

**FINAL-FORM RULEMAKING  
ENVIRONMENTAL QUALITY BOARD  
[25 PA. CODE CH. 93]**

**Water Quality Standards; Dunbar Creek et al. Stream Redesignations**

The Environmental Quality Board (Board) amends Chapter 93 (relating to water quality standards). This final-form rulemaking amends the drainage lists at §§ 93.9c, 93.9k, 93.9l, 93.9o, 93.9r, 93.9t and 93.9v (relating to designated water uses and water quality criteria) as set forth in Annex A. The purpose of this final-form rulemaking is to update the designated uses so the surface waters of this Commonwealth are afforded the appropriate level of protection. This final-form rulemaking fulfills the Commonwealth's obligations under State and Federal law to review and revise, as necessary, water quality standards that are protective of surface waters.

This final-form rulemaking was adopted by the Board at its meeting of **DATE**.

*A. Effective Date*

This final-form rulemaking will be effective upon publication in the *Pennsylvania Bulletin*. Once approved by the United States Environmental Protection Agency (EPA), water quality standards are used to implement the Federal Clean Water Act (CWA) (33 U.S.C.A. §§ 1251—1388).

*B. Contact Persons*

For further information, contact Michael (Josh) Lookenbill, Program Manager, Water Quality Standard Division, Bureau of Clean Water, 11th Floor, Rachel Carson State Office Building, P.O. Box 8774, 400 Market Street, 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 Pennsylvania Hamilton Relay Service by calling (800) 654-5984 (TDD-users) or (800) 654-5988 (voice users). This final-form rulemaking is available on the Department of Environmental Protection's (Department) web site at [www.dep.pa.gov](http://www.dep.pa.gov) (Select "Public Participation," then "Environmental Quality Board" and then navigate to the Board meeting of **DATE**).

*C. Statutory Authority*

This final-form rulemaking is authorized under sections 5(b)(1) and 402 of The Clean Streams Law (CSL) (35 P.S. §§ 691.5 (b)(1) and 691.402), which authorize the Board to develop and adopt rules and regulations to implement the CSL (35 P.S. §§ 691.1—691.1001), 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, sections 101(a)(2) and 303(c)(2)(A) of the CWA (33 U.S.C.A. §§ 1251(a)(2) and 1313(c)(2)(A)) set forth requirements for water quality standards.

#### *D. Background and Purpose*

The purpose of developing water quality standards is to protect this Commonwealth's surface waters. Water quality standards are in-stream water quality goals that are implemented by imposing specific regulatory requirements (such as treatment requirements, effluent limits and best management practices (BMPs)) on individual sources of pollution. Water quality standards include designated uses, numeric and narrative criteria to protect those uses, and antidegradation requirements for surface waters. The Commonwealth protects its surface waters for a variety of uses relating to aquatic life, water supply, recreation and fish consumption, special protection and navigation.

The continued development of water quality standards, including revisions and updates, is required by Federal and State law. Section 5 of the CSL (35 P.S. § 691.5) instructs the Department to consider water quality management and pollution control in the watershed as a whole, and the present and possible future uses of waters when adopting rules and regulations. In addition to these requirements, the Commonwealth has responsibilities under the CWA that require water quality standards to be reviewed and approved by the EPA for consistency with the mandates under that act. Section 101(a)(2) of the CWA (33 U.S.C.A. § 1251(a)(2)) establishes the National goal that, wherever attainable, water quality should provide for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water. Section 303(c)(2)(A) of the CWA (33 U.S.C.A. § 1313(c)(2)(A)) requires water quality standards to include designated uses of waters, taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial and other purposes. Section 303(d)(4)(B) of the CWA (33 U.S.C.A. § 1313(d)(4)(B)) establishes an antidegradation policy for waters where the quality of the water equals or exceeds levels necessary to protect the designated uses for such waters. Section 303(c)(1) of the CWA (33 U.S.C.A. § 1313(c)(1)) requires states to periodically review and revise, as necessary, their water quality standards. The designated uses included in this final-form rulemaking are consistent with these State and Federal statutory mandates.

The Department also has an obligation to protect existing uses when data indicates that a surface water attains or has attained an existing use. Section 93.1 (relating to definitions) defines "existing uses" as "those uses actually attained in the waterbody on or after November 28, 1975, whether or not they are included in the water quality standards." Where the existing uses are different than the designated uses for a surface water, the waterbody will receive the water quality protection identified by either the existing uses or the designated uses, whichever use is most protective.

