 402 of The Clean Streams Law (35 P. S. §§ 691.5(b)(1) and 691.402), which authorize the Board to develop and adopt rules and regulations to implement provisions of The Clean Streams Law and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20), which grants to the Board the power and duty to formulate, adopt and promulgate rules and regulations for the proper performance of the work of the Department. In addition, section 303 of the Federal Clean Water Act (33 U.S.C.A. § 1313) sets forth requirements for water quality standards and the Federal regulations in 40 CFR 131.32 (relating to Pennsylvania) set forth certain requirements for portions of the Commonwealth's antidegradation program and the Federal regulation in 40 CFR 131.41 (relating to bacteriological criteria for those states not complying with Clean Water Act section 303(i)(1)(A)) sets forth bacteria criteria for coastal recreation waters in this Commonwealth.

D. *Background and Purpose of the Amendment*

The water quality standards (WQS), which are generally codified in Chapter 93, are designed to implement the requirements of sections 5 and 402 of The Clean Streams Law and section 303 of the Federal Clean Water Act. This proposed rulemaking fulfills the Federally-required triennial review of water quality standards as mandated by the Federal Clean Water Act. The WQS consist of the existing and designated uses of the surface waters of this Commonwealth, along with the specific numerical and narrative criteria necessary to achieve and maintain those uses and an antidegradation policy. Thus, WQSs are in-stream water quality goals that are implemented by imposing specific regulatory requirements, such as treatment requirements, best management practices and effluent limitations, on individual sources of pollution.

WQS are an important element of the Commonwealth's water quality management program. Some type of water quality standard has been in use for approximately 75 years in this Commonwealth. One of the early actions after the Sanitary Water Board (SWB) was created in 1923 was to classify streams by priority for water quality management actions. In 1947, the SWB classified all streams in this Commonwealth by the degree of treatment that had to be provided before discharge could occur. Article 301—Water Quality Control, which specifically contained water uses, general and specific water quality criteria and designated water uses, was added to the SWB's Rules and Regulations on June 28, 1967. The SWB was then abolished on January 19, 1971, following the formation of the new Department of Environmental Resources (PA DER) in 1968. Responsibilities for developing and maintaining the water quality criteria and standards, and other related regulations were transferred to PA DER. New or revised specific water quality criteria and standards were developed by PA DER for all Commonwealth surface waters, and formally adopted into Chapter 93 on September 10, 1971.

PA DER completed its first major review and complete overhaul of the water quality criteria and standards in 1979. After a series of public hearings and extensive public participation, revisions to the water quality criteria and uses were incorporated into Chapter 93. The Environmental Protection Agency (EPA) Region III formally approved the revisions to the Commonwealth's WQS on January 26, 1981. Section 303(c)(1) of the Clean Water Act requires that states periodically, but at least once every 3 years, review and revise as necessary, their WQS. As such, additional reviews and revisions were made to the Commonwealth's WQS during 1985, 1989 and 1994. The then newly formed Department of Environmental Protection (Department), which was created in June 1995 after splitting PA DER into two agencies by approval of the Conservation and Natural Resources Act (71 P. S. §§ 1340.101—1340.1103), began to conduct it's first comprehensive review of WQS regulations, policies and implementation procedures which became the basis for the next Triennial Review. Additional reviews and revisions were made to the Commonwealth's WQS during 1998, 1999, 2000, 2002 and 2004 to address amendments for the Great Lakes Initiative (GLI), antidegradation policies, the WQS Regulatory Basics Initiative (RBI) Triennial and several other corrective amendments.

On May 9, 2007, the Department's Water Resources Advisory Committee voted to present this rulemaking package to the Board. In addition, the Department presented this rulemaking package to the Agricultural Advisory Board on August 22, 2007. This proposal constitutes this Commonwealth's current triennial review of its WQS.

E. *Summary of Issues and Proposed Regulatory Revisions*

Issues being considered in this triennial review are: updating the water quality criteria; merging sections of Chapter 16 (relating to water quality toxics management strategy—statement of policy) into Chapter 93; adding a definition in § 93.1 to clarify the term "conventional treatment" for potable water supply (PWS) that is used in § 93.3, Table 1 and clarifying in the footnote to Table 3 in § 93.7 (relating to specific water quality criteria) that other more sensitive "critical uses" may apply; verifying current exceptions to fishable/swimmable waters; making corrections and changes to drainage lists; and other typographic and grammatical corrections.

Chapter 93. Water Quality Standards, Table of Contents

The chapter is being amended to show the incorporation of sections of Chapter 16 into Chapter 93. The sections proposed to be merged include the criteria tables. The merging of these sections will consolidate the WQSs by allowing all of this Commonwealth's water quality criteria to reside in one chapter. The remaining sections of Chapter 16 will be retained in the statement of policy, with some modifications, corrections and updates.

Section 93.1. Definitions.

The Board proposes to clarify that the substances referred to in the definition for "toxic substances" will be identified in Chapter 93, rather than Chapter 16.

A new definition is proposed to clarify and define the reference to "conventional treatment" in the description of the PWS in Table 1 in § 93.3 (protected water uses). This definition incorporates the practices identified by the drinking water program that are commonly understood to provide "conventional" treatment.

A definition for "water effect ratio" will be added to Chapter 93 using language from § 16.31(e) (relating to application) that currently describes a WER.

Section 93.3. Protected water uses.

The Board proposes to clarify the definition of "migratory fishes" in Table 1. The proposed definition will explain that the fishes move to and from flowing waters to complete their life cycle in other waters.

The Board will also clarify that the definition of "irrigation" also includes golf courses, athletic fields and other commercial horticultural activities.

Section 93.7. Specific water quality criteria. Table 3.

Changes to the use notation in the Critical Use column for the Ammonia-nitrogen (Am) criterion was inadvertently missed during the previous triennial review when the numerical system was replaced by the protected use symbols identified in § 93.3, Table 1. The proposed change replaces the "1" with the aquatic life use symbols that it had previously intended to represent (CWF, WWF, TSF, MF).

The Board proposes to change the footnote in § 93.7, Table 3, for "Critical Use" to clarify that other intervening uses may become the most sensitive use if it is determined that the specified Critical Use is not providing adequate protection for all Statewide and protected uses, identified in § 93.3 and § 93.4 (relating to Statewide water uses), in or on the waterbody. Additional language will be added to the footnote as follows: "Other intervening more sensitive uses may apply at a given location on the waterbody."

Section 93.8. Development of site-specific water quality criteria.

The Board proposes to relocate this section to a new § 93.8d (relating to special criteria for the Great Lakes Systems) following the proposed incorporation of sections and criteria tables from Chapter 16. The Board is also proposing to refine the procedure for informing the public of how site-specific water quality criteria will be incorporated into the WQS.

The Department has considered and approved NPDES permitted dischargers' requests for site-specific water quality criteria for facilities in this Commonwealth when it has been demonstrated that there exist site-specific biological or chemical conditions of the receiving waters, which differ from conditions upon which the water quality criteria were based. This was accomplished by performing site-specific chemical and toxicological studies through a WER study or through criteria recalculation methods following the EPA's "Guidance on the Determination and Use of Water—Effect Ratios for Metals" (EPA-823-B-94-001, February 1994). A WER is a factor that expresses the difference between the measures of the toxicity of a substance in laboratory water and the toxicity in site water. The WER provides a mechanism to account for that portion of a metal or other applicable chemical, which is toxic under certain physical, chemical or biological conditions. A criterion recalculation considers the appropriateness of the toxicity data used to develop the National or State-recommended criterion as compared to conditions at a specific site.

Section 93.8a. Toxic substances.

This section is being amended and the new title will read, "water quality criteria for toxic substances." The language in subsection (b) of the current section relating to Chapter 16 (relating to water quality toxics management strategy—statement of policy) and the toxics criteria will be replaced with references to Chapter 93. The new entry will read, "Water quality criteria for toxic substances shall be established as set forth in this Chapter. The analytical procedures will be listed in Chapter 16 (relating to water quality toxics management strategy—statement of policy)."

The Board proposes to delete, "At intervals not exceeding 1 year" in subsection (h) because the regulatory process will generally extend longer than 1 year, and this function will now become part of the triennial review process.

The Board proposes to clarify in subsection (j)(3) the location of the antidegradation requirements. The antidegradation requirements are now in Chapter 93 and Chapter 96 (relating to water quality standards implementation). The current reference to Chapter 95 (relating to water quality standards; and wastewater treatment requirements) is obsolete and will be replaced with Chapter 96.

The Board proposes to create four new sections in Chapter 93 to accommodate sections and tables being moved from Chapter 16. These new sections are §§ 93.8b—93.8e.

The water quality criteria for toxic substances that are National recommended water quality criteria currently contained in Chapter 16, Appendix A, Table 1 will be moved into § 93.8c, Table 5. New site-specific water quality criteria that are developed or approved by the Department will be placed and remain in Chapter 16 Appendix A Table 1, until they can be moved into Chapter 93 during a triennial review or other review of WQS.

New § 93.8c. Human health and aquatic life criteria for toxic substances.

Many of the human health criteria in the "EPA National Recommended Water Quality Criteria: 2002 (EPA-822-R-02-047, November 2002)" compilation have been revised based on the EPA's new methodology for deriving human health criteria (*Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000), EPA-822-B-00-004, October 2000*) or based on new scientific data not previously available for calculating water quality criteria.

The National recommended water quality criteria revisions include a compilation of: previously published criteria that are unchanged, criteria that have been recalculated from earlier criteria and newly calculated criteria based on peer-reviewed assessments and data.

