

<h1 style="text-align: center;">Regulatory Analysis Form</h1> <p style="text-align: center;">(Completed by Promulgating Agency)</p>		<p><i>INDEPENDENT REGULATORY REVIEW COMMISSION</i></p>
<p>(All Comments submitted on this regulation will appear on IRRC's website)</p>		
<p>(1) Agency Environmental Protection</p>		
<p>(2) Agency Number: Identification Number: 7-534</p>		<p>IRRC Number:</p>
<p>(3) PA Code Cite: 25 Pa Code, Chapter 93</p>		
<p>(4) Short Title: Water Quality Standards – Triennial Review</p>		
<p>(5) Agency Contacts (List Telephone Number and Email Address):</p> <p>Primary Contact: Laura Edinger; 717.783.8727; ledinger@pa.gov Secondary Contact: Jessica Shirley; 717.783.8727; jessshirley@pa.gov</p>		
<p>(6) Type of Rulemaking (check applicable box):</p> <p><input checked="" type="checkbox"/> Proposed Regulation <input type="checkbox"/> Final Regulation <input type="checkbox"/> Final Omitted Regulation</p>		<p><input type="checkbox"/> Emergency Certification Regulation; <input type="checkbox"/> Certification by the Governor <input type="checkbox"/> Certification by the Attorney General</p>
<p>(7) Briefly explain the regulation in clear and nontechnical language. (100 words or less)</p> <p>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 water quality standards. Further, states are required to protect existing uses of their waters. This regulation is undertaken as part of the Department's ongoing review of Pennsylvania's water quality standards.</p> <p>The proposed regulation will update and revise Sections 93.1 by adding clarification; Table 3, at Section 93.7 by updating the aquatic life criterion for ammonia, and the Bacteria criteria for changes to the recreational use (Bac₁) criterion and moving the Bac₂ criterion to Drainage List X; deleting reference to Appendix A, Table 1A in Section 93.8a(b) since Table 1A is being deleted in Chapter 16; removing reference to the Federal regulation in 40 CFR 131.32(a) in Section 93.8a(j)(3) since this federal promulgation had been withdrawn by U.S. EPA; Sections 93.8c(a) and 93.8c(b), are updated to clarify that the criteria in Table 5 may apply to the Great Lakes System for those substances not listed in Table 6; toxic substances at Section 93.8c, Table 5, are being updated using the latest scientific information and policies developed by EPA under the Clean Water Act, section 304(a); clarifying the use of the Biotic Ligand Model (BLM) for the development of new or updated site-specific criteria for copper in freshwater systems in Section 93.8d(c); and creating a new on-line resource at Section 93.8d(f)(2), to maintain a publicly available list of site-specific criteria that have been developed, and are being used by the Department in permitting and other pollution control measures.</p> <p>There are also corrections to the water quality standards chapters for typographical and translation errors, and missed references associated with prior rulemaking and/or publication activities. This includes corrections to use designations and stream entries found in Drainage Lists at Sections 93.9a-93.9z, for revisions which are not</p>		

being addressed by separate stream redesignation rulemakings. These changes to the drainage lists are proposed to clarify stream names, segment boundaries, reformat the drainage lists, and to correct typographical and other errors.

(8) State the statutory authority for the regulation. Include specific statutory citation.

The Pennsylvania Clean Streams Law, Act of June 22, 1937 (P.L. 1987, No. 394) as amended, 35 P.S. §§ 691.5 (b)(1) and 691.402.

Section 1920-A of The Administrative Code of 1929, as amended, 71 P.S. § 510-20.

Section 303(c) of the Federal Clean Water Act, 33 U.S.C.A. § 1313(c).

(9) Is the regulation mandated by any federal or state law or court order, or federal regulation? Are there any relevant state or federal court decisions? If yes, cite the specific law, case or regulation as well as any deadlines for action.

Section 303(c) of the federal Clean Water Act and 40 CFR Part 131 require states to develop water quality standards that consist of designated uses, water quality criteria and antidegradation requirements. Such standards must “protect the public health or welfare and enhance the quality of water.” In addition, such standards must take into consideration water uses including public water supplies, propagation of fish and wildlife, recreational purposes, agricultural purposes and industrial purposes.