For example, if the designated use of a stream is listed as Cold Water Fishes (CWF) but the Department's evaluation of available existing use information indicates that the water also attains the use of High Quality Waters (HQ), the stream would be protected for this HQ-CWF existing use through Department permit or approval actions. Section 93.4c (relating to implementation of antidegradation requirements) requires the Department to make a final determination of existing use protection for a surface water as part of a final permit or approval action. During the review of a permit application and draft permit, interested persons may provide the Department with additional information regarding existing use protection for the surface water. This additional information is considered prior to a final determination of existing use protection and is included

in the draft stream evaluation reports that are published on the Department's web site for public review and comment.

In addition to existing use determinations made during a Department permit or approval process, stream use evaluations may be initiated in other ways. The Department may identify candidate streams for redesignation of uses during routine waterbody investigations. Other agencies may request use evaluations to be considered, and members of the public may submit a rulemaking petition to the Board in accordance with § 93.4d (relating to processing of petitions, evaluations and assessments to change a designated use). When an evaluation of the data demonstrates that existing uses are incongruent with the designated uses, a stream redesignation proposal will be initiated through the rulemaking process to ensure the designated uses in the drainage lists found in §§ 93.9a—93.9z are consistent with the existing uses of the stream.

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 residents and visitors of this 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 related illnesses. Clean surface waters benefit this Commonwealth by providing for increased tourism and recreational use of the waters. Clean water provides for increased wildlife habitat and more productive fisheries. Furthermore, clean water attracts businesses and industry that require a high quality of surface water for production or operation.

The purpose of this final-form rulemaking is to update the designated uses so that the surface waters of this Commonwealth are afforded the appropriate level of protection. These amendments to the designated uses of streams benefit not only local residents but those persons from outside the areas affected by this final-form rulemaking who come to enjoy the benefits and aesthetics of outdoor recreation.

The amendments are the result of stream evaluations conducted by the Department in response to: petitions (Bear Run, Cranberry Creek, Two Lick Creek); a request from the Pennsylvania Fish and Boat Commission (PFBC) (Dunbar Creek); the Department's ongoing Statewide monitoring activities (UNT 08187 to South Branch Codorus Creek and Clyde Run); and an error identified in Chapter 93 (UNT 28168 to Oley Creek). The stream redesignations rely on the special protection qualifiers found at §§ 93.4b(a)(2)(i)(A), 93.4b(a)(2)(ii), 93.4b(b)(1)(iii), 93.4b(b)(1)(v), and 93.4b(b)(2) (relating to qualifying as High Quality or Exceptional Value Waters). The redesignations also include evaluation of the protected water uses specified in § 93.3 (relating to protected water uses) (UNT 08187 to South Branch Codorus Creek) and the less restrictive use qualifiers specified in § 93.4(b) (relating to Statewide water uses) (UNT 28168 to Oley Creek). The specific qualifiers applied for each of the stream redesignation recommendations are detailed in the individual stream evaluation reports available on the Department's web site. This final-form rulemaking was developed by the Bureau of Clean Water following a comprehensive evaluation of the physical, chemical and biological characteristics of these waterbodies and other information available on these waterbodies. The data and information evaluated support this final-form regulation as set forth in Annex A.

In addition to the changes to designated uses, the Board is correcting an error that was inadvertently introduced in a prior rulemaking to the drainage list in § 93.9c (relating to Drainage

List C), published at 48 Pa.B. 866 (February 10, 2018). The correction clarifies that the mainstem and tributaries of Swiftwater Creek downstream of UNT 04960 continue to be designated as HQ-CWF, MF.

The Board adopted the proposed rulemaking at its April 20, 2021 meeting, and was published in the *Pennsylvania Bulletin* at 51 Pa.B. 4062 (July 31, 2021) with a 45-day public comment period that closed on September 14, 2021. The Board held one virtual public hearing on August 30, 2021, for the purpose of accepting comments on the proposed rulemaking. The Board received comments from 228 commentators, including testimony from three witnesses at the public hearing and a letter from the Independent Regulatory Review Commission (IRRC) indicating IRRC had no objections, comments or recommendations to offer on the regulation. The comments received on the proposed rulemaking are summarized in section F.

The Board has considered all public comments received on the proposed rulemaking in preparing this final-form rulemaking.

