

**NOTICE OF FINAL RULEMAKING
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ENVIRONMENTAL QUALITY BOARD
[25 PA. Code, Chapter 93]**

Triennial Review of Water Quality Standards

Order

The Environmental Quality Board (Board) is amending 25 Pa. Code Chapter 93 (relating to water quality standards) as set forth in Annex A.

This order was adopted by the Board at its meeting of April 16, 2013.

A. Effective Date

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

B. Contact Persons

For further information contact Rodney A. Kime, Chief, Division of Water Quality Standards, Bureau of Point and Non-Point Source Management, 11th Floor, Rachel Carson State Office Building, P.O. Box 8774, Harrisburg, PA 17105-8774, (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) website (<http://www.dep.state.pa.us>).

C. Statutory Authority

The final rulemaking is 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 authorizes 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 131.41 (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 the Commonwealth.

D. Background and Summary

Section 303(c)(1) of The Clean Water Act requires that states periodically, but at least once every three years, review and revise as necessary, their water quality standards. This regulation constitutes Pennsylvania's current triennial review of its water quality standards.

Pennsylvania's water quality standards, which are codified in Chapter 93 and portions of Chapter 92a, are designed to implement the requirements of Section 5 and 402 of The Clean Streams Law and Section 303 of the Federal Clean Water Act (33 U.S.C.A. § 1313). The water quality standards consist of the designated and existing uses of the surface waters of this Commonwealth, along with the specific numeric and narrative criteria necessary to achieve and maintain those uses, and an antidegradation policy. Thus, water quality standards are instream 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.

This final rule will revise the Chapter 93 (Water Quality Standards) regulations. These regulatory revisions will clarify requirements and update the regulations to be consistent with federal guidance where indicated. This regulation may affect persons who discharge wastewater into surface waters of the Commonwealth or otherwise conduct activities, which may impact such 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. DEP evaluated the two Pennsylvania water bodies where the uses are not currently met, including: (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 U.S. 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 of Environmental Resources (DER) 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 the final rulemaking.

In April 1989 DER cooperated with the Delaware River Basin Commission (DRBC), the U.S. Environmental Protection Agency (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 Sections 93.9e and 93.9g (Drainage Lists E and 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.

The Department discussed the proposed triennial rulemaking with the Water Resources Advisory Committee (WRAC) five times in 2011, including at the committee's April, June, July, October and December 2011 meetings. On January 11 2012, WRAC voted to present the proposed rulemaking package to the Board. The Agricultural Advisory Board declined the need for their consideration on the proposed triennial review of water quality standards that was scheduled for its regular October 19, 2011 meeting.

The regulation was adopted by the Board as proposed rulemaking at its April 17, 2012 meeting, and was published in the *Pennsylvania Bulletin* on July 7, 2012 (42 Pa.B. 4367) with provision for a 45-day public comment period that ended August 21, 2012. The Board held a public hearing for the purpose of accepting comments on the proposed rulemaking on August 8, 2012 in Conference Room 105, Rachel Carson State Office Building, 400 Market Street, Harrisburg, PA. The Board received public comments from 197 commenters including testimony from two witnesses at the public hearing. The comments received on the proposed regulation are summarized in Section E below.

The Board has considered all of the public comments received on its proposed rulemaking in preparing this final regulation. WRAC, in coordination with the Department, initiated an Ad hoc workgroup to discuss two aspects of the triennial review proposed rulemaking for revisions to Chapter 93, Water Quality Standards. The Ad hoc workgroup met on August 27, 2012 to discuss the proposed sulfate aquatic life criterion, and again on August 29, 2012, to allow for scientific information to be presented on the aquatic life and human health criterion for molybdenum. These publicly noticed Ad hoc workgroup meetings were held in Room 105, Rachel Carson State Office Building, 400 Market Street, Harrisburg, PA, and offered presenters the opportunity to participate by conference call, as well.

The draft final regulation was discussed with WRAC at its November 28, 2012 meeting. WRAC approved the final rulemaking and recommended the Department present the final rulemaking to the Board for adoption.