The U.S. EPA urged the Department in a letter dated January 21, 2013 to include the federally recommended ammonia and recreational water quality criteria (RWQC) into the Commonwealth’s water quality standards. Also, the U.S. EPA specifically mentioned in their May 22, 2014 approval letter in reference to the 2013 Pennsylvania Triennial Review of WQS “that PADEP will address the issues of total dissolved solids, most notably chlorides, ammonia, and recreational criteria”, in their next triennial review.

In addition, it is the duty of the Department, pursuant to section 5 of the state Clean Streams Law, to consider water quality management, pollution control in the watershed as a whole, and the present and possible future uses of waters in adopting regulations.

(10) State why the regulation is needed. Explain the compelling public interest that justifies the regulation. Describe who will benefit from the regulation. Quantify the benefits as completely as possible and approximate the number of people who will benefit.

Section 303(c)(1) of the federal Clean Water Act and 40 CFR 131.20 require that states review their water quality standards and modify them, as appropriate, at least once every three years. The proposed regulation fulfills this requirement for Pennsylvania’s triennial review of water quality standards. This requirement is based upon recognition that the science of water quality is constantly advancing. Its purpose is to ensure that standards are based on current science, methodologies, and U.S. EPA mandates, recommendations and guidance. The federal mandate for states to develop water quality criteria is found at section 303(c)(2)(A) of the Clean Water Act (CWA).

The purpose of developing the water quality standards is to protect Pennsylvania’s surface waters. Pennsylvania’s surface waters, through the water quality standards program, are protected for a variety of uses including: drinking water supplies for humans, livestock and wildlife; fish consumption; irrigation for crops;

aquatic life uses; recreation; and industrial water supplies. All the citizens of this Commonwealth will benefit from the regulation because it provides the appropriate level of water quality protection for all water uses.

By protecting the water uses, and the quality of the water necessary to maintain the uses, benefits may be gained in a variety of ways by all citizens of the Commonwealth. For example, clean water used for drinking water supplies benefits the consumers by lowering drinking water treatment costs and reducing medical costs associated with drinking water illnesses. Additionally, by maintaining water quality standards, clean surface water is available for irrigation of crops and livestock and for use in industrial processes. Clean surface waters also benefit the Commonwealth by providing for increased tourism and recreational use of the waters. Clean water provides for increased wildlife habitat and more productive fisheries.

(11) Are there any provisions that are more stringent than federal standards? If yes, identify the specific provisions and the compelling Pennsylvania interest that demands stronger regulations.

No. The proposed regulations are not more stringent than federal standards.

(12) How does this regulation compare with those of the other states? How will this affect Pennsylvania's ability to compete with other states?

Other states are also required to maintain water quality standards, based on the federal mandate at section 303(c) of the federal Clean Water Act and 40 CFR Part 131. If other states or tribes have not yet adopted similar CWA Section 304(a) criteria, they will be required to consider these criteria during their next triennial review. The proposed amendments will not put Pennsylvania at a competitive disadvantage to other states.

See attached summary Table – Summary: Ammonia, and Human Health Criteria for U.S. EPA Region 3 and Neighboring States.

(13) Will the regulation affect any other regulations of the promulgating agency or other state agencies? If yes, explain and provide specific citations.

No other state regulations are affected by this proposal.

State agencies that may cause pollution in surface waters could possibly be affected by this regulation. For example, if an agency's activity involves the discharge of pollutants into surface waters, the discharge must meet the water quality standards identified by this regulation.

(14) Describe the communications with and solicitation of input from the public, any advisory council/group, small businesses and groups representing small businesses in the development and drafting of the regulation. List the specific persons and/or groups who were involved. ("Small business" is defined in Section 3 of the Regulatory Review Act, Act 76 of 2012.)