*E. Summary of Final-Form Rulemaking and Changes from Proposed to Final-Form Rulemaking*

This final-form rulemaking amends the drainage lists at §§ 93.9c, 93.9k, 93.9l, 93.9o, 93.9r, 93.9t and 93.9v set forth in Annex A. The purpose of this rulemaking is to update the designated uses so that the surface waters of this Commonwealth are afforded the appropriate level of protection. Other than a change to Drainage List L discussed as follows, there are no changes made to the amendments described as follows from the proposed rulemaking to this final-form rulemaking.

As part of this stream redesignation process and in accordance with § 93.4c, the Department offered opportunities for the public to provide data and information during the review of surface water uses prior to drafting the proposed rulemaking. The Department provided public notice of its intent to assess Bear Creek, Clyde Run, Cranberry Creek, Dunbar Creek, Two Lick Creek, UNT 28168 to Oley Creek and UNT 08187 to South Branch Codorus Creek and requested water quality data for these streams through publications in the *Pennsylvania Bulletin* as summarized in Table 1.

**Table 1. *Pennsylvania Bulletin* publication dates for notices of stream evaluation.**

<b>Stream Name</b>	<b>Pennsylvania Bulletin</b>	<b>Publication Date</b>
Bear Run	37 Pa.B. 4490	August 11, 2007
	46 Pa.B. 3328	June 25, 2016
Clyde Run	40 Pa.B. 5643	October 2, 2010
Cranberry Creek	44 Pa.B. 6149	September 27, 2014
	48 Pa.B. 5924	September 22, 2018
Dunbar Creek	30 Pa.B. 2071	April 22, 2000
Two Lick Creek	34 Pa.B. 1520	March 13, 2004
UNT 28168 to Oley Creek	45 Pa.B. 2676	May 30, 2015
UNT 08187 to South Branch Codorus Creek	42 Pa.B. 2539	May 12, 2012

Additionally, notices of the intent to assess these streams were posted on the Department's web site. The Department directly notified affected municipalities, planning commissions, conservation districts and Commonwealth agencies of these redesignation evaluations in letters dated as summarized in Table 2.

**Table 2. Letters of notification to affected governmental organizations and agencies.**

<b>Stream Name</b>	<b>Date of Letter</b>
Bear Run	May 22, 2007
	July 8, 2016
Clyde Run	November 5, 2010
Cranberry Creek	September 15, 2017
Dunbar Creek	April 19, 2000
Two Lick Creek	March 2, 2004
UNT 28168 to Oley Creek	May 11, 2015
UNT 08187 to South Branch Codorus Creek	April 2, 2012

In response to these notifications, the Department received one letter in support of the redesignation for Bear Run. The Department received no additional water quality data for Bear Run, Clyde Run, Dunbar Creek, Two Lick Creek, UNT 28168 to Oley Creek or UNT 08187 to South Branch Codorus Creek. Karl M. Weiler provided temperature data for Cranberry Creek.

Following the period for data submission described in the notices of intent to assess, the Department evaluated all available water quality data and other applicable information for these streams, drafted stream evaluation reports and published the draft reports on its web site for public review and comment as summarized in Table 3. If members of the public are interested in receiving notifications of stream evaluations, including the notices of intent to assess and draft stream evaluation reports, they may subscribe to the Department's Electronic Notification System, eNotice.

**Table 3. Stream evaluation draft report publication for public comment.**

<b>Stream Name</b>	<b>Draft Report Publication Date</b>	<b>Petitioner (if applicable)</b>
Bear Run	February 24, 2017	Ken Sink Chapter of Trout Unlimited
Clyde Run	July 14, 2018	
Cranberry Creek	July 14, 2018	Brodhead Creek Watershed Association
Dunbar Creek	July 14, 2018	
Two Lick Creek	February 24, 2017	Ken Sink Chapter of Trout Unlimited
UNT 28168 to Oley Creek	July 14, 2018	
UNT 08187 to South Branch Codorus Creek	February 24, 2017	

Each draft report was open for public comment for no less than a 30-day period.

For Bear Run, one comment was received in support of the Exceptional Value Waters (EV) and HQ-CWF recommendations.

For Clyde Run, one comment was received in support of the recommendations.

For Cranberry Creek, approximately 159 comments were received in response to the draft report. Ten comments expressed opposition and 148 comments expressed support for the recommendations. A macroinvertebrate survey conducted by Normandeau Associates was submitted.

For Dunbar Creek, the Department received 46 comments in support of the recommendations.

For Two Lick Creek, the Department received three comments in response to the draft report. One comment was in support of the recommendation and two comments were in opposition.