E. Summary of Responses to Comments and Changes to the Proposed Rulemaking

As a result of the public hearing and public comment period, the Board received comments from 197 commentators including the Independent Regulatory Review Commission (IRRC) and the U.S. Environmental Protection Agency (EPA Region 3). The majority of commentators expressed opposition to the proposed water quality criteria for molybdenum, sulfates and chlorides. Specifically, commentators questioned whether the statewide criteria for these contaminants would impact the economy and regulated community and also questioned the scientific studies the Department relied upon in the development of the criteria. Commentators also requested that the Department perform additional instream monitoring and provide further justification on the need for the proposed statewide criteria for molybdenum, sulfates and chlorides.

A more detailed summary of the comments submitted to the Board and the Department's responses to those comments are available in the Report to the Environmental Quality Board Comment and Response Document (February 2013).

A detailed description of the revisions to the Chapter 93 proposal follows:

§ 93.4d. Processing of petitions, evaluations, and assessments to change a designated use.

The Board received a comment requesting that all property owners affected by a potential stream redesignation be directly notified of the petition and assessment.

While the Department acknowledges that notifying the public of stream redesignation rulemaking activities is important, it would be onerous and costly to require the Department to directly notify all property owners, as suggested by the commentator; therefore the Board is not including direct property owner notification requirements in the final rulemaking. The Department believes it has effective measures in place to ensure the public is informed of stream redesignation activities. For example, the Department posts all of its stream redesignation rulemaking activities on its website at http://www.portal.state.pa.us/portal/server.pt/community/water_quality_standards/10556 (select “Monitoring”, then “Stream Redesignations”). Any interested member of the public can visit the Department’s website at any time to get the latest and most up-to-date information regarding the Department’s actions pertaining to stream redesignations. The Department will continue to post all of its stream redesignation rulemaking activities on its website. As an additional opportunity for notice, the Department is considering the issuance of a press release whenever an activity occurs related to stream redesignations. Currently, any member of the public who is interested about stream redesignation activities may register on the Department’s website to receive direct electronic notification of press releases issued by the Department. The Department believes these outreach measures will be more effective in notifying the public about stream redesignation rulemaking activities and will increase the effectiveness of the public notification provisions in §93.4d in comparison to relying on one-time notices published in local newspapers that often go unnoticed by the public. However, the Department may rely on newspaper notices to inform the public of stream redesignation rulemaking activities when it may be more appropriate to do so.

§ 93.7. Specific water quality criteria.

Chloride – There were several comments received by the Board in opposition to the chloride aquatic life equation-based criterion. The Board is withdrawing the proposed equation-based aquatic life criteria for chloride, including both the acute and chronic equations.

The overall proportion of ions (ion matrices) in the water affects the toxicity of individual ions such as chloride. There is now more recent and ongoing research, much of it funded by EPA, examining the relationship between various ion matrices and toxicity. A workshop attended by major researchers in April 2012 titled “Effects of Major Ions on Aquatic Organisms” focused on ion matrices and their effects on sensitive aquatic species. The ion matrices could be most problematic in the Commonwealth’s calcium dominated limestone streams or where the source of chlorides is other than sodium chloride.

The Department is now aware of several studies currently being undertaken to determine chloride toxicity. The Canadian Council of Ministers of the Environment released guidelines for chloride criteria development in 2011. The Stroud Water Research Center also prepared an

expert report on ambient water quality criteria for chlorides (Stroud Report #: 2010004 June 14, 2010). The report concluded that the criteria proposed by the Department may not be protective of sensitive species and as a result they recommended other more protective criteria.

The Department recognizes it needs to conduct a review and evaluation of recent data before adopting a standard, but that it must be done in a timely manner. By a majority vote of 13 to 0 with 1 abstention, WRAC passed the following motion at its November 28, 2012, meeting, encouraging the Department to continue working on chloride criteria: “WRAC encourages DEP to continue evaluating the chloride criteria with the goal of proposing new criteria preferably prior to the next Triennial review.”