A summary of the Boards proposed toxics criteria revisions is listed as follows:

The following revised human health criteria incorporate the EPA's new human health criteria methodology from October 2000. A new National default fish consumption rate of 17.5 grams/day replaces the previous 6.5 grams/day fish consumption rate, to adequately protect the general population of fish consumers. In addition, the cancer potency factor for PCBs has been updated according to the best available toxics data located in the Integrated Risk Information System (IRIS) database, which is the National preferred information source. Following are the present and proposed criteria changes to the human health water quality criteria for toxic substances:

Chemical name	*Present Criteria µg/L*	*Proposed Criteria µg/L*
2-CHLOROPHENOL	121	81
2,4-DICHLORO-PHENOL	93	77
2,4-DIMETHYL-PHENOL	540	380
4,6-DINITRO-o-CRESOL	13.4	13
2,4-DINITRO-PHENOL	70	69
PENTACHLORO-PHENOL	0.28	0.27
2,4,6-TRICHLORO-PHENOL	2.1	1.4
ACROLEIN	320	190
ACRYLONITRILE	.059	.051
CARBON TETRACHLORIDE	0.25	0.23
CHLORODIBROMO-METHANE	0.41	0.40
DICHLOROBROMO- METHANE	0.56	0.55
METHYL BROMIDE	48.0	47.0
METHYLENE CHLORIDE	4.7	4.6
TETRACHLORO ETHYLENE	0.8	0.69
TOLUENE	6,800	1,300
1,1,2-TRICHLOROETHANE	0.60	0.59
TRICHLOROETHYLENE	2.7	2.5
VINYL CHLORIDE	2.0	0.025
ACENAPHTHENE	1200	670
ANTHRACENE	9600	8300
BENZIDINE	.00012	.000086
BENZO(a)ANTHRACENE	.0044	.0038
BENZO(a)PYRENE	.0044	.0038
3,4-BENZOFLUORANTHENE	.0044	.0038
BENZO(k)FLUORANTHENE	.0044	.0038
BIS(2-CHLOROETHYL)ETHER	.031	.030
BIS(2-ETHYLHEXYL)PHTHALATE	1.8	1.2
2-CHLORONAPHTHALENE	1700	1000
CHRYSENE	.0044	.0038
DIBENZO(a,h)ANTHRACENE	.0044	.0038
3,3-DICHLOROBENZIDINE	.04	.021
DIETHYL PHTHALATE	23000	17000
DIMETHYL PHTHALATE	31300	27000
DI-N-BUTYL PHTHALATE	2700	2000
1,2-DIPHENYLHYDRAZINE	.04	.036
FLUORANTHENE	300	130
FLUORENE	1300	1100
HEXACHLOROBENZENE	.00075	.00028
HEXACHLOROETHANE	1.9	1.4
INDENO(1,2,3cd)PYRENE	.0044	.0038

Chemical name	*Present Criteria µg/L*	*Proposed Criteria µg/L*
ISOPHORONE	36	35
N-NITROSODI-N-PHENYLAMINE	5	3.3
PYRENE	960	830
1,2,4-TRICHLOROBENZENE	330	35
ALDRIN	.00013	.000049
alpha-BHC	.0039	.0026
beta-BHC	.014	.0091
CHLORDANE	0.0021	.00080
4,4-DDT	.00059	.00022
4,4-DDE	.00059	.00022
4,4-DDD	.00083	.00031
DIELDRIN	.00014	.000052
alpha-ENDOSULFAN	110	62
ENDRIN ALDEHYDE	0.76	0.29
HEPTACHLOR	.00021	.000079
HEPTACHLOREPOXIDE	.0001	.000039
PCBs	.000044	.000064
TOXAPHENE	.00073	.00028
2,3,7,8-TCDD	1.3 E-8	5.0 E-9

Similar to those listed previously, the toxics criteria listed as follows are also calculated using the EPA's 2000 methodology for deriving human health criteria, but because these toxics can also be found in other media (such as in food, air and the like), the Federally-recommended criterion contains a relative source contribution (RSC) to account for nonwater sources of exposure.

Chemical Name	*RSC*	*Present Criteria µg/L*	*Proposed Criteria µg/L*
ANTIMONY	.40	14	5.6
THALLIUM	.20	1.7	.24
CYANIDE, FREE	.20	700	140
CHLOROBENZENE	.20	680	130
ETHYLBENZENE	.20	3100	530
TOLUENE	.20	6800	1300
1,2-trans-DICHLOROETHYLENE	.20	700	140
1,2-DICHLOROBENZENE	.20	2700	420
HEXACHLOROCYCLOPENTADIENE	.20	240	40
ENDRIN	.20	0.76	.059

The criteria for the following toxics were developed based on the EPA's 2000 methodology for deriving human health criteria and other toxicity data as follows:

Chemical name	*RSC*	*Present Criteria µg/L*	*Proposed Criteria µg/L*
ARSENIC		50	10
1,1-DICHLOROETHYLENE	0.2	0.057	33
BUTYLBENZYL PHTHALATE		300	150
gamma-BHC (LINDANE)	0.2	.019	0.098

Arsenic. The EPA is in the process of an extensive evaluation of the ambient water criterion for arsenic. The Department's present criterion for arsenic is 50 µg/L, which was the maximum contaminate level (MCL) allowed in drinking water. On January 22, 2001, the EPA adopted the MCL for arsenic in drinking water at 10 µg/L, replacing the old MCL of 50 µg/L. The rule became effective on February 22, 2002. The date by which systems had to comply with the new 10 µg/L standard was January 23, 2006.

At this time the Board is proposing to adopt 10 µg/L for the arsenic ambient water quality criterion. Upon the EPA's completion of the arsenic evaluation, and in the event of incorporation of a new recommended ambient

water quality human health criterion, the Department will reevaluate the criterion for arsenic and make a recommendation to the Board on whether to incorporate it into the Commonwealth's WQS.

1,1-Dichloroethylene (1,1-DCE). The EPA has determined after comprehensive review that the toxicity data for 1,1-DCE exhibits suggestive evidence of carcinogenicity but not sufficient evidence to assess human carcinogenic potential. Therefore 1,1-DCE has been labeled a possible human carcinogen. The cancer potency factor has been removed from the IRIS database, which is the National preferred information source. The Board is proposing this recalculated human health criterion as a threshold level toxic, as recommended by the EPA. The criterion is calculated using a reference dose, which accounts for noncancer effects and a RSC that accounts for nonwater sources of exposure. In addition, because this toxic substance exhibits suggestive evidence of carcinogenicity the criterion was developed using an addition margin of safety (divided by a factor of 10) to protect human health from carcinogenic effects. The guidelines for development of human-based criteria with threshold level toxic effects are presently found in Chapter 16.

Butylbenzyl Phthalate. This compound is also calculated as a human health threshold level toxic substance. The proposed criterion retains an additional margin of safety (divided by a factor of 10) to account for it being a possible human carcinogen, according to established protocols presently found in Chapter 16.

Gamma-BHC (Lindane). The cancer potency factor for lindane has been removed from IRIS. The Board is proposing the calculated human health criterion as a threshold level toxic as recommended by the EPA. The criterion was calculated using a reference dose, which accounts for noncancer effects and a RSC that accounts for nonwater sources of exposure. In addition, because this toxic substance exhibits suggestive evidence of carcinogenicity the criterion includes a margin of safety (divided by a factor of 10) to protect human health from carcinogenic effects.

New criteria being added to Table 5.

New criteria that have been developed or approved by the Department are being proposed for adoption by the Board and added to Table 5. The Board is proposing to add ambient water quality human health criteria for molybdenum (210 µg/L) and metolachlor (69 µg/L) to the water quality standards since these compounds are expected to be present in discharges.

The Board proposes to adopt the freshwater aquatic life criterion that was recently developed by the EPA for diazinon where both the criteria continuous concentration and criteria maximum concentration are not to exceed 0.17 µg/L (EPA-822-R-05-006, Dec. 2005). This criterion replaces a similar guidance value that was previously developed by the Department based on limited available toxicological data. Formally adopting this new diazinon criterion is needed to support TMDLs and for use in other NPDES permits when needed.

New § 93.8d. Development of site-specific water quality criteria.

This new § 93.8d is proposed to contain the provisions for developing site-specific water quality criteria, which were previously contained in § 93.8 prior to merging the criteria tables from Chapter 16.

New § 93.8e. Special criteria for the Great Lakes System.

The Board is proposing to incorporate portions of the Special Provisions for the Great Lakes System from Chapter 16 into a new § 93.8e, including the Great Lakes Aquatic Life and Human Health Criteria Table (as a new Table 6) and the Great Lakes Wildlife Criteria Table (as a new Table 7) from § 16.61 (relating to special provisions for the Great Lakes System).

Section 93.9. Designated water uses and water quality criteria.

Clarification is being added to describe that the county being referenced in the stream drainage lists in §§ 93.9a—93.9z is the county in which the mouth "or the downstream limit of the zone being described for that entry" is located. It currently only refers to it being the location of the mouth of the waterbody. In addition, an amendment to § 93.9(b) clarifies that the most stringent WQS applies between the Department's standards and interstate or international agencies' standards under an interstate compact or international agreement.

Corrections to Drainage Lists

Sections 93.9a—93.9o and 93.9z. Add MF to Drainage Lists A—O and Z.