No comments were received on the draft report for UNT 28168 to Oley Creek.

One comment was received in support of the EV recommendation for UNT 08187 to South Branch Codorus Creek.

Copies of the stream evaluation reports for these waterbodies are available on the Department's web site or from the contact persons listed in section B of this preamble. All data and comments received in response to these notifications were considered in the review of the surface water evaluations for these streams. The data and information collected on these waterbodies support the Board's final-form rulemaking as set forth in Annex A.

Department staff delivered a presentation of the proposed rulemaking to the Agricultural Advisory Board on November 7, 2019. Staff provided a brief overview of the stream redesignation process and the Department's recommendations for the streams included in this final-form rulemaking.

The following is a brief summary of the Department's recommendations for each waterbody.

§ 93.9c. *Drainage List C*

*Cranberry Creek*—The Brodhead Creek Watershed Association submitted a petition requesting that Cranberry Creek, from its source to mouth, be considered for redesignation to EV. The indigenous aquatic community is an excellent indicator of long-term water quality conditions and is used as a measure of both water quality and ecological significance. The integrated benthic macroinvertebrate score test described at § 93.4b(b)(1)(v) was applied to Cranberry Creek. Dimmick Meadow Brook (05244) served as the EV reference for stream metrics comparisons. Three of four stations met the 92% comparison required to qualify for EV. Therefore, the Department recommended that the Cranberry Creek basin, from and including UNT 04948 to its mouth be designated as EV, Migratory Fishes (EV, MF) in § 93.9c (relating to

Drainage List C). The remainder of the Cranberry Creek basin, from its source to UNT 04948 should maintain the current designated use of HQ-CWF, MF.

§ 93.9k. *Drainage List K*

*UNT 28168 to Oley Creek*—The Department conducted an evaluation of UNT 28168 to Oley Creek due to an error discovered in § 93.9k (relating to Drainage List K) that affected the Oley Creek basin and UNT 28168. The error listed these surface waters with two conflicting use designations. A correction to § 93.9k was made in the stream redesignation rulemaking published at 47 Pa.B. 7029 (November 18, 2017), which lists the designated use of UNT 28168 as HQ-CWF consistent with the 1979 rulemaking. UNT 28168 is also currently listed on the Commonwealth's CWA section 303(d) list of impaired waters. The aquatic life use of UNT 28168 is impaired, and the source has been identified on the CWA section 303(d) list as Abandoned Mine Drainage. The Department evaluated the stream to determine if the human caused conditions that created the impairment occurred before the special protection designation and whether or not the current designated use of HQ-CWF is attainable. As required by § 93.4(b), a use attainability analysis was conducted to determine the appropriate designated aquatic life use of the water. A survey of UNT 28168 indicated that it is appropriately listed on the section 303(d) list of impaired waters. Furthermore, historical aerial photography confirms that significant mining activity as early as 1939 caused conditions that prevented UNT 28168 from meeting the Conservation Area designated use in 1973 and the HQ designated use in 1979. Due to current limitations in available treatment technologies, land availability and remediation, for both point and nonpoint source control of the specific pollutants of concern, UNT 28168 will not attain the HQ-CWF use. Therefore, the Department recommended that UNT 28168 to Oley Creek be designated as CWF, MF in § 93.9k.

§ 93.9l. *Drainage List L*

*Bear Run*—The Ken Sink Chapter of Trout Unlimited submitted a petition requesting that the Bear Run basin, from its source to its confluence with South Branch Bear Run, be considered for redesignation to HQ or EV. On April 16, 2016, the PFBC added Bear Run, from its source to its confluence with South Branch Bear Run, to the List of Class A Wild Trout Waters following public notice and comment (46 Pa.B. 1977 (April 16, 2016)). The Bear Run basin, from its source to its confluence with South Branch Bear Run, qualifies as HQ based on § 93.4b(a)(2)(ii) regarding Class A wild trout stream qualifier. In addition, the portions of the Bear Run basin located entirely within State Game Land (SGL) 174 meet the definition in § 93.1 for an "outstanding National, State, regional or local resource water." These waters satisfy the HQ qualifiers in § 93.4b(a) and are located within SGL managed by the Pennsylvania Game Commission (PGC). The PGC has established coordinated water quality protective measures in its resource management plans that provide protection to substantial reaches of the watershed corridor. As such, these stream segments qualify as EV waters under § 93.4b(b)(1)(iii). Therefore, the Department recommended that: the Bear Run basin, from UNT 27063 to South Branch Bear Run excluding the headwaters of Brooks Run, be designated as EV in § 93.9l (relating to Drainage List L); and that the Bear Run basin, from its source to and including UNT 27063, and the Brooks Run basin from its source to and including UNT 27059, be designated as HQ-CWF in § 93.9l.