The Water Resources Advisory Committee (WRAC) was briefed on the scope of the regulation at the February 18, 2015, meeting, and provided on-going updates on the review and regulatory development at the August 12th and November 18, 2015, meetings. WRAC was also provided a draft of the proposed regulatory amendments in January 2016, so they could consider the amendments and make recommendations at the March 24, 2016 meeting, when WRAC voted to concur with the Department's recommendation to move the rulemaking forward for EQB consideration. In addition, the Department provided to the Agricultural Advisory Board

(AAB) on February 25, 2016, a regulatory update that included the triennial review of water quality standards. Also, DEP provided to the Citizens Advisory Council (CAC) on June 21, 2016, an overview of the triennial review. Later in 2016, the draft proposed regulatory language was amended to remove the chloride criterion. The status of the draft regulatory language was discussed again with WRAC at its March 29, 2017 meeting, informing WRAC members that the proposal would be moving forward to the EQB, as modified without containing a chloride criterion recommendation.

The public will be afforded the opportunity to comment on this proposed regulation during a 60-day public comment period, in addition to public hearings.

(15) Identify the types and number of persons, businesses, small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012) and organizations which will be affected by the regulation. How are they affected?

Persons with existing or proposing new or expanded activities or projects which result in discharges to waters of the Commonwealth will be required to implement treatment of effluent or best management practices (BMPs) and the appropriate protections to meet the water quality standards established by this regulation. Such treatment and practices may result in higher design, engineering, construction, and treatment costs. However, it is not possible to identify the total number of persons, businesses and organizations that will be affected by the regulation, or the potential associated costs. It is not possible to predict the future business decisions of existing or potentially new entities that choose to conduct associated activities that will be affected by these regulations. Therefore, it is not possible or practicable to quantify their technology needs and BMP costs that may be associated with these future activities. The proposed regulations do, however, establish a clear and appropriate set of goals, objectives and targets to which these persons, businesses, and organizations can plan and design towards.

Ammonia is present in raw sewage and is currently treated and removed by many wastewater treatment plants. Ammonia is also used in agriculture in connection with fertilizers. It is also found as part of metal finishing, pharmaceuticals production, processing of crude oil and corrosion protection. No impact or minimal impact is expected for the great majority of point source discharges in Pennsylvania. In those cases, where additional treatment for ammonia may be needed, minimal cost impact is expected because ammonia is highly treatable. Treatment usually involves only time allowed for biological degradation and exposure to atmospheric oxygen.

Bacteria are common one-celled organisms and are a natural component of surface waters. While most are not harmful to humans, some can cause illness and disease. Fecal coliforms, including *E. coli*, are commonly found in the gastrointestinal tract and feces of warm-blooded animals, and are therefore indicators of fecal contamination from human and animal wastes. Water-borne pathogenic diseases that may coincide with fecal contamination include ear infections, dysentery, typhoid fever, viral and bacterial gastroenteritis, and Hepatitis A. All point source discharges in Pennsylvania containing treated sewage already are required to disinfect their wastewater prior to discharge. Disinfection practices such as chlorination, ozonation, or ultra-violet (UV) light are used to kill or deactivate microorganisms. There will be little cost associated with the new criteria since disinfection is already a required part of treatment at these facilities.

See also human health criteria rationale and technical documents referenced in #28 explaining the types of industries that may be affected by changes to the toxics criteria.

The proposed regulation will be implemented through the Department's permit and approval actions.

(16) List the persons, groups or entities, including small businesses, that will be required to comply with the regulation. Approximate the number that will be required to comply.

All persons, groups or entities with proposed or existing point source discharges containing the pollutants that are included in this proposed rulemaking into surface waters of the Commonwealth must comply with the regulation.

Also, see response to #15.

(17) Identify the financial, economic and social impact of the regulation on individuals, small businesses, businesses and labor communities and other public and private organizations. Evaluate the benefits expected as a result of the regulation.

All citizens of the Commonwealth, both present and future, will benefit from having clean water that is protected and maintained. Any reduction in the total toxic load in Pennsylvania waterbodies is likely to have a positive effect on the human health of Pennsylvanians. This will translate into an as yet unknown economic benefit through avoided cleanup or remediation costs later in time, as well as avoided costs for the treatment and caring for persons with diseases and disabilities that can be reasonably attributed to environmental contaminants in surface water.

Reduced toxics in Pennsylvania's waterways will likely increase recreational fishing and tourism to swimming and fishing locations throughout the state. Additionally, cleaner rivers and fish may lead to increased birding and wildlife viewing opportunities, as the benefits of cleaner water and fish work themselves up the food chain, resulting in substantial economic benefits. Persons who recreate on the waters and who fish, both for sport and consumption, will benefit from better water quality protection.