The three major eastern drainage basins within this Commonwealth, the Delaware, Susquehanna and Potomac River basins, which make up the Commonwealth's contribution to the greater Mid-Atlantic slope, have historically supported the passage, maintenance and propagation of migratory fish. Migratory fish are characterized as anadromous and catadromous fishes and other fishes, which travel to or from flowing waters to complete their life cycle. Anadromous fishes spend most of their lives in saltwater, but migrate to flowing freshwaters to spawn, while catadromous fishes spend most of their lives in freshwater, and spawn in saltwater. The construction of large hydroelectric dams, smaller milldams, other lowhead dams or obstructions, and overfishing, which started in the 1800s, has led to the decline of this Commonwealth's migratory fish populations. Since that time, restoration efforts have been and continue to be successfully implemented in an effort to restore migratory fish populations into their historical ranges. The presence or potential for passage, maintenance and propagation of native migratory fish can be substantiated through fish passage restoration projects that currently facilitate the recovery of species to a significant portion of their historical range and proposed projects with the potential to restore populations to the entire historical range. This proposal would apply a migratory fish designation to the Mid-Atlantic slope drainages, and has taken into consideration the presence or potential for passage, maintenance and propagation of American eel, American shad, hickory shad, blueback herring, alewife, Atlantic striped bass, shortnose sturgeon, Atlantic sturgeon and other fish species that migrate locally within the watershed to complete their life cycles. Therefore, a basin-wide migratory fish designation is proposed for drainage lists A—O and Z, unless there are specific exceptions noted for certain waterbodies or stream segments within one of these drainage lists. Drainage lists A—G are located within the Delaware River Basin. Drainage lists H—O are located within the Susquehanna River Basin. Drainage list Z is located within the Potomac River Basin. It should be noted, however, that this particular revision that accompanies this rulemaking, but will be incorporated into the regulations at final-form rulemaking.

The following additional changes to the drainage lists are proposed by the Board to clarify stream names and segment boundaries and designations. These corrections do not change the current stream use designations, and only serve as clarifications:

Section 93.9d. Drainage List D.

The zone description for the headwaters of the Black Creek basin is currently written in § 93.9d as 'Basin, Source to Beaver Creek.' This zone description, however, actually defines the Hazle Creek basin since the confluence of Hazle Creek and Beaver Creek form Black Creek. Hazle Creek is currently missing from this drainage list. To correct this, an entry for Hazle Creek basin will be inserted before the Beaver Creek entry. The 'Main Stem' entry for Black Creek will be corrected to reference the confluence of Hazle Creek and Beaver Creek, which forms Black Creek. The unnamed tributaries (UNT) entry for Beaver Creek to the Mouth will also be corrected to reference the confluence of Hazle Creek and Beaver Creek. This action will not affect the current stream use designations for these waters.

Additionally, Koons Creek and Brushy Hollow Run are listed as tributaries to Black Creek in the Department's stream directory. To clarify their proper location within Drainage List D, the Board proposes to add Koons Creek before the Quakake Creek entries and add Brushy Hollow Run after Quakake since these two streams are named tributaries within this section. This action will not affect the current stream use designations.

Section 93.9f. Drainage List F.

The Board proposes to correct an error that was made during the most recent Triennial Review of Water Quality Standards (TR04) concerning Drainage List F. Before TR04, which was published as a proposal at 33 Pa.B. 5192 (October 18, 2003) and final-form rulemaking at 35 Pa.B 1197 (February 12, 2005), there were two entries for the UNTs to the Schuylkill River from the Berks-Chester-Montgomery County border to Valley Creek. One entry designated all of the UNTs to the Schuylkill River on the Chester County shore as HQ-TSF (except those in Spring City and Phoenixville). The other entry designated all of the UNTs to the Schuylkill River on the Montgomery County shore as Warm Water Fishes (WWF). The UNTs to the Schuylkill River in Spring City and Phoenixville were not listed in Chapter 93. The result of the last triennial review was to incorrectly list all of the UNTs to the Schuylkill River (on both the Chester and Montgomery County shores) from the Berks-Chester-Montgomery County border to Valley Creek (except those in Spring City and Phoenixville) as HQ-TSF in § 93.9f. The UNTs to the Schuylkill River in Spring City and Phoenixville were designated WWF. Further corrective action is necessary because all of the UNTs to the Schuylkill River on the Montgomery County shore should not be HQ-TSF, but rather should be WWF. Also, the entry for reference to UNTs from 'Valley Creek to Tide' should be changed so that it reads from 'Valley Creek to Head of Tide.' The county listed for this entry should not be Chester-Montgomery since the 'Head of Tide' for the Schuylkill River is actually located in Philadelphia County (Fairmont Dam).

It was brought to the Department's attention that Mellshamic Creek is listed in the Department's stream directory as a UNT to the Schuylkill River. After extensive review, the Department has determined that Mellshamic Creek is a local name given to one of two UNTs in this reach of the Schuylkill River. To clarify this, the Board proposes to remove the stream entry containing the local name Mellshamic Creek from this drainage list. This action will not affect the current stream use designations since this stream will be covered by the UNTs entry.

Additionally, the Department recently received information that suggests Trout Creek and Monocacy Creek may be improperly designated in § 93.9f. Both streams are currently designated WWF and they will both undergo separate reviews for redesignation to CWF. The Department will conduct its review of available information pertaining to these two streams during the proposed phase of this rulemaking. The public is encouraged to make available to the Department any technical data concerning the water quality, instream habitat or biological condition of either of these two streams. After the Department's review has been completed, the appropriate designated use for Monocacy Creek and Trout Creek will be included in the final-form rulemaking. The Department will protect any more stringent existing use, as indicated on the Department's Existing Use List which is posted on the Department's website and maintained by the Bureau of Water Standards and Facility Regulation.

Section 93.9i. Drainage List I.

It was determined that the name of North Fork Mehoopany Creek is incorrect in the drainage list. After thorough review of the PA Gazetteer of Streams and the PA Stream Directory it was determined that North Branch Mehoopany Creek is the correct name. The Board proposes to correct the name of North Fork Mehoopany Creek, to North Branch Mehoopany Creek.

Nine Partners Creek is a tributary to the Tunkhannock Creek. Nine Partners Creek was historically known as Leslie Creek and was referenced in the *Water Resources Bulletin*, Gazetteer of Streams (June 1984) as being the same stream as Leslie Creek. To clarify the stream name, the Board proposes to change the name of Leslie Creek to Nine Partners Creek.

These actions will not affect the current stream use designations for these waters.

Section 93.9l. Drainage List L.

The Board proposes to clarify that the origin of Rauchtown Creek is the confluence of Rockey Run and Gottshall Run. This action will not affect the current stream use designations.

Section 93.9m. Drainage List M.

Currently, Buddys Run is an incorrect name for a tributary to Shamokin Creek. This stream name should be Bennys Run. This action will not affect the current stream use designation for this tributary.

Section 93.9q. Drainage List Q.

Shirley Run is a tributary to Thompson Creek in the Ohio River basin (Drainage List Q). The entry, which designates Shirley Run basin as HQ-CWF, is missing from § 93.8. Shirley Run basin was redesignated from CWF to HQ-CWF in the Tinicum Creek et. al, final-form rulemaking published at 17 Pa.B. 5247 (October 11, 1997). As a result of the RBI (Regulatory Basics Initiative) Triennial Review final rulemaking, which was published at 30 Pa.B. 6111 (November 18, 2000), the designation for Shirley Run was inadvertently and erroneously reverted back to CWF as it was prior to the Tinicum Creek, et al rulemaking. This proposed amendment to Chapter 93 is intended to restore the HQ-CWF designation for Shirley Run, which was originally established by the Tinicum Creek, et. al., rulemaking package of 1997.

To clarify that the mouth of West Branch Caldwell Creek lies in Warren County, the Board will change the county entry in § 93.9q from Crawford County to Warren County. This action will not affect the current stream use designations.

Section 93.9v. Drainage List V.

The Board proposes to clarify the county listings for two of the entries that comprise the Tenmile Creek basin. The downstream boundary for the zone that describes the headwaters of Tenmile Creek (Basin, Source to South Fork Tenmile Creek) lies along the boundary between Greene and Washington Counties and therefore both Greene and Washington Counties should be listed with this entry in § 93.9v. Similarly, Greene, Washington and Fayette Counties should be listed with the entry for the downstream portion of Tenmile Creek (Basin, South Fork Tenmile Creek to Mouth) since the mouth of Tenmile Creek lies at the border of these three counties. These corrections will not affect the current stream use designations.

Section 93.9x. Drainage List X.

The Board proposes to add a reference to both the Department of Health's regulations and the Federal regulation in 40 CFR 131.41, which sets forth new bacteria criteria within this Commonwealth for coastal recreation waters on Lake Erie.

Exceptions for Fishable/Swimmable Waters

Part of the triennial review requires that states reexamine water body segments that do not meet the fishable or swimmable uses specified in section 101(a)(2) of the Federal Clean Water Act. The Department evaluated the two Commonwealth water bodies where the uses are not currently met: (1) the Harbor Basin and entrance channel to Outer Erie Harbor/Presque Isle Bay (Drainage List X, § 93.9x); and (2) several zones in the Delaware Estuary (Drainage Lists E and G, §§ 93.9e and 93.9g).

The swimmable use designation was deleted from the Harbor Basin and entrance channel demarcated by United States Coast Guard buoys and channel markers on Outer Erie Harbor/Presque Isle Bay because pleasure boating and commercial shipping traffic pose a serious safety hazard in this area. This decision was further supported by a Use Attainability (UAA) study conducted by the Department in 1985. Because the same conditions and hazards exist today, no change to the designated use for Outer Erie Harbor/Presque Isle Bay is proposed.

In April 1989, the Department cooperated with the Delaware River Basin Commission (DRBC), the EPA and other DRBC signatory states on a comprehensive UAA study in the lower Delaware River and Delaware Estuary. This study resulted in appropriate recommendations relating to the swimmable use, which DRBC included in water use classifications and water quality criteria for portions of the tidal Delaware River in May 1991. The appropriate DRBC standards were referenced in §§ 93.9e and 93.9g (relating to Drainage List E; and Drainage List G) in 1994. The primary water contact use remains excluded from the designated uses for river miles 108.4 to 81.8 because of continuing significant impacts from combined sewer overflows, and hazards associated with commercial shipping and navigation.