Drainage List L has been amended between the proposed rulemaking and this final-form rulemaking to clarify that the South Branch Bear Run basin retains its current designated use of CWF, MF and is not included in the EV redesignation of Bear Run – Basin, Brooks Run to South Branch Bear Run.

§ 93.9o. *Drainage List O*

*UNT 08187 to South Branch Codorus Creek*—The Department evaluated the UNT 08187 to South Branch Codorus Creek basin as part of ongoing Statewide monitoring efforts. Biological data were collected to evaluate UNT 08187 since the indigenous aquatic community is an excellent indicator of long-term water quality conditions. The integrated benthic macroinvertebrate score test described at § 93.4b(b)(1)(v) was applied to UNT 08187. Carbaugh Run (60248) served as the EV reference for stream metrics comparisons. Both stations on UNT 08187 met the 92% comparison required to qualify for EV. Therefore, the Department recommended the entire basin of UNT 08187 to South Branch Codorus Creek be designated as EV, MF in § 93.9o (relating to Drainage List O).

§ 93.9r. *Drainage List R*

*Clyde Run*—The Department evaluated the Clyde Run basin as part of ongoing Statewide monitoring efforts. Biological data were collected to evaluate Clyde Run since the indigenous aquatic community is an excellent indicator of long-term water quality conditions. The integrated benthic macroinvertebrate score test described at § 93.4b(b)(1)(v) was applied to Clyde Run. Korb Run (54831) served as the EV reference for stream metrics comparisons. The Clyde Run station met the 92% comparison required to qualify for EV. Therefore, the Department recommended the entire basin of Clyde Run be designated as EV in § 93.9r (relating to Drainage List R).

§ 93.9t. *Drainage List T*

*Two Lick Creek*—The Ken Sink Chapter of Trout Unlimited submitted a petition requesting that the Two Lick Creek main stem, from the tailrace of the Two Lick Reservoir to Yellow Creek, be considered for redesignation to HQ-CWF. The Two Lick Creek main stem is currently designated Trout Stocking (TSF). The indigenous aquatic community is an excellent indicator of long-term water quality conditions. The integrated benthic macroinvertebrate score test described at § 93.4b(a)(2)(i)(A) was applied to Two Lick Creek. Cross Fork (23765) and Kettle Creek (23661) served as the EV references for stream metrics comparisons. Data collected at two stations on Two Lick Creek in 2005 were compared to Cross Fork while data collected at one of the same stations in 2009 were compared to Kettle Creek. None of the Two Lick Creek samples exceeded the 83% comparison required to qualify for HQ. As a result of data collection, the Department documented the presence of a naturally reproducing Salmonidae community and other flora and fauna indigenous to a cold water habitat in Two Lick Creek. Therefore, the Department recommended the Two Lick Creek main stem, from the Two Lick Reservoir tailrace to the confluence of Yellow Creek, be designated as CWF in § 93.9t (relating to Drainage List T).



§ 93.9v. *Drainage List V*

*Dunbar Creek*—The PFBC submitted information to the Department requesting that the Dunbar Creek basin, from its source to Gist Run, be considered for redesignation to EV. The integrated benthic macroinvertebrate score test described at § 93.4b(b)(1)(v) was applied to Dunbar Creek. Clear Shade Creek (45293) served as the EV reference for stream metrics comparisons. Six of 12 stations on Dunbar Creek met the 92% comparison required to qualify for EV. In addition, the portions of the Dunbar Creek basin located entirely within SGL 51 meet the definition in § 93.1 for an "outstanding National, State, regional or local resource water." These waters are currently designated HQ and are located within SGL managed by the PGC. The PGC has established coordinated water quality protective measures in its resource management plans that provide protection to substantial reaches of the watershed corridor. As such, these stream segments qualify as EV waters under § 93.4b(b)(1)(iii). The PGC water quality protective measures combined with reasonable acid mine drainage remediation and recovery projects demonstrate that an EV designated use for the Glade Run basin as set forth in Annex A is appropriate. Therefore, the Department recommended EV designations in § 93.9v (relating to Drainage List V) for: the Dunbar Creek basin, from its source to Glade Run; the Glade Run basin, from the boundary of SGL 51 to Mouth; and the Dunbar Creek basin, from Glade Run to Gist Run.