A reduction in toxics found in Pennsylvania's waterways may lead to increased property values for properties located near rivers or lakes. The study, *The Effect of Water Quality on Rural Nonfarm Residential Property Values*, (Epp and Al-Ani, American Journal of Agricultural Economics, Vol 61, No. 3 (Aug. 1979)), used real estate prices to determine value of improvements in water quality in small rivers and streams in Pennsylvania. Water quality, whether measured in pH or by the owner's perception, has a significant effect on the price of adjacent property. Their analysis showed a positive correlation between water quality and housing values. They concluded that buyers are aware of the environmental setting of a home and that differences in the quality of nearby waters affects the price paid for a residential property.

A 2006 study from the Great Lakes region estimated that property values were significantly depressed in two regions associated with toxic contaminants (PAHs, PCBs, and heavy metals). The study showed that a portion of the Buffalo River region (approx. 6 miles long) had depressed property values of between \$83 million and \$118 million for single-family homes, and between \$57 million and \$80 million for multi-family homes as a result of toxic sediments. The same study estimated that a portion of the Sheboygan River (approx. 14 miles long) had depressed property values of between \$80 million and \$120 million as the result of toxics.

"Economic Benefits of Sediment Remediation," <http://www.nemw.org/Econ> . While this study related to the economic effect of contaminated sediment in other waters in the Great Lakes region, the idea that toxic pollution depresses property values is easily transferable to Pennsylvania. A reduction in toxic pollution in Pennsylvania's waters has a substantial economic benefit to property values in close proximity to waterways.

There are economic benefits to be gained by maintaining clean water for potable and other water supply uses. Water suppliers, and their customers, may benefit from lower pretreatment costs if water is withdrawn that meets the surface water quality standards. Assuring the availability of clean water will cut down on the costs to consumers for purchasing household pretreatment/water filtration systems and bottled water. See *"The Real Cost of Bottled Water,"* San Francisco Chronicle, Feb. 18th, 2007, <http://www.sfgate.com/green/article/The->

real-cost-of-bottled-water-2647986.php which estimates the cost of bottled water to be anywhere between 240 and 10,000 times more expensive than tap water. An additional benefit to greater reliance on tap water is the reduction of containers that need to be recycled or disposed of in landfills. Persons may incur a cost benefit by reducing their dependence on bottled waters and household water filtration systems based on their confidence in source water quality.

By controlling toxics at the point of discharge, users downstream will not have to bear the costs associated with cleaning up someone else's discharge before the water can be used. For example, fewer toxics in surface waters may reduce costs incurred by downstream surface water users who have to pre-treat water for industrial or commercial use (i.e. food processors). Also, reductions at the point of discharge reduce the costs for water suppliers who will have to treat water that is high in toxics at their intakes to meet drinking water standards. Passing on the treatment to water suppliers will increase costs to drinking water customers. Any intervening water uses such as irrigation and fish consumption, between the point of discharge and the point of use, will be protected by limiting the amount of toxics that may be discharged. Under these scenarios, multiple surface water users will benefit—industrial, agricultural, commercial, and potable water users.

There are also economic benefits to be gained by having clearly defined remediation standards for surface waters. Under Pennsylvania's Land Recycling and Environmental Remediation Standards Act, liability relief is available, by operation of law, if a person demonstrates compliance with the environmental remediation standards established by the law. Surface water quality criteria are used to develop remediation standards under the law. Persons performing remediation depend upon these criteria to obtain a liability relief benefit under the law. An article in the Duquesne University Law Review discusses the importance of liability limitation as "vital to the participation in the remediation process." The article recognizes that "liability protection provides the missing ingredient—financial incentive—for undertaking the cleanup of an industrial site." See "*COMMENT: Pennsylvania's Land Recycling Program: Solving the Brownfields Problem with Remediation Standards and Limited Liability*," Creenan, James W. and Lewis, John Q., Duquesne University Law Review, 34 *Duq. L. Rev.* 661 (Spring 1996). Industrial land redevelopers will benefit from these regulations by having financial certainty when choosing a surface water cleanup standard and by being eligible for liability relief under state law.

Also, see response to #15.