F. *Benefits, Costs and Compliance*

1. *Benefits*. Overall, the Commonwealth, its citizens and natural resources will benefit from these recommended changes because they provide the appropriate level of protection to preserve the integrity of existing and designated uses of surface waters in this Commonwealth. Protecting water quality has economic values provided to present and future generations in the form of clean water, recreational opportunities and aquatic life protection. It is important to realize all benefits and to ensure that activities that depend on surface water or that may affect its chemical, biological and physical integrity may continue in a manner that is environmentally, socially and economically sound. Maintenance of water quality ensures its future availability for all uses.

2. *Compliance Costs*. The proposed amendments to Chapter 93 may impose additional compliance costs on the regulated community. These regulatory changes are necessary to improve total pollution control. The expenditures necessary to meet new compliance requirements may exceed that which is required under existing regulations.

Persons conducting or proposing activities or projects shall comply with the regulatory requirements relating to designated and existing uses. Persons expanding a discharge or adding a new discharge point to a stream could be adversely affected if they need to provide a higher level of treatment to meet the more stringent criteria for selected parameters or there are changes in designated and existing uses of the stream. These increased costs may take the form of higher engineering, construction or operating cost for wastewater treatment facilities. Treatment costs are site-specific and depend upon the size of the discharge in relation to the size of the stream and many other factors. Therefore, it is not possible to precisely predict the actual change in costs. Economic impacts would primarily involve the potential for higher treatment costs for new or expanded discharges to streams that are redesignated. The initial costs from technologically improved treatments may be offset over time by potential savings from and increased value of improved water quality through these improved and possibly more effective or efficient treatments.

3. *Compliance Assistance Plan*. The proposed revisions have been developed as part of an established program that has been implemented by the Department since the early 1980s. The revisions are consistent with and based on existing Department regulations.

The proposed amendments will be implemented, in part, through the National Pollutant Discharge Elimination System (NPDES) permitting program. No additional compliance actions are anticipated. Staff is available to assist regulated entities in complying with the regulatory requirements if questions arise.

4. *Paperwork Requirements*. The proposed revisions should have no significant paperwork impact on the Commonwealth, its political subdivisions or the private sector.

G. *Pollution Prevention*

WQS are a major pollution prevention tool because they protect water quality and designated and existing uses. The proposed amendments will be implemented through the Department's permit and approval actions. For example, the NPDES bases effluent limitations on the designated use of the stream and the water quality criteria necessary to achieve designated and existing uses.

H. *Sunset Review*

The regulations will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulations effectively fulfill the goals for which they were intended.

I. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (act) (71 P. S. § 745.5(a)), on December 21, 2007, the Depart-

ment submitted a copy of the proposed rulemaking and a copy of a Regulatory Analysis Form to the Independent Regulatory Review Commission (IRRC) and to the Chairpersons of the Senate and House Environmental Resources and Energy Committees. A copy of this material is available to the public upon request.

Under section 5(g) of the act, IRRC may convey any comments, recommendations or objections to the proposed rulemaking within 30 days of the close of the public comment period. The comments, recommendations or objections shall specify the regulatory review criteria that have not been met. The act specifies detailed procedures for review, prior to final publication of the rulemaking, by the Department, the General Assembly and the Governor of comments, recommendations or objections raised.

J. *Public Comments*

Written Comments. Interested persons are invited to submit comments, suggestions or objections regarding the proposed rulemaking to the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477 (express mail: Rachel Carson State Office Building, 16th Floor, 400 Market Street, Harrisburg, PA 17105-8477). Comments submitted by facsimile will not be accepted. The Board must receive comments by February 26, 2008. Interested persons may also submit a summary of their comments to the Board. The summary may not exceed one page in length and must also be received by the Board by February 26, 2008. The one page summary will be provided to each member of the Board in the agenda packet distributed prior to the meeting at which the proposed amendments will be considered.

Electronic Comments. Comments may be submitted electronically to the Board at RegComments@state.pa.us and must be received by the Board by February 26, 2008. A subject heading of the proposal and a return name and address must be included in each transmission. If an acknowledgement of electronic comments is not received by the sender within 2 working days, the comments should be retransmitted to the e-mail address provided above to ensure receipt.

K. *Public Meeting and Public Hearing*

The Department will hold two public meetings to explain the proposed rulemaking and to respond to questions from meeting participants. The meetings will be held at 2 p.m. and at 6 p.m. as follows:

February 14, 2008 — Department of Environmental Protection
Southcentral Regional Office
Susquehanna Room A
909 Elmerton Avenue
Harrisburg, PA 17110

The Board will hold two public hearings for the purpose of accepting comments on this proposed rulemaking. The hearings will be held at 4 p.m. and at 8 p.m. as follows:

February 14, 2008 — Department of Environmental Protection
Southcentral Regional Office
Susquehanna Room A
909 Elmerton Avenue
Harrisburg, PA 17110

Persons wishing to present testimony at the hearing are requested to contact the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477, (717) 787-4526, at least 1 week in advance of the hearing to reserve a time to present testimony. Oral testimony is limited to 10 minutes for each witness. Witnesses are requested to submit three written copies of oral testimony to the testimony on their behalf at each hearing. Organizations are limited to designating one witness to present testimony on their behalf at the hearing.

Persons in need of accommodations as provided for in the Americans With Disabilities Act of 1990 should contact the Board at (717) 787-4526 or through the Pennsylvania AT&T Relay Services at (800) 654-5984 (TDD) to discuss how the Department may accommodate their needs.

KATHLEEN A. MCGINTY,
Chairperson

(*Editor's Note:* For a document relating to this document see 38 Pa.B. 258 (January 12, 2008).)

Fiscal Note: 7-421. No fiscal impact; (8) recommends adoption.

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

Subpart C. PROTECTION OF NATURAL RESOURCES

ARTICLE II. WATER RESOURCES

CHAPTER 93. WATER QUALITY STANDARDS

§ 93.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

***Conventional treatment*—Conventional filtration in a treatment process that uses separate, sequential units for coagulation/flocculation, clarification and granular media filtration to produce finished water for drinking.**

* * * * *

Toxic substance—A chemical or compound in sufficient quantity or concentration which is, or may become, harmful to human, animal or plant life. The term includes, but is not limited to, priority pollutants and those substances which are identified in **Tables 5 and 6 of this chapter. Additional toxic substances are also described in** Chapter 16 **Appendix A, Table 1** (relating to **site-specific** water quality **criteria for** toxic **[management] substances [strategy—statement of policy]**).

***WER—Water Effect Ratio*—A factor that expresses the difference between the measures of the toxicity of a substance in laboratory water and the toxicity in site water. The WER provides a mechanism to account for that portion of a metal that is toxic under certain physical, chemical or biological conditions.**

* * * * *

§ 93.3. Protected water uses.

Water uses which shall be protected, and upon which the development of water quality criteria shall be based, are set forth, accompanied by their identifying symbols, in Table 1:

TABLE 1

Symbol	*Protected Use*
Aquatic Life	

Symbol	*Protected Use*
	* * * * *
MF	*Migratory Fishes*—Passage, maintenance and propagation of anadromous and catadromous fishes and other fishes which **[ascend] move** to **or from** flowing waters to complete their life cycle **in other waters**.
	* * * * *
Water Supply	
	* * * * *
IRS	*Irrigation*—Used to supplement precipitation for **[growing crops] crop production, maintenance of golf courses and athletic fields, and other commercial horticultural activities**.
	* * * * *

§ 93.7. Specific water quality criteria.

(a) Table 3 displays specific water quality criteria and associated critical uses. The criteria associated with the Statewide water uses listed in § 93.4, Table 2 apply to all surface waters, unless a specific exception is indicated in §§ 93.9a—93.9z. Other specific water quality criteria apply to surface waters as specified in §§ 93.9a—93.9z. All applicable criteria shall be applied in accordance with this chapter, Chapter 96 (relating to water quality standards implementation) and other applicable State and Federal laws and regulations.

TABLE 3

Parameter	*Symbol*	*Criteria*	*Critical Use**
		* * * * *	
Ammonia Nitrogen	Am	The maximum total ammonia nitrogen concentration **(in mg/L)** at all times shall be the numerical value given by: un-ionized ammonia nitrogen (NH_3-N) × ($\log^{-1}$[pK_T-pH] + 1), where:	**[1] CWF, WWF, TSF, MF**
		* * * * *	

* Critical **[use] Use:** The most sensitive designated or existing use the criteria are designed to protect. **Other intervening, more sensitive uses may apply at a given location on the waterbody.**

(b) Table 4 contains specific water quality criteria that apply to the water uses to be protected. When the symbols listed in Table 4 appear in the Water Uses Protected column in **[§ 93.9] §§ 93.9a—93.9z,** they have the meaning listed in the second column of Table 4. Exceptions to these standardized groupings will be indicated on a stream-by-stream or segment-by-segment basis by the words "Add" or "Delete" followed by the appropriate symbols described elsewhere in this chapter.

* * * * *

(d) If the Department determines that natural quality of a surface water segment is of lower quality than the applicable aquatic life criteria in Table 3, **5 or Chapter 16, Appendix A Table 1**, the natural quality shall constitute the aquatic life criteria for that segment. All draft natural quality determinations shall be published in the *Pennsylvania Bulletin* and be subject to a minimum 30-day comment period. The Department will maintain a publicly available list of surface waters and parameters where this subsection applies, and **[shall] will**, from time to time, submit appropriate amendments to §§ 93.9a—93.9z.