*Correction to Drainage List C*

In the Sobers Run rulemaking published at 48 Pa.B. 866 (February 10, 2018), Swiftwater Creek basin retained its HQ designation with the exception of adding an EV designation for the source of Swiftwater Creek to, but not including, UNT 04960 to Swiftwater Creek. The word "basin" was inadvertently omitted with the listing of UNT 04960 to Mouth, thereby eliminating listings for tributaries to that section of Swiftwater Creek. This final-form rulemaking restores the original HQ listing for those tributaries by adding the "basin" designation.

*F. Summary of Comments and Responses on the Proposed Rulemaking*

All public comments received on the proposed rulemaking supported the stream redesignation recommendations as set forth in Annex A.

The Board received comments from 65 commentators in support of redesignating the surface waters contained in this final-form rulemaking.

The Board received a comment from 57 commentators highlighting a 2014 Lehigh Valley report that outlines the economic value of protecting clean water and natural areas.

The Board also received comments from 161 commentators supporting the Cranberry Creek redesignation recommendation to EV, MF. In addition to their support for the redesignation, several commentators requested the Department reevaluate the basin from its source to unnamed tributary (UNT) 04948 stating that the scores necessary to qualify for EV designation were close to being achieved.

Six commentators submitted comments in support of the Dunbar Creek basin redesignation recommendation.

The EPA provided one comment with respect to the redesignation of UNT 28168 to Oley Creek from HQ-CWF, MF to CWF, MF and noted that a use attainability analysis (UAA) is required for redesignations to less restrictive uses. Two additional commentators echoed the EPA's comment.

The Board appreciates these comments in support of this final-form rulemaking. The Board does not agree that the headwaters of Cranberry Creek warrant additional evaluation at this time and is not recommending redesignation of the Cranberry Creek basin from its source to UNT 04948 in this final-form rulemaking. With respect to the EPA's comment, the stream report for UNT 28168 to Oley Creek includes the required UAA component, and a copy of each stream report is available on the Department's web site.

### *G. Benefits, Costs and Compliance*

#### *Benefits*

Overall, this Commonwealth's residents and visitors and its natural resources will benefit from this final-form rulemaking because it provides the appropriate level of protection to preserve the integrity of existing and designated uses of surface waters in this Commonwealth. Protecting water quality provides economic value to present and future generations in the form of a clean water supply for human consumption, wildlife, irrigation and industrial use; recreational opportunities such as fishing (also for consumption); water contact sports and boating; and aquatic life protection. It is important for the Commonwealth to ensure that the associated opportunities and activities continue in a manner that is environmentally, socially and economically sound. Protection and maintenance of water quality ensures its future availability for all potential uses. The following paragraphs describe the economic and social benefits of clean water that are protected by this final-form rulemaking.

#### *Increased property values*

A reduction in toxics found in the waterways of this Commonwealth 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), pp. 529—534 ([www.jstor.org/stable/1239441](http://www.jstor.org/stable/1239441))), used real estate prices to determine the value of improvements in water quality in small rivers and streams in this Commonwealth. Water quality, whether measured in pH or by the owner's perception, has a significant effect on the price of adjacent property. The 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 affect the price paid for a residential property.

A 2010 report from the Delaware Riverkeeper Network ([www.delawariverkeeper.org/sites/default/files/River Values Report 0.pdf](http://www.delawariverkeeper.org/sites/default/files/River%20Values%20Report%200.pdf)) discusses a case study from the Maine Agricultural and Forest Experiment Station which compared water-front

property values based on whether the water that the homes faced was considered clean. Properties located near higher quality waters had higher market value than if the waterbody was lower in water quality. It was shown in some cases that a decline in water quality can completely abate the market value premium associated with a home being a waterfront property.

A 2006 study by Braden et al. from the Great Lakes region estimated that property values were significantly depressed in two regions associated with toxic contaminants (polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs) and heavy metals). The study showed that a portion of the Buffalo River region (approximately 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 multifamily homes as a result of toxic sediments. The same study (Braden et al. 2006) estimated that a portion of the Sheboygan River (approximately 14 miles long) had depressed property values of between \$80 million and \$120 million as the result of toxics. “Economic Benefit of Sediment Remediation in the Buffalo River AOC and Sheboygan River AOC: Final Project Report,” ([www.nemw.org/Econ](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 applies in this Commonwealth. A reduction in toxic pollution in this Commonwealth’s waters has a substantial economic benefit to property values in close proximity to waterways.