(18) Explain how the benefits of the regulation outweigh any cost and adverse effects.

Health and welfare benefits to all citizens of the Commonwealth accrue from protecting the surface waters of the Commonwealth at the appropriate level. The benefits from substantial revenue and jobs associated with popular fisheries, and other industries that rely on clean water, outweigh the cost and adverse effects associated with selective effluent treatment technology and best management practices for those who cause pollution of the waters.

Section 4 of the Pennsylvania Clean Streams Law (Declaration of Policy) clearly indicates the benefits of, and how it is essential to maintain clean, unpolluted waters, if Pennsylvania is to attract new manufacturing industries and to develop Pennsylvania's full share of the tourist industry; to have adequate out of door recreational facilities in the decades ahead; and that it is the objective of the Clean Streams Law not only to prevent further pollution of the waters of the Commonwealth, but also to reclaim and restore to a clean, unpolluted condition every stream in Pennsylvania that is presently polluted. The prevention and elimination of water pollution is recognized as being directly related to the economic future of the Commonwealth. Section 4 of the Clean Streams Law was amended July 31, 1970 (P.L.653, No. 222).

Also, see responses to #15 and #17.

(19) Provide a specific estimate of the costs and/or savings to the regulated community associated with compliance, including any legal, accounting or consulting procedures which may be required. Explain how the dollar estimates were derived.

Specific estimates of costs and savings cannot be determined because each activity that will result in pollution to waters in this Commonwealth must be reviewed based on site-specific considerations. These site-specific considerations include, but are not limited to the size, flow volume, and the chemical, biological and physical properties of both the receiving water and the effluent discharge. These unique parameters result in site-specific requirements. National Pollutant Discharge Elimination System (NPDES) permits and other approvals will be required for discharges to waters of this Commonwealth using the water quality uses and criteria identified in the proposed regulations.

(20) Provide a specific estimate of the costs and/or savings to the local governments associated with compliance, including any legal, accounting or consulting procedures which may be required. Explain how the dollar estimates were derived.

No costs will be imposed directly upon local governments by this proposed regulation. This proposal is based on and will be implemented through existing Department programs, procedures and policies. However, certain municipalities or municipally-owned entities that discharge pollutants to surface waters may be affected by this proposed regulation as described in #15. The costs associated with permits and performance or design requirements will be site-specific and will be based on effluent limitations or best management practices and the appropriate protections for a particular waterbody.

A municipality may derive additional revenue and employment from the tourism industries that are attracted to recreation associated with protected and improved surface waters, such as anglers, boaters, swimmers and others interested in outdoor recreation.

(21) Provide a specific estimate of the costs and/or savings to the state government associated with the implementation of the regulation, including any legal, accounting, or consulting procedures which may be required. Explain how the dollar estimates were derived.

No costs will be imposed directly upon state governments by this proposed regulation. This proposal is based on and will be implemented through existing Department programs, procedures and policies. However, certain state agencies or state-owned entities that discharge pollutants to surface waters may be affected by this proposed regulation as described in #15. The costs associated with permits and performance or design requirements will be site-specific and will be based on effluent limitations or best management practices and the appropriate protections for the particular waterbody.

The state may derive additional revenue and employment from the tourism industries that are attracted to recreation associated with the surface waters, such as anglers, boaters, swimmers, and others interested in outdoor recreation.

Also, see response to #17.

(22) For each of the groups and entities identified in items (19)-(21) above, submit a statement of legal, accounting or consulting procedures and additional reporting, recordkeeping or other paperwork, including copies of forms or reports, which will be required for implementation of the regulation and an explanation of measures which have been taken to minimize these requirements.

Each activity that will result in pollution to waters of this Commonwealth requires a review that is based on site-specific considerations, including the specific pollutant(s) expected or known to be in the discharge to waters of this Commonwealth. Existing Department procedures will be used to implement this proposed regulation. Persons with existing or proposing new or expanded activities or projects which result in discharges to waters of the Commonwealth will be required to implement treatment of effluent or best management practices and the appropriate protections to meet the water quality standards established by this regulation.

(22a) Are forms required for implementation of the regulation?

No additional forms are required, as a result of this regulation.