§ 93.8. **[Development of site-specific water quality criteria] (Reserved).**

[(a) The Department will consider a request for site-specific criteria for protection of aquatic life, human health or wildlife when a person demonstrates that there exist site-specific biological or chemical conditions of receiving waters which differ from conditions upon which the water quality criteria were based. Site-specific criteria may be developed for use only in place of current Statewide or regional (such as the Great Lakes systems) criteria. The request for site-specific criteria shall include the results of scientific studies for the purpose of:

(1) Defining the areal boundaries for application of the site-specific criteria which will include the potentially affected wastewater dischargers identified by the Department, through various means, including, but not limited to, the total maximum daily load (TMDL) process described in Chapter 96 (relating to water quality standards implementation) or biological assessments.

(2) Developing site-specific criteria which protect its existing use and designated use.

(b) Scientific studies shall be performed in accordance with the procedures and guidance in the Water Quality Standards Handbook (EPA 1994), as amended and updated, guidance provided by the Department or other scientifically defensible methodologies approved by the Department.

(c) Prior to conducting studies specified in subsections (a) and (b), a proposed plan of study shall be submitted to and approved by the Department.

(d) Signed copies of all reports including toxicity test data shall be submitted to the Department within 30 days of completion of the tests.

(e) If as a result of its review of the report submitted, the Department determines that a site-specific criterion is appropriate, the Department will, for site-specific changes to criteria in § 93.7 (relating to specific water quality criteria), prepare a recommendation to the EQB in the form of proposed rulemaking, incorporating that criterion for the water body segment. The site-specific changes to the criteria will become effective for the water body segment following adoption by the EQB as final rulemaking and publication in the *Pennsylvania Bulletin*.

(f) A person challenging a Department action under this section shall have the burden of proof to demonstrate that the Department's action does not meet the requirements of this section.]

§ 93.8a. **[Toxic] Water quality criteria for toxic** substances.

* * * * *

(b) Water quality criteria for toxic **[management]** substances shall be established **as described** under Chapter 16 (relating to water quality toxics management strategy—statement of policy) **[wherein the criteria and]. The Department will develop water quality criteria for toxics not listed in Chapter 93, Table 5 in accordance with § 93.8d (relating to development of site-specific water quality criteria) and Chapter 16. Appendix A, Table 1 in Chapter 16 lists site-specific human health and aquatic life criteria that have been recently developed or adopted by the Department based on approved methodologies and the best scientific information currently available. The approved EPA** analytical procedures **and detection limits for these substances** will also be listed **in Chapter 16**. Chapter 16**,** along with changes made to it**,** is hereby specifically incorporated by reference.

* * * * *

(h) **[At intervals not exceeding 1 year, the]** The Department will **periodically, but at least once every 3 years, review, revise as necessary, and** publish **[a]** new or revised water quality criteria for toxic substances, and revised procedures for criteria development in the *Pennsylvania Bulletin*.

* * * * *

(j) The requirements for discharges to and antidegradation requirements for the Great Lakes System are as follows:

* * * * *

(3) Statewide antidegradation requirements in this chapter and Chapter **[95 (relating to water quality standards; and wastewater treatment requirements)] 96 (relating to water quality standards implementation)** and in the Federal regulation in 40 CFR 131.32(a) (relating to Pennsylvania) as applicable, apply to all surface waters of the Great Lakes System.

* * * * *

§ 93.8b. Metals criteria.

Dissolved criteria are footnoted in Table 5, and have been developed by applying the most current EPA conversion factors to the total recoverable criteria. The EPA factors are listed in the following Conversion Factors Table:

Conversion Factors Table

	Chronic	*Acute*	*Source*
Arsenic	**1.000 (As3+)**	**1.000 (As3+)**	**1,2**
Cadmium	**1.101672-(ln[H] × 0.041838)**	**1.136672-(ln[H] × 0.041838)**	**2**
Chromium VI	**0.962**	**0.982**	**1,2**
Copper	**0.960**	**0.960**	**1,2**
Lead*		**1.46203-(ln[H] × 0.145712**	
Mercury	**0.85**	**0.85**	**1,2**
Nickel	**0.997**	**0.998**	**1,2**
Selenium	**0.922**	**0.922**	**1**
Silver	**NA**	**0.85**	**2**
Zinc	**0.986**	**0.978**	**1,2**

*** Conversion factor applies to both acute and chronic criteria.**

Source 1—Final Water Quality Guidance for the Great Lakes System (60 FR 15366, March 23, 1995)

Source 2—Establishment of Numeric Criteria for Priority Pollutants; Revision of Metals Criteria-Interim Final Rule (60 FR 22229, May 4, 1995)

§ 93.8c. Human health and aquatic life criteria for toxic substances.

(a) Table 5 and Chapter 16, Appendix A, Table 1 (relating to site-specific water quality criteria for toxic substances) list the aquatic life and human health criteria for toxic substances which the Department uses in development of effluent limitations in NPDES Permits and for other purposes. The human health criteria, which include probable modes of exposure (such as, but not limited to, ingestion from drinking water and fish consumption, inhalation and dermal absorption), are further defined as to the specific effect (that is, cancer or threshold health effects). For those aquatic life criteria which are hardness related and specified as a formula, such as several of the heavy metals, the Department will use the specific hardness of the receiving stream after mixing with the waste discharge in calculating criteria on a case-by-case basis. The priority pollutant numbers (PP NO) used by the EPA to identify priority pollutants are included in Table 5 for reference purposes. The toxics without a PP NO are nonpriority pollutants and State-derived criteria.

(b) Some of these criteria may be superseded for the Delaware Estuary, Ohio River Basin, Lake Erie Basin and Genesee River Basin under interstate and international compact agreements with the Delaware River Basin Commission, Ohio River Valley Sanitation Commission and International Joint Commission, respectively. The criteria in Table 5 do not apply to the Great Lakes System. Water quality criteria for the Great Lakes System are contained in § 93.8e (relating to special criteria for the Great Lakes System) and Table 6 (relating to Great Lakes Aquatic Life and Human Health Criteria). Criteria may be developed for the Great Lakes System for substances other than those listed in § 93.8e under the methodologies in § 16.61 (relating to special provisions for the Great Lakes system).

TABLE 5
WATER QUALITY CRITERIA FOR TOXIC SUBSTANCES
Fish and Aquatic Life Criteria

PP NO	*Chemical Name*	*CAS Number*	*Criteria Continuous Concentrations (µg/L)*	*Criteria Maximum Concentration (µg/L)*	*Human Health Criteria (µg/L)*	
1M	ANTIMONY	07440360	220	1100	5.6	H
2M	ARSENIC	07440382	150 (As3+)	340 (As3+)	10	H
3M	BERYLLIUM	07440417	N/A	N/A	N/A	—
4M	CADMIUM	07440439	*{1.101672-(ln[H] ×0.041838)} ×Exp(0.7409×ln[H] -4.719) (ex: @H=100, CCC=0.25)	*{1.136672-(ln[H] ×0.041838)} ×Exp(1.0166×ln[H] -3.924) (ex: @H=100, CMC=2.0)	N/A	—
5M	CHROMIUM III	16065831)	*0.860×Exp(0.819×ln [H]+0.6848) (ex: @H=100, CCC=74)	*0.316Exp(0.819×ln [H]+3.7256) (ex: @H=100, CMC=570)	N/A	—
5M	CHROMIUM VI	18540299	*10	*16	N/A	—
6M	COPPER	07440508	*0.960×Exp(0.8545×ln [H]-1.702) (ex: @H=100, CCC=9.0)	*0.960×Exp(0.9422×ln [H]-1.700) (ex: @H=100, CMC=13)	N/A	—
7M	LEAD	07439921	*{1.46203-(ln[H] ×0.145712)} ×Exp(1.273×ln[H] -4.705) (ex: @H=100, CCC=2.5)	*{1.46203-(ln[H] x0.145712)} ×Exp(1.273×ln[H] -1.460) (ex: @H=100, CMC=65)	N/A	—
8M	MERCURY	07439976	*0.77 (Hg2+)	*1.4 (Hg2+)	0.05	H
9M	NICKEL	07440020	*0.997×Exp(0.846×ln [H]+0.0584) (ex: @H=100, CCC=52)	*0.998×Exp(0.846×ln [H]+2.255) (ex: @H=100, CMC=470)	610	H
10M	SELENIUM	07782492	*4.6	N/A	N/A	—
11M	SILVER	07440224	N/A	*0.850×Exp(1.72×ln [H]-6.590) (ex: @H=100, CMC=3.2)	N/A	—
12M	THALLIUM	07440280	13	65	.24	H
13M	ZINC	07440666	*0.986×Exp(0.8473×ln [H]+0.884) (ex: @H=100, CCC=120)	*0.978×Exp(0.8473×ln [H]+0.884) (ex: @H=100, CMC=120)	N/A	
14M	CYANIDE, FREE	00057125	5.2	22	140	H
1A	2-CHLORO-PHENOL	00095578	110	560	81	H
2A	2,4-DICHLORO-PHENOL	00120832	340	1700	77	H
3A	2,4-DIMETHYL-PHENOL	00105679	130	660	380	H
4A	4,6-DINITRO-o-CRESOL	00534521	16	80	13	H
5A	2,4-DINITRO-PHENOL	00051285	130	660	69	H
6A	2-NITRO-PHENOL	00088755	1600	8000	N/A	—
7A	4-NITRO-PHENOL	00100027	470	2300	N/A	—
8A	P-CHLORO-m-CRESOL	00059507	30	160	N/A	—