*Maintenance of abundant and healthy fish and wildlife populations and support for outdoor recreation*

Businesses requiring a high-quality source water and those in the recreation industry will be positively affected by this final-form rulemaking. The maintenance and protection of the water quality will ensure the long-term availability of recreational fisheries and other activities. The purpose of these stream redesignations is to preserve these resources for current and future sportspersons, outdoor recreators and wildlife enthusiasts so that the social and economic benefits are maintained in the local areas. As recreation demands increase in the future, the preservation of unique resources will undeniably add economic value to the local areas and, importantly, provide a valuable social function for outdoor recreation. Specific revenue-related benefits associated with outdoor trout fishing in this Commonwealth are outlined below.

The Center for Rural Pennsylvania prepared a report titled “Economic Values and Impacts of Sport Fishing, Hunting and Trapping Activities in Pennsylvania” (Shafer et al. 1998, [www.rural.palegislature.us/documents/reports/hunting.pdf](http://www.rural.palegislature.us/documents/reports/hunting.pdf)) that examined such economic values and impacts between the years 1995 to 1997. The report provides a snapshot of how much money these sporting activities bring to this Commonwealth and how they affect employment in rural areas. A major finding of that report is the total annual value of \$3.7 billion for sport fishing was almost three times the \$1.26 billion spent in travel costs to use fishing resources during the same 12-month period. The total net annual benefit to anglers was \$2.49 billion.

According to the “Angler Use, Harvest and Economic Assessment on Wild Trout Streams in Pennsylvania,” (R. Greene et al., 2005, [www.fishandboat.com/Fish/Fisheries/TroutPlan/Documents/WildTroutStreamAnglerUseCatchEconomicContribution.pdf](http://www.fishandboat.com/Fish/Fisheries/TroutPlan/Documents/WildTroutStreamAnglerUseCatchEconomicContribution.pdf)), the PFBC collected information to assess the economic impact of wild trout angling in this Commonwealth, during the 2004 regular trout season, April 17 through

September 3, 2004. The PFBC found, based on the results of this study, that angling on wild trout streams contributed over \$7.16 million to this Commonwealth's economy during the regular trout season in 2004.

According to the "2011 National Survey of Fishing, Hunting and Wildlife-Associated Recreation" (U.S. Fish and Wildlife Service 2011, [www.census.gov/prod/2012pubs/fhw11-nat.pdf](http://www.census.gov/prod/2012pubs/fhw11-nat.pdf)) for this Commonwealth, approximately 1,101,000 anglers, participated in fishing and 3,598,000 persons participated in wildlife watching in the year 2011. In addition, all fishing related expenditures in this Commonwealth totaled \$485 million in 2011. Such expenditures include food and lodging, transportation, and other expenses (that is, equipment rental, bait, cooking fuel). In 2011, wildlife watchers spent \$1.3 billion on activities in this Commonwealth. Expenditures include trip-related costs and equipment.

According to a 2017 report by the Outdoor Industry Association, this Commonwealth's outdoor recreation generated 251,000 direct in-State jobs, \$8.6 billion in wages and salaries, and \$1.9 billion in State and local tax revenue. These figures include both tourism and outdoor recreation product manufacturing. The association reported that 56% of Commonwealth residents participate in outdoor recreation each year. "The Outdoor Economy: Take it Outside for American Jobs and a Strong Economy," (<https://outdoorindustry.org/resource/pennsylvania-outdoor-recreation-economy-report>).