(22b) If forms are required for implementation of the regulation, **attach copies of the forms here**. If your agency uses electronic forms, provide links to each form or a detailed description of the information required to be reported. **Failure to attach forms, provide links, or provide a detailed description of the information to be reported will constitute a faulty delivery of the regulation.**

N/A

(23) In the table below, provide an estimate of the fiscal savings and costs associated with implementation and compliance for the regulated community, local government, and state government for the current year and five subsequent years.

	Current FY Year 16/17	FY+1 Year 17/18	FY+2 Year 18/19	FY+3 Year 19/20	FY+4 Year 20/21	FY+5 Year 21/22
SAVINGS:	\$	\$	\$	\$	\$	\$
Regulated Community	Not Measurable	Not Measurable	Not Measurable	Not Measurable	Not Measurable	Not Measurable
Local Government	“	“	“	“	“	“
State Government	“	“	“	“	“	“
Total Savings	“	“	“	“	“	“
COSTS:						
Regulated Community	Not Measurable	Not Measurable	Not Measurable	Not Measurable	Not Measurable	Not Measurable
Local Government	“	“	“	“	“	“
State Government	“	“	“	“	“	“
Total Costs	“	“	“	“	“	“

REVENUE LOSSES:						
Regulated Community	Not Measurable	Not Measurable	Not Measurable	Not Measurable	Not Measurable	Not Measurable
Local Government	“	“	“	“	“	“
State Government	“	“	“	“	“	“
Total Revenue Losses	“	“	“	“	“	“

(23a) Provide the past three-year expenditure history for programs affected by the regulation.

Program	FY -3 (2013-14)	FY -2 (2014-15)	FY -1 (2015-16)	Current FY (2016-17)
160-10381 Enviro Protection Operations	\$75,184,000	\$84,438,000	\$87,172,000	\$89,066,000
161-10382 Enviro Program Management	\$25,733,000	\$28,517,000	\$28,277,000	\$30,025,000

(24) For any regulation that may have an adverse impact on small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012), provide an economic impact statement that includes the following:

(a) An identification and estimate of the number of small businesses subject to the regulation.

Persons with proposed or existing discharges into surface waters of the Commonwealth must comply with the regulation. Also, see response #15.

(b) The projected reporting, recordkeeping, and other administrative costs required for compliance with the proposed regulation, including the type of professional skills necessary for preparation of the report or record.

Each activity that will result in pollution to waters of this Commonwealth requires a review that is based on site-specific considerations. National Pollutant Discharge Elimination System (NPDES) permits and other approvals will be required for discharges to waters, using the water quality criteria and standards identified in the proposed regulations. Existing Department procedures will be used to implement this proposed regulation.

(c) A statement of probable effect on impacted small businesses.

Each activity that will result in pollution to waters of this Commonwealth requires a review that is based on site-specific considerations. National Pollutant Discharge Elimination System (NPDES) permits and other approvals will be required for discharges to waters, using the water quality criteria and standards identified in the proposed regulations. Existing Department procedures will be used to implement this proposed regulation.

(d) A description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation.

There were no non-regulatory alternatives or less intrusive methods available to consider to achieve the purpose of this proposed regulation.

In addition to the flexibility afforded by the regulatory mechanisms in the NPDES permitting program, the water quality regulations include a provision that allows for the development of site-specific water quality criteria, in lieu of the statewide criteria, under certain circumstances. In particular, in accordance with §93.8d(a), if site-specific biological or chemical conditions of the receiving waters differ from the conditions upon which the statewide criteria are based, or there exists a need for a site-specific criterion for a substance not listed in §93.8c, Table 5, the Department will consider a request for site-specific criteria. A discharger has the opportunity to weigh the costs of developing a site-specific standard against the usage of an existing statewide standard.

(25) List any special provisions which have been developed to meet the particular needs of affected groups or persons including, but not limited to, minorities, the elderly, small businesses, and farmers.

There are no such provisions in this proposed regulation.

(26) Include a description of any alternative regulatory provisions which have been considered and rejected and a statement that the least burdensome acceptable alternative has been selected.

There were no non-regulatory alternatives available to consider in this case.