			Fish and Aquatic Life Criteria			
PP NO	*Chemical Name*	*CAS Number*	*Criteria Continuous Concentrations (µg/L)*	*Criteria Maximum Concentration (µg/L)*	*Human Health Criteria (µg/L)*	
9A	PENTACHLORO-PHENOL	00087865	Exp(1.005 × [pH] -5.134) @pH=6.5 7.8 9.0 Crit=4.1 15 50	Exp(1.005 × [pH] -4.869) @pH=6.5 7.8 9.0 Crit=5.3 19 65	0.27	CRL
10A	PHENOL	00108952	N/A	N/A	21000	H
11A	2,4,6-TRICHLORO-PHENOL	00088062	91	460	1.4	CRL
1V	ACROLEIN	00107028	1	5	190	H
2V	ACRYLONITRILE	00107131	130	650	0.051	CRL
3V	BENZENE	00071432	130	640	1.2	CRL
5V	BROMOFORM	00075252	370	1800	4.3	CRL
6V	CARBON TETRACHLORIDE	00056235	560	2800	0.23	CRL
7V	CHLORO-BENZENE	00108907	240	1200	130	H
8V	CHLORODIBRO-MO-METHANE	00124481	N/A	N/A	0.40	CRL
9V	CHLOROETHANE	00075003	N/A	N/A	N/A	—
10V	2-CHLOROETHYL VINYL ETHER	00110758	3500	18000	N/A	—
11V	CHLOROFORM	00067663	390	1900	5.7	CRL
12V	DICHLOROBRO-MO- METHANE	00075274	N/A	N/A	0.55	CRL
14V	1,1-DICHLORO-ETHANE	00075343	N/A	N/A	N/A	—
15V	1,2-DICHLORO-ETHANE	00107062	3100	15000	0.38	CRL
16V	1,1-DICHLORO-ETHYLENE	00075354	1500	7500	33.0	H
17V	1,2-DICHLORO-PROPANE	00078875	2200	11000	N/A	—
18V	1,3-DICHLORO-PROPYLENE	00542756	61	310	34	CRL
19V	ETHYLBENZENE	00100414	580	2900	530	H
20V	METHYL BROMIDE	00074839	110	550	47	H
21V	METHYL CHLORIDE	0074873	5500	28000	N/A	—
22V	METHYLENE CHLORIDE	00075092	200	12000	4.6	CRL
23V	1,1,2,2-TETRA-CHLOROETHANE	00079345	210	1000	0.17	CRL
24V	TETRACHLORO-ETHYLENE	00127184	140	700	0.69	CRL
25V	TOLUENE	00108883	330	1700	1300	H
26V	1,2-trans-DICHLORO-ETHYLENE	00156605	1400	6800	140	H
27V	1,1,1-TRICHLORO-ETHANE	00071556	610	3000	N/A	
28V	1,1,2-TRICHLORO-ETHANE	00079005	680	3400	0.59	CRL
29V	TRICHLORO-ETHYLENE	00079016	450	2300	2.5	CRL

			Fish and Aquatic Life Criteria			
PP NO	*Chemical Name*	*CAS Number*	*Criteria Continuous Concentrations (µg/L)*	*Criteria Maximum Concentration (µg/L)*	*Human Health Criteria (µg/L)*	
31V	VINYL CHLORIDE	00075014	N/A	N/A	.025	CRL
1B	ACENAPHTHENE	00083329	17	83	670	H
2B	ACENAPHTHYLENE	00208968	N/A	N/A	N/A	—
3B	ANTHRACENE	00120127	N/A	N/A	8300	H
4B	BENZIDINE	00092875	59	300	0.000086	CRL
5B	BENZO(a)-ANTHRACENE	00056553	0.1	0.5	0.0038	CRL
6B	BENZO(a)PYRENE	00050328	N/A	N/A	0.0038	CRL
7B	3,4-BENZO-FLUORANTHENE	00205992	N/A	N/A	0.0038	CRL
8B	BENZO(ghi)-PERYLENE	00191242	N/A	N/A	N/A	—
9B	BENZO(k)-FLUORANTHENE	00207089	N/A	N/A	0.0038	CRL
10B	BIS(2-CHLORO-ETHOXY)METHANE	00111911	N/A	N/A	N/A	—
11B	BIS(2-CHLORO-ETHYL)ETHER	00111444	6000	30000	0.030	CRL
12B	BIS(2-CHLORO-ISOPROPYL)ETHER	00108601	N/A	N/A	1400	H
13B	BIS(2-ETHYL-HEXYL)PHTHALATE	00117817	910	4500	1.2	CRL
14B	4-BROMOPHENYL PHENYL ETHER	00101553	54	270	N/A	—
15B	BUTYLBENZYL PHTHALATE	00085687	35	140	150	H
16B	2-CHLORO-NAPHTHALENE	00091587	N/A	N/A	1000	H
17B	4-CHLORO- PHENYL PHENYL ETHER	07005723	N/A	N/A	N/A	—
18B	CHRYSENE	00218019	N/A	N/A	0.0038	CRL
19B	DIBENZO(a,h)-ANTHRACENE	00053703	N/A	N/A	0.0038	CRL
20B	1,2-DICHLORO-BENZENE	00095501	160	820	420 for dichloro-benzene	H
21B	1,3-DICHLORO-BENZENE	00541731	69	350	See 20B	H
22B	1,4-DICHLORO-BENZENE	00106467	150	730	See 20B	H
23B	3,3-DICHLORO-BENZIDINE	00091941	N/A	N/A	.021	CRL
24B	DIETHYL PHTHALATE	00084662	800	4000	17000	H
25B	DIMETHYL PHTHALATE	00131113	500	2500	270000	H
26B	DI-N-BUTYL PHTHALATE	00084742	21	110	2000	H
27B	2,4-DINITRO-TOLUENE	00121142	320	1600	0.05 for dinitro-toluene	CRL

			Fish and Aquatic Life Criteria			
PP NO	*Chemical Name*	*CAS Number*	*Criteria Continuous Concentrations (µg/L)*	*Criteria Maximum Concentration (µg/L)*	*Human Health Criteria (µg/L)*	
28B	2,6-DINITRO-TOLUENE	00606202	200	990	See 27B	CRL
29B	DI-N-OCTYL PHTHALATE	00117840	N/A	N/A	N/A	—
30B	1,2-DIPHENYL-HYDRAZINE	00122667	3	15	.036	CRL
31B	FLUORANTHENE	00206440	40	200	130	H
32B	FLUORENE	00086737	N/A	N/A	1100	H
33B	HEXACHLORO-BENZENE	00118741	N/A	N/A	0.00028	CRL
34B	HEXACHLORO-BUTADIENE	00087683	2	10	0.44	CRL
35B	HEXACHLORO-CYCLOPENTADIENE	00077474	1	5	40	H
36B	HEXACHLORO-ETHANE	00067721	12	60	1.4	CRL
37B	INDENO(1,2,3-cd)PYRENE	00193395	N/A	N/A	.0038	CRL
38B	ISOPHORONE	00078591	2100	10000	35	H
39B	NAPHTHALENE	00091203	43	140	N/A	—
40B	NITROBENZENE	00098953	810	4000	17	H
41B	N-NITROSO-DIMETHYLAMINE	00062759	3400	17000	0.00069	CRL
42B	N-NITROSODI-N-PROPYLAMINE	00621647	N/A	N/A	0.005	CRL
43B	N-NITROSO-DIPHENYLAMINE	00086306	59	300	3.3	CRL
44B	PHENANTHRENE	00085018	1	5	N/A	—
45B	PYRENE	00129000	N/A	N/A	830	H
46B	1,2,4-TRICHLORO-BENZENE	00120821	26	130	35	H
1P	ALDRIN	00309002	0.1	3	0.000049	CRL
2P	alpha-BHC	00319846	N/A	N/A	0.0026	CRL
3P	beta-BHC	00319857	N/A	N/A	.0091	CRL
4P	gamma-BHC (LINDANE)	00058899	N/A	0.95	0.098	H
5P	delta-BHC	00319868	N/A	N/A	N/A	—
6P	CHLORDANE	00057749	0.0043	2.4	0.00080	CRL
7P	4,4-DDT	00050293	0.001	1.1	.00022	CRL
8P	4,4-DDE	00072559	0.001	1.1	.00022	CRL
9P	4,4-DDD	00072548	0.001	1.1	.00031	CRL
10P	DIELDRIN	00060571	0.056	0.24	.000052	CRL
11P	alpha-ENDOSUL-FAN	00959988	0.056	0.22	62 for endosulfan	H
12P	beta-ENDOSUL-FAN	33213659	0.056	0.22	See 11P	H
13P	ENDOSULFAN SULFATE	01031078	N/A	N/A	N/A	—
14P	ENDRIN	00072208	0.036	0.086	.059	H

Fish and Aquatic Life Criteria

PP NO	*Chemical Name*	*CAS Number*	*Criteria Continuous Concentrations (µg/L)*	*Criteria Maximum Concentration (µg/L)*	*Human Health Criteria (µg/L)*	
15P	ENDRIN ALDEHYDE	07421934	N/A	N/A	0.29	—
16P	HEPTACHLOR	00076448	0.0038	0.52	.000079	CRL
17P	HEPTACHLOR EPOXIDE	01024573	0.0038	0.5	.000039	CRL
18P	PCB		0.014	N/A	0.000064 for PCBs	CRL
25P	TOXAPHENE	08001352	0.0002	0.73	0.00028	CRL
PP	2,3,7,8-TCDD	01746016	N/A	N/A	5.0 E-9	CRL
—	ACETONE	00067641	86000	450000	3500	H
—	ALUMINUM	07429905	N/A	750	N/A	—
—	BARIUM	07440393	4100	21000	2400	H
—	BORON	07440428	1600	8100	3100	H
—	COBALT	07440484	19	95	N/A	—
—	p-CRESOL	00106445	160	800	N/A	—
—	DIAZINON	333415	0.17	0.17	N/A	—
—	FORMALDEHYDE	00050000	440	2200	700	H
—	2-HEXANONE	00591786	4300	21000	N/A	—
—	LITHIUM	07439932	N/A	N/A	N/A	—
—	METHYLETHYL KETONE	00078933	32000	230000	21000	H
—	METHYLISO-BUTYL KETONE	00108101	5000	26000	N/A	—
—	METOLACHLOR	51218452	NA	NA	69	H
—	MOLYBDENUM	07439987	NA	NA	210	H
—	I-PROPANOL	00071238	46000	230000	N/A	—
—	2-PROPANOL	00067630	89000	440000	N/A	—
—	1,2,3-TRICHLORO-PROPANE	00096184	N/A	N/A	210	H
—	VANADIUM	07440622	100	510	N/A	—
—	XYLENE	01330207	210	1100	70000	H