Dissolved Oxygen – On final rulemaking, the Board is revising the proposed language in DO₁ to provide clarity to where §93.7(b) should be applied. Specifically, the clause “applied in accordance with (b)” is moved so that it is clear that both the 7-day average and minimum criteria for naturally reproducing salmonids should be applied in accordance with §93.7(b).

The Board would like to further clarify that the final regulations for dissolved oxygen criteria apply to flowing, freshwater and the epilimnion of naturally stratified lakes, ponds or impoundments.

Also, in response to a comment received by the Board, it is changing the word “Salmonid” to “salmonid”, since the word is no longer a proper noun and does not need to be capitalized.

Sulfate – The Board is withdrawing the proposed equation-based aquatic life criteria for sulfate. Dr. David Soucek, Ph.D., with the Illinois Natural History Survey, is the primary investigator in the research that led to the development of the proposed equation-based sulfate criteria. Dr. Soucek and other leading researchers cautioned that although the toxicological results supporting the proposed sulfate criterion are valid, the test conditions used in the toxicity tests, which led to the development of the sulfate criterion, may not be applicable to all the Commonwealth’s waters. The ionic composition of the test water compared to the natural ionic composition of portions of Pennsylvania’s waters differs and that difference is the cause for concern. Sodium (Na²⁺) was the dominant cation associated with the sulfate (SO₄²⁻) anion under the test conditions. In Pennsylvania streams, natural Sodium (Na²⁺) concentrations are low while calcium (Ca²⁺) and Magnesium (Mg²⁺) are more prevalent.

It has been demonstrated that varying the cations affects the toxicity of the sulfate anion in solution. This toxicity difference in response to ionic composition leads to doubts regarding whether the proposed sulfate criteria provides the appropriate level of aquatic life protection from the toxic effects that have been scientifically proven to be associated with elevated sulfate levels. Additionally, Dr. Soucek and other researchers stated that a chronic standard is needed to adequately protect the aquatic life and the proposed standard only includes an acute standard.

Although the Board is withdrawing the sulfate proposed criteria, the Department will continue to monitor the quantities of sulfate discharged from various sources and measure stream concentrations while reviewing the developing science on sulfate.

Temperature – The Board is removing the rate of temperature change language from this section. A rate of temperature change provision remains applicable in Chapter 96, Section 96.6 to help control adverse impacts that may result from rapid changes in temperature. The Department continues to be interested in evaluating new science that pertains to a rate of temperature change to protect aquatic organisms.

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

1,4-Dioxane – Based on comments received that a statewide criterion is not warranted, the Board is removing the proposed statewide criterion. The Department will continue to evaluate 1,4-dioxane in Pennsylvania. Additionally, the Department will continue to develop site-specific criteria, as needed, using the best available science.

Molybdenum – The Board is removing the proposed statewide criterion for molybdenum based on comments received that a statewide criterion for molybdenum is not warranted. The Department will continue to evaluate molybdenum in Pennsylvania. Additionally, the Department will continue to develop site-specific criteria, as needed, using the best available science.

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

In part (f)(1) the Board is adding language to this section to be consistent with the recent revisions in Chapter 92a. (relating to public notice of permit applications and draft permits; and public notice of public hearing). This change merely updates the cross references.

§ 93.9k. Drainage List K.

Staff from the Pennsylvania Fish and Boat Commission (PFBC) submitted comments during the public comment period of this triennial review regarding a possible omission of four named streams from § 93.9K. These four streams are Packers Run, Raups Run, Gaskins Run, and Kipps Run.

Gaskins Run, Kipps Run, Raups Run, and Packers Run are all currently designated CWF, MF. To be even broader, all tributaries to the (North Branch) Susquehanna River between Mahoning Creek and the West Branch Susquehanna River are CWF, MF. These four tributaries (Gaskins Run, Kipps Run, Raups Run, & Packers Run) are all included under the current entry for UNTs to Susquehanna River; Basins; Lackawanna River to West Branch Susquehanna River; Luzerne, Columbia, Montour, Northumberland; CWF, MF; None.