There were no alternative regulatory schemes to consider in achieving the correct level of protection for the waters of the Commonwealth. The proposed regulations reflect the results of a periodic and on-going scientific evaluation of regulatory criteria, as required by all states under the federal Clean Water Act.

The U.S. EPA urged the Department in a letter dated January 21, 2013 to include the federally recommended ammonia and recreational water quality criteria (RWQC) into the Commonwealth's water quality standards. Also, the U.S. EPA specifically mentioned in their May 22, 2014 approval letter in reference to the 2013 Pennsylvania Triennial Review of WQS "that PADEP will address the issues of total dissolved solids, most notably chlorides, ammonia, and recreational criteria", in their next triennial review.

(27) In conducting a regulatory flexibility analysis, explain whether regulatory methods were considered that will minimize any adverse impact on small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012), including:

(a) The establishment of less stringent compliance or reporting requirements for small businesses.

This proposed regulation does not establish or revise compliance or reporting requirements for small businesses. There were no less stringent compliance or reporting requirements to consider in this case. Any WQ criteria that are less stringent than those proposed were not protective enough for the waters of the Commonwealth and would negate the benefits listed in Question #17.

There were no alternative regulatory schemes to consider in achieving the correct level of protection for the waters of the Commonwealth. The proposed regulations reflect the results of a scientific evaluation of regulatory criteria.

(b) The establishment of less stringent schedules or deadlines for compliance or reporting requirements for small businesses.

There were no non-regulatory alternatives available to consider.

Schedules of compliance and reporting requirements to meet the proposed standards may be considered when permit or approval actions are taken, in accordance with 25 Pa Code Chapter 92a. They are not considered as part of this scientific evaluation of the correct water quality criteria needed to protect surface waters.

(c) The consolidation or simplification of compliance or reporting requirements for small businesses.

Schedules of compliance and reporting requirements to meet the proposed standards may be considered when permit or approval actions are taken. They are not part of this scientific evaluation and establishment of the correct water quality criteria needed to protect surface waters.

(d) The establishment of performance standards for small businesses to replace design or operational standards required in the regulation.

The proposed regulations represent performance standards. They identify the instream goals for water quality protection and do not identify the design or operational standards that must be used to meet the goals.

(e) The exemption of small businesses from all or any part of the requirements contained in the regulation.

There were no such exemptions of small businesses to consider in this case.

(28) If data is the basis for this regulation, please provide a description of the data, explain in detail how the data was obtained, and how it meets the acceptability standard for empirical, replicable and testable data that is supported by documentation, statistics, reports, studies or research. Please submit data or supporting materials with the regulatory package. If the material exceeds 50 pages, please provide it in a searchable electronic format or provide a list of citations and internet links that, where possible, can be accessed in a searchable format in lieu of the actual material. If other data was considered but not used, please explain why that data was determined not to be acceptable.

Please see the attached rationale documents for criteria development and specific literature reviews and citations.

In addition to attached rationale documentation, more reference material can be accessed as described below:

DEP assessed the peer reviewed technical documentation for the recommended ammonia criteria and found it was scientifically sound. The document can be accessed at <https://www.epa.gov/wqc/aquatic-life-criteria-ammonia>

DEP assessed the peer reviewed technical documentation for the recommended recreational criteria for bacteria and found it was scientifically sound. The document can be accessed at <https://www.epa.gov/sites/production/files/2015-10/documents/rwqc2012.pdf>

DEP assessed the peer reviewed technical documentation for the recommended human health criteria and found it was scientifically sound. The document can be accessed at <https://www.epa.gov/sites/production/files/2015-10/documents/human-health-2015-update-factsheet.pdf>

(29) Include a schedule for review of the regulation including:

- A. **The length of the public comment period:** 60-days
- B. **The date or dates on which any public meetings or hearings will be held:** Hearings TBD; during 60-day comment period
- C. **The expected date of delivery of the final-form regulation:** Quarter 2, 2018
- D. **The expected effective date of the final-form regulation:** Quarter 2, 2018
- E. **The expected date by which compliance with the final-form regulation will be required:** Quarter 2, 2018
- F. **The expected date by which required permits, licenses or other approvals must be obtained:** When permits or approvals are issued or renewed

(30) Describe the plan developed for evaluating the continuing effectiveness of the regulations after its implementation.