Acronyms and Footnotes to Table 5

*** Indicates dissolved metal criterion; others are total recoverable metals. Each listed dissolved criterion in Table 5 is equal to the corresponding total recoverable criterion before rounding (from the EPA National Ambient Water Quality Criteria Documents) multiplied by the conversion factor (from the Conversions Factors Table); a criterion that is expressed as a hardness (H)-based equation is shown in Table 5 as the conversion factor (listed) multiplied by the hardness criterion equation; an example criterion at hardness=100mg/L is included.**

CAS—Chemical Abstract Service number

CRL—Cancer risk level at 1×10^{-6}

H—Threshold effect human health criterion; incorporates additional uncertainty factor for some Group C carcinogens.

ln[H]—Natural Logarithm of the Hardness of stream as mg/l $CaCO_3$

µg/L—Micrograms per liter

N/A—Criterion not developed

PP NO—Priority Pollutant Number

§ 93.8d. Development of site-specific water quality criteria.

(a) The Department will consider a request for site-specific criteria for protection of aquatic life, human health or wildlife when a person demonstrates that there exist site-specific biological or chemical conditions of receiving waters which differ from conditions upon which the water quality criteria were based. Site-specific criteria may be developed for use only in place of current Statewide or regional (such as the Great Lakes systems) criteria. The request for site-specific criteria must include the results of scientific studies for the purpose of:

(1) Defining the areal boundaries for application of the site-specific criteria which will include the potentially affected wastewater dischargers identi-

fied by the Department, through various means, including, but not limited to, the total maximum daily load (TMDL) process described in Chapter 96 (relating to water quality standards implementation) or biological assessments.

(2) Developing site-specific criteria which protect its existing use and designated use.

(b) Scientific studies shall be performed in accordance with the procedures and guidance in the Water Quality Standards Handbook (EPA 1994), including "Guidance on the Determination and Use of Water-Effect Ratios for Metals" (February 1994) and with the "Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health" (2000), as amended and updated. Other guidance approved by the Department, which is based on other EPA approved or scientifically defensible methodologies, may be used. The WER study may be conducted, based on either total recoverable or dissolved criteria, depending on the form of the criterion.

(c) Prior to conducting studies specified in subsections (a) and (b), a proposed plan of study shall be submitted to the Department for review, consideration and approval.

(d) Signed copies of all reports including toxicity test data shall be submitted to the Department within 60 days of completion of the tests.

(e) If, as a result of its review of the report submitted to satisfy a request, the Department determines that a site-specific criterion for a toxic substance is appropriate, the Department will publish the site-specific criterion in the *Pennsylvania Bulletin*, along with other special conditions under § 92.61(a)(5) (relating to public notice of permit application and public hearing), and in Chapter 16 Appendix A, Table 1 (relating to site-specific water quality criteria for toxic substances). Changes listed in Appendix A, Table 1 will be promulgated through a formal rulemaking process as part of a triennial review or other rulemaking. If, as a result of its review of the report submitted to satisfy a request, the Department determines that a site-specific criterion for a parameter listed in § 93.7 (relating to specific water quality criteria) is appropriate, the Department will prepare a recommendation to the EQB in the form of proposed rulemaking, incorporating that criterion for the water body segment. A change to the criterion for a parameter listed in § 93.7 will become effective following adoption by the EQB as final rulemaking and publication in the *Pennsylvania Bulletin*.

(f) A person challenging a Department action under this section shall have the burden of proof to demonstrate that the Department's action does not meet the requirements of this section.

§ 93.8e. Special criteria for the Great Lakes System.

(a) *Special criteria*. The special provisions in this section apply for the Great Lakes System, which includes the streams, rivers, lakes and other bodies of surface water within the drainage basin of the Great Lakes in this Commonwealth.

(b) *Water quality criteria for the Great Lakes System*. Human health and aquatic life criteria for the Great Lakes System are contained in Table 6 (relating to Great Lakes aquatic life and human health criteria). For any pollutant not listed in the table, criteria to protect existing and designated uses will be developed by the Department, as needed in accordance with this chapter and Chapter 16 (relating to water quality toxics management strategy—statement of policy).

TABLE 6
GREAT LAKES AQUATIC LIFE AND HUMAN HEALTH CRITERIA

Fish and Aquatic Life Criteria

PP NO	*Chemical Name*	*CAS Number*	*Criteria Continuous Concentrations (µg/L)*	*Criteria Maximum Concentration (µg/L)*	*Human Health Criteria (µg/L)*	
2M	Arsenic	07440382	*148 (As3+)	*340 (As3+)	N/A	
4M	Cadmium	07440439	*{1.101672-(ln[H] ×0.041838)} ×Exp(0.7852xln[H] -2.715) (ex: @H=100, CCC=2.24)	*{1.136672-(ln[H] x0.041838)} ×Exp(1.128×ln[H] -3.6867) (ex: @H=100, CMC=4.26)	N/A	
5M	Chromium, III	16065831	*0.860×Exp(0.819×ln [H]+0.6848) (ex: @H=100, CCC=74)	*0.316×Exp(0.819×ln [H]+3.7256) (ex: @H=100, CMC=570)	N/A	
5M	Chromium, VI	18540299	*10.56	*15.73	N/A	—
6M	Copper	07440508	*0.960×Exp(0.8545×ln [H]-1.702) (ex: @H=100, CCC=8.96)	*(0.960×Exp(0.9422×ln [H]-1.700) (ex: @H=100, CMC=13.44)	N/A	
8M	Mercury	07439976	*0.77	*1.44	0.0031	H

Fish and Aquatic Life Criteria

PP NO	*Chemical Name*	*CAS Number*	*Criteria Continuous Concentrations (µg/L)*	*Criteria Maximum Concentration (µg/L)*	*Human Health Criteria (µg/L)*	
9M	Nickel	07440020	*0.997×Exp(0.846×ln [H]+0.0584 (ex: @H=100, CCC=52.01)	*[0.998×Exp(0.846×ln [H]+2.255) (ex: @H=100, CMC=468.24)	N/A	H
10M	Selenium	07782492	*4.61	N/A	N/A	—
13M	Zinc	07440666	*0.986×Exp(0.8473xln [H]+0.884) (ex: @H=100, CCC=118.14)	*0.978×Exp(0.8473×ln [H]+0.884) (ex: @H=100, CMC=117.18)	N/A	
14M	Cyanide, Free	00057125	5.2	22	600	H
3A	2,4-Dimethyl-phenol	00105679	N/A	N/A	450	H
5A	2,4-Dinitro-phenol	00051285	N/A	N/A	55	H
9A	Pentachlorophenol	00087865	Exp(1.005 [pH]-5.134) @pH=6.5 7.8 9.0 Crit=4.05 14.95 49.95	Exp (1.005 [pH]-4.869) @pH=6.5 7.8 9.0 Crit=5.28 19.49 65.10	N/A	
3V	Benzene	00071432	N/A	N/A	1.2	CRL
7V	Chloro-benzene	00108907	N/A	N/A	470	H
22V	Methylene Chloride	00075092	N/A	N/A	4.7	CRL
25V	Toluene	00108883	N/A	N/A	5600	H
29V	Trichloro-ethylene	00079016	N/A	N/A	2.9	CRL
33B	Hexachloro-benzene	00118741	N/A	N/A	0.000045	CRL
36B	Hexachloro-ethane	00067721	N/A	N/A	0.53	CRL
4P	gamma-BHC (Lindane)	00058899	N/A	0.95	0.47	H
6P	Chlordane	00057749	N/A	N/A	0.000025	CRL
7P	4,4-DDT	00050293	N/A	N/A	0.000015	CRL
10P	Dieldrin	00060571	0.056	0.24	0.00000065	CRL
14P	Endrin	00072208	0.036	0.086	N/A	
18P	PCBs		N/A	N/A	0.00000039	CRL
25P	Toxaphene	08001352	N/A	N/A	0.0000068	CRL
PP	2,3,7,8-TCDD	01746016	N/A	N/A	8.6 E-10	CRL
—	Parathion	00056382	0.013	0.065	N/A	

Acronyms and Footnotes to Table 6

*** Indicates dissolved metal criterion; others are total recoverable metals. Each listed dissolved criterion in Table 6 is equal to the corresponding total recoverable criterion before rounding (from the EPA National Ambient Water Quality Criteria Documents) multiplied by the conversion factor (from the Conversions Factors); a criterion that is expressed as a hardness (H)-based equation is shown in Table 6 as the conversion factor (listed) multiplied by the hardness criterion equation; an example criterion at hardness=100mg/L is included.**

CAS—Chemical Abstract Service number

CRL—Cancer risk level at 1×10^{-6}

H—Threshold effect human health criterion; incorporates additional uncertainty factor for some Group C carcinogens.

ln[H]—Natural Logarithm of the Hardness of stream as mg/l $CaCO_3$

µg/L—Micrograms per liter

N/A—Criterion not developed.