After reviewing the history associated with designation in this watershed, all tributaries to the Susquehanna River, both named and unnamed, between Mahoning Creek and West Branch Susquehanna River will be included in a single listing for “Tributaries to Susquehanna River”. This is a new change following the proposed rulemaking published at 42 Pa.B. 4187 and therefore it appears as capitalized, bolded and underlined text in the Annex. A more complete discussion of the designation history can be found in the Report to the Environmental Quality Board: Comment and Response Document (February 2013).

F. Benefits, Costs and Compliance

Benefits - Overall, the Commonwealth, its citizens and natural resources will benefit from these recommended changes because they provide the appropriate level of protection in order to preserve the integrity of existing and designated uses of surface waters in this Commonwealth. Protecting water quality also provides economic value to present and future generations in the form of clean water for multiple water supply uses, recreational opportunities, and human health 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.

Compliance Costs – The 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 must 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. These increased costs may take the form of higher engineering, construction or operating costs for facilities. Treatment costs and best management practices 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 or best management practices may be offset over time by potential savings from and increased value of improved water quality.

Compliance Assistance Plan — The final regulations 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 relating to compliance.

The final regulations 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.

Paperwork Requirements — The final regulations should have no significant paperwork impact on the Commonwealth, its political subdivisions, or the private sector.

G. Pollution Prevention

Water quality standards are a major pollution prevention tool because they protect water quality and designated and existing uses. The final regulations will be implemented through the Department's permit and approval actions. For example, the National Pollutant Discharge

Elimination System (NPDES) bases effluent limitations and best management practices on the water uses of the stream and the water quality criteria necessary to protect and maintain those uses.

H. Sunset Review

This final-form rulemaking will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulation effectively fulfills the goals for which it was intended.

I. Regulatory Review

Under Section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on June 22, 2012, the Department submitted a copy of the proposed rulemaking published at 42 Pa.B. 4367 on July 7, 2012, to the Independent Regulatory Review Commission (IRRC) and to the Chairpersons of the Senate and House Environmental Resources and Energy Committees (Standing Committees) for review and comment.

Under Section 5(c) of the Regulatory Review Act (71 P.S. § 745.5(c)), IRRC and the House and Senate Committees were provided with copies of the comments received during the public comment period, as well as other documents when requested. In preparing the final-form rulemaking, the Department has considered all comments from IRRC, the House and Senate Committees and the public.

Under section 5.1(j.2) of the Regulatory Review Act (71 P.S. § 745.5a(j.2)), on June 19, 2013, the final-form rulemaking was deemed approved by the House and Senate Committees. Under section 5.1(e) of the Regulatory Review Act, IRRC met on June 20, 2013, and approved the final-form rulemaking.

J. Findings of the Board

The Board finds that:

- (1) Public notice of proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P.L. 769, No. 240) (45 P.S. §§ 1201 and 1202) and regulations promulgated thereunder at 1 Pa. Code §§ 7.1 and 7.2.
- (2) A public comment period was provided as required by law. In addition, a Board hearing was held. All comments were considered.
- (3) This final-form rulemaking does not enlarge the purpose of the proposal published at 42 Pa.B. 4367.
- (4) This final-form rulemaking is necessary and appropriate for administration and enforcement of the authorizing acts identified in Section C of this order.

K. Order of the Board

The Board, acting under the authorizing statutes, orders that:

- (a) The regulations of the Department, 25 PA Code Chapter 93, are amended by amending §§ 93.1, 93.4c, 93.4d, 93.7, 93.8b, 93.8c, 93.8d, 93.9b – 93.9i, 93.9k – 93.9o, 93.9s, 93.9w, 93.9z to read as set forth in Annex A, with ellipses referring to the existing text of the regulation.
- (b) The Chairperson of the Board shall submit this order and Annex A to the Office of General Counsel and the Office of Attorney General for approval and review as to legality and form, as required by law.
- (c) The Chairperson shall submit this order and Annex A to the Independent Regulatory Review Commission and the Senate and House Environmental Resources and Energy Committees as required by the Regulatory Review Act.
- (d) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.
- (e) This order shall take effect immediately upon publication in the *Pennsylvania Bulletin*.

E. Christopher Abruzzo
Acting Chairperson
Environmental Quality Board