This regulation will be reviewed on a triennial basis, as required at least once every three years, in accordance with the federal Clean Water Act. As newer science is developed, the standards will be updated.

TABLE – TR17 RAF # 12
Summary: Criteria Update for U.S. EPA Region 3 and Neighboring States

AMMONIA		U.S. EPA's 2015 Human Health Criteria Updates
Pennsylvania		
<i>Human Health</i>		Proposing EPA's 2015 HH Criteria Updates for 94 pollutants; adding new risk input factors into codified methods for criteria development; and recalculated several state-derived criteria using new risk input factors during current TR
<i>Freshwater Aquatic Life - Current Criteria</i>	Current criteria based on EPA 1983 draft report	
<i>Freshwater Aquatic Life – Proposed Criteria</i>	Proposing EPA 2013 (mussels & trout present statewide) during current TR	
Delaware		
<i>Freshwater Aquatic Life</i>	No immediate plans to adopt EPA 2013; but will consider during next TR	
<i>Freshwater Human Health</i>		No immediate plans to adopt EPA 2015; will evaluate approach & risk factors during next TR
Maryland		
<i>Freshwater Aquatic Life</i>	Will consider EPA 2013 in next TR or in the interim	
<i>Human Health</i>		Not planning to adopt at this time. May adopt in a subsequent rulemaking.
New Jersey		
<i>Freshwater Aquatic Life</i>	plans to adopt EPA 2013 during next TR	
<i>Freshwater Human Health</i>		No current plans to adopt EPA 2015; currently performing preliminary review of HH updates
New York		
<i>Human Health</i>		Currently reviewing EPA's 2015 Updates; comparing NY's procedural approach to EPA's updates (risk factors and methods)

<i>Freshwater Aquatic Life</i>	Considering adoption as part of next TR	
	AMMONIA	U.S. EPA's 2015 Human Health Criteria Updates
Ohio		
<i>Human Health</i>		Proposing to include EPA's 2015 HH Criteria Updates for 94 pollutants along with this next triennial.
<i>Aquatic Life - Current</i>	Currently equation-based NH ₃ criteria; Ohio-specific & tiered, varies by designated aquatic life / beneficial uses & OMZA ¹ http://www.epa.ohio.gov/portals/35/rules/01-07.pdf	
<i>Aquatic Life - Proposed</i>	Plan to propose EPA 2013 for Warm water = mussels present & salmonids absent. Cold water = either retain current criteria or propose EPA 2013 mussels present & salmonids present.	
Virginia		
<i>Freshwater Aquatic Life</i>	Currently holding stakeholder advisory meetings. Expect to ask Water Control Board for permission to publish proposal public notice late 2016 or spring 2017. VA's concern: Implementation has yet to be definitively addressed. One option discussed is through schedules of permit compliance.	
<i>Human Health</i>		Yes. VA plans to adopt. Part of the same rulemaking for ammonia criteria update.
West Virginia		
<i>Freshwater Aquatic Life</i>	No immediate plans to adopt EPA 2013, need to know if it is fully protective of mussels before change is sought	
<i>Human Health</i>		Not expecting to adopt this Triennial year—seeking further information from EPA on how HH Criteria Updates were developed

Washington, D.C.		
<i>Freshwater Aquatic Life</i>	District is proposing EPA 2013 ammonia criteria during 2016 triennial review	
<i>Human Health</i>		District is proposing EPA 2015 HH criteria update during 2016 triennial review
	AMMONIA	U.S. EPA's 2015 Human Health Criteria Updates
DRBC		
<i>Freshwater Aquatic Life</i>	No immediate plans to adopt EPA 2013; but will coordinate with member states according to progress of their TR's	
<i>Human Health</i>		No immediate plans to adopt EPA 2015; but currently evaluating and will coordinate with member states according to their TR's; using DRBC Toxics Advisory Committee
ORSANCO		
<i>Human Health</i>	1 mg/L (applied only at water intake)	Will consider EPA 2015 HH criteria for next triennial.
<i>Aquatic Life</i>	Adopted EPA 2013 ² .	

¹(OMZA) = outside mixing zone average

²Regarding Ammonia EPA 2013: Trout absent. Mussels present is default. Mussels absent table included in standards.

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