PPNO—Priority Pollutant Number

(c) *Wildlife criteria*. Wildlife criteria will be developed for the bioaccumulative chemicals of concern (BCCs) in the Great Lakes System using methodologies contained in the Great Lakes guidance in 40 CFR Part 132, Appendix D (relating to Great Lakes Water Quality Initiative methodology for the development of wildlife criteria). The wildlife criteria are contained in the following table:

GREAT LAKES WILDLIFE CRITERIA

TABLE 7

PP NO	*Chemical Name*	*Criterion (µg/L)*
7-9P	DDT & METABOLITES	0.000011
8M	MERCURY	0.0013

PP NO	*Chemical Name*	*Criterion (µg/L)*
18-24P	**PCBs (TOTAL)**	**0.00012**
PP	**2,3,7,8-TCDD**	**3.1 E-9**

DESIGNATED WATER USES AND WATER QUALITY CRITERIA

§ 93.9. Designated water uses and water quality criteria.

(a) The tables in §§ 93.9a—93.9z display designated water uses and water quality criteria in addition to the water uses and criteria specified in Tables 2 and 3. Designated uses shall be protected in accordance with Chapters 95 and 96 (relating to wastewater treatment requirements; and water quality standards implementation) and any other applicable State and Federal laws and regulations. The tables also indicate specific exceptions to Tables 2 and 3 on a stream-by-stream or segment-by-segment basis by the words "add" or "delete" followed by the appropriate symbols described elsewhere in this chapter. The county column in §§ 93.9a—93.9z indicates the county in which the mouth of the stream **or the downstream limit of the zone described for that entry** is located. Abbreviations used in the Stream and the "Zone" columns are as follows:

* * * * *

(b) When appropriate, "Exceptions to Specific Criteria" provide reference to the Delaware River Basin Commission (DRBC) water quality regulations, Orsanco (Ohio River Valley Water Sanitation Commission) pollution control standards and the Great Lakes Water Quality Agreement (GLWQA) which specify the criteria that apply **if a water quality standard is more stringent than those in this title**. The applicable criteria can be obtained from the following:

* * * * *

(**Editor's Note:** A basin-wide migratory fishes (MF) designation is being applied to Drainage Lists A—O and Z, unless there are specific exceptions already noted for certain waterbodies or stream segments within one of these drainage lists. These specific changes to the drainage lists, however, are not reflected in this Annex, but will be added to the regulations at final rulemaking. Drainage Lists A—G are located within the Delaware River Basin. Drainage Lists H—O are located within the Susquehanna River Basin. Drainage List Z is located within the Potomac River Basin.)

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§ 93.9d. Drainage List D.

Delaware River Basin in Pennsylvania

Lehigh River

Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
	* * * * *			
3—Penn Springs	Basin	Carbon	HQ-CWF	None
3—Black Creek	**[Basin, Source to Beaver Creek**	**Carbon**	**HQ-CWF**	**None]**
4—Hazle Creek	**Basin**	**Carbon**	**HQ-CWF**	**None**
4—Beaver Creek	Basin	Carbon	CWF	None
3—Black Creek	Main Stem, **Confluence of Hazle Creek and** Beaver Creek to Mouth	Carbon	CWF	None
4—**[Unnamed Tributaries] UNTs** to Black Creek	Basins, **Confluence of Hazle Creek and** Beaver Creek to Mouth	Carbon	HQ-CWF	None
4—Koons Creek	**Basin**	**Carbon**	**HQ-CWF**	**None**
4—Quakake Creek	Basin, Source to Wetzel Creek	Carbon	HQ-CWF	None
5—Wetzel Creek	Basin	Carbon	CWF	None
4—Quakake Creek	Basin, Wetzel Creek to Mouth	Carbon	CWF	None
4—Brushy Hollow Run	**Basin**	**Carbon**	**HQ-CWF**	**None**
3—Maple Hollow	Basin	Carbon	HQ-CWF	None
	* * * * *			

§ 93.9f. Drainage List F.

Delaware River Basin in Pennsylvania

Schuylkill River

Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
	* * * * *			
3—Monocacy Creek	Basin	Berks	WWF	None
3—UNTs to Schuylkill River	Basins, **(all UNT's along Montgomery County shore),** Berks-Chester-Montgomery County Border to Valley Creek **[(except those in Spring City and Phoenixville)]**	**[Chester—]** Montgomery	**[HQ-TSF] WWF**	None
3—UNTs to Schuylkill River	**Basins (all UNTs along Chester County shore except those in Spring City and Phoenixville), Berks-Chester-Montgomery County Border to Valley Creek**	**Chester**	**HQ-TSF**	**None**
3—UNTs to Schuylkill River	Basins, in Spring City and Phoenixville	Chester	WWF	None
	* * * * *			
3—Valley Creek	Basin	Montgomery-Chester	EV	None
3—**[Unnamed Tributaries] UNTs** to Schuylkill River	Basins, Valley Creek to **Head of** Tide	**[Chester-Montgomery] Philadelphia**	WWF	None
[3—Mellshamic Creek	**Basin**	**Montgomery**	**WWF**	**None]**
3—Trout Creek	Basin	Montgomery	WWF	None
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§ 93.9i. Drainage List I.

Susquehanna River Basin in Pennsylvania

Susquehanna River

Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
	* * * * *			
2—Mehoopany Creek	Basin, Source to North **[Fork] Branch Mehoopany Creek**	Wyoming	HQ-CWF	None
3—North **[Fork] Branch** Mehoopany Creek	Basin	Wyoming	CWF	None
2—Mehoopany Creek	Basin, North **[Fork] Branch Mehoopany Creek** to Mouth	Wyoming	CWF	None
2—Taques Creek	Basin	Wyoming	CWF	None
2—Tunkhannock Creek	Main Stem, Source to Susquehanna-Wyoming County Border	Susquehanna-Wyoming	CWF	None
3—**[Unnamed Tributaries] UNTs** to Tunkhannock Creek	Basins, Source to Susquehanna-Wyoming County Border	Susquehanna	CWF	None
3—Bear Swamp Creek	Basin	Susquehanna	CWF	None
3—Bell Creek	Basin	Susquehanna	CWF	None

Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
3— **[Leslie] Nine Partners** Creek	Basin	Susquehanna	CWF	None
3–Partners Creek	Basin	Susquehanna	CWF	None

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§ 93.9l. Drainage List L.

Susquehanna River Basin in Pennsylvania

West Branch Susquehanna River

Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
4—**[Unnamed Tributary] UNT** 21134	Basin, Source to Rauchtown Creek	Lycoming	CWF	None
5—Rauchtown Creek	**[Basin, Source to Confluence of Rockey Run and Gottshall Run**	**Clinton**	**HQ-CWF**	**None]**
6—Rockey Run	**Basin**	**Clinton**	**HQ-CWF**	**None**
6—Gottshall Run	**Basin**	**Clinton**	**HQ-CWF**	**None**
5—Rauchtown Creek	Basin, Confluence of Rockey Run and Gottshall Run to Mouth	Lycoming	CWF	None

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§ 93.9m. Drainage List M.

Susquehanna River Basin in Pennsylvania

Susquehanna River

Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
3—Trout Run	Basin	Northumberland	CWF	None
3—**[Buddys] Bennys** Run	Basin	Northumberland	CWF	None
3—Millers Run	Basin	Northumberland	CWF	None

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§ 93.9q. Drainage List Q.

Ohio River Basin in Pennsylvania

Allegheny River

Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
4—Marsh Run	Basin	Crawford	CWF	None
4—Thompson Creek	Basin, **Source to Shirley Run**	Crawford	CWF	None
5—Shirley Run	**Basin**	**Crawford**	**HQ-CWF**	**None**
4—Thompson Creek	**Basin, Shirley Run to Mouth**	**Crawford**	**CWF**	**None**

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5—Caldwell Creek	Basin, Source to West Branch Caldwell Creek	Warren	HQ-CWF	None

Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
6—West Branch Caldwell Creek	Basin	**[Crawford] Warren**	EV	None
5—Caldwell Creek	Basin, West Branch Caldwell Creek to Mouth	Crawford	EV	None

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§ 93.9v. Drainage List V.

Ohio River Basin in Pennsylvania

Monongahela River

Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
	* * * * *			
3—Bates Run	Basin	Fayette	WWF	None
3—Tenmile Creek	Basin, Source to South Fork Tenmile Creek	Greene-**Washington**	TSF	None
4—South Fork Tenmile Creek	Basin, Source to Browns Creek	Greene	HQ-WWF	None
5—Browns Creek	Basin	Greene	HQ-WWF	None
4—South Fork Tenmile Creek	Basin, Browns Creek to Mouth	Greene-**Washington**	WWF	None
3—Tenmile Creek	Basin, South Fork Tenmile Creek to Mouth	Greene-**Washington-Fayette**	WWF	None

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§ 93.9x. Drainage List X.

Lake Erie

Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
1—Lake Erie	All sections of lake in PA except Outer Erie Harbor and Presque Isle Bay	Erie	CWF	*Delete* Fe, **[pH1,]** DO1 and Bac1 See GLWQA ***Add* E. coli per 40 CFR 131.41 and *See* 28 Pa. Code § 18.28(b)(2) and (3)**
1—Lake Erie (Outer Erie Harbor and Presque Isle Bay)	Portion of lake bordered by Presque Isle on west, longitude 80° 10′ 18″ on north, except harbor area and central channel dredged and maintained by United States Army Corps of Engineers.	Erie	WWF	*Delete* pH *Add* pH between 7 and 9 ***Add* E. coli per 40 CFR 131.41 and *See* 28 Pa. Code § 18.28(b)(2) and (3)**
1—Lake Erie (Outer Erie Harbor and Presque Isle Bay)	Harbor area and central channel dredged and maintained by United States Army Corps of Engineers	Erie	WWF, *Delete* WC	*Delete* pH and Bac1, *Add* pH between 7 and 9, Bac2

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