Southwick Associates has prepared several reports for the Theodore Roosevelt Conservation Partnership that analyze the economic contribution of outdoor recreation in this Commonwealth. A 2018 report, "The Power of Outdoor Recreation Spending in Pennsylvania: How hunting, fishing, and outdoor activities help support a healthy state economy," ([www.trcp.org/wp-content/uploads/2018/12/TRCP-and-Southwick-PA-Economic-Analysis-12-6-18.pdf](http://www.trcp.org/wp-content/uploads/2018/12/TRCP-and-Southwick-PA-Economic-Analysis-12-6-18.pdf)), states that during 2016 there were more than 390,000 jobs supported by outdoor recreation activities in this Commonwealth, and for comparison, this is more than the number of jobs in this Commonwealth that supported the production of durable goods. In 2016, outdoor recreation had an economic contribution in Pennsylvania of almost \$17 billion in salaries and wages paid to employees and over \$300 million in federal, state, and local tax revenue. An updated 2020 report for the Theodore Roosevelt Conservation Partnership, "Estimating the economic contributions of outdoor recreation in Pennsylvania: an analysis of 2020 state-level economic contributions made by hunting, fishing, and other outdoor recreation activities," ([www.trcp.org/wp-content/uploads/2022/04/TRCP-PA-Economic-Report-2020-FINAL.pdf](http://www.trcp.org/wp-content/uploads/2022/04/TRCP-PA-Economic-Report-2020-FINAL.pdf)), revealed that economic contributions from outdoor recreation increased from nearly \$17 billion in salaries and wages paid to employees in 2016 to nearly \$20 billion in 2020. The 2020 report also continues to highlight the fact that "more Pennsylvania jobs are supported by outdoor recreation than by the production of durable goods (U.S. Bureau of Labor Statistics, 2020)." In 2020, outdoor recreation activities supported more than 430,000 jobs and contributed more than \$32 billion to Pennsylvania's state gross domestic product (GDP) and over \$6.5 billion in tax revenue at the federal, state, and locals levels, which is a significant increase from the 2016 tax revenue total of over \$300 million.

*Maintenance of the current green infrastructure along streams and the associated reduction in tax expenditures*

The findings of a 2014 Lehigh Valley Planning Commission report entitled “Lehigh Valley Return on Environment,” ([www.lvpc.org/pdf/2014/ReturnOnEnvironment\\_Dec\\_18\\_2014.pdf](http://www.lvpc.org/pdf/2014/ReturnOnEnvironment_Dec_18_2014.pdf)), demonstrates the benefits when clean water and natural areas are protected. The report states, “the current green infrastructure along streams in the Lehigh Valley reduces tax dollars by avoiding more than \$110.3 million annually in expenditures for water supply (\$45.0 million), disturbance (flood) mitigation (\$50.6 million) and water quality (\$14.7 million).” This report describes how investing in green infrastructure to improve water quality (such as watershed conservation, forest buffers, and wetlands construction) can be much more cost effective than more traditional gray infrastructure approaches (such as pipes and treatment plants).

*Savings in water treatment for downstream communities that rely on surface waters for water supplies and availability of unpolluted water for domestic, agricultural and industrial uses*

The Department identified one public water supply facility with a raw water intake located within the candidate stream sections for redesignation in this final-form rulemaking package. This public water supplier, which serves over 22,300 citizens, will benefit from this final-form rulemaking because their raw source water will be afforded a higher level of protection. This final-form rulemaking further provides the likelihood of economic benefits to the public water supplier and the local community. By maintaining clean surface water, public water suppliers may avoid the costly capital investments that are often required for the installation of advanced water treatment processes as well as the higher annual operations and maintenance costs associated with effective operation of these processes. Safe drinking water is vital to maintaining healthy and sustainable communities. Protecting the quality of drinking water sources can reduce the incidence of illness and reduce health care costs, help ensure a continuous supply of safe drinking water, enable communities to plan and build future capacity for economic growth and ensure their long-term sustainability for years to come. Public water suppliers’ customers will also benefit from reduced fees for clean drinking water.

*Compliance costs*

This final-form rulemaking is necessary to protect and maintain the existing water quality of the HQ and EV waters, to protect existing water uses and to effectively control discharges of pollutants into the affected streams. These amendments to Chapter 93 do not impose any new compliance costs on persons engaged in regulated activities under existing individual permits or approvals from the Department since existing discharges are included in any determination of existing water quality when streams are redesignated to HQ or EV. Additional compliance costs may arise when permits or approvals are necessary for new or expanded regulated activities in HQ or EV waters, or when streams are redesignated to different non-special protection designations (such as WWF to CWF). Discharges to special protection streams are not eligible for coverage under National Pollutant Discharge Elimination System (NPDES) general permits, based on § 92a.54(a)(8) (relating to general permits), and therefore, require individual permits. Some additional cost will be incurred by facilities required to obtain an individual permit. The Department will implement stream redesignations through permit and approval actions.

Persons adding or expanding a discharge to a stream may need to provide a higher level of treatment or additional BMPs to protect the designated and existing uses of the affected streams, which could result in higher engineering, construction or operating costs. Treatment costs and BMPs are based on the specific design and operation of a facility, which also requires consideration of the size of the discharge in relation to the size of the stream and many other factors.

In the future, a person who proposes a new, additional or increased point source discharge to an EV or HQ water would need to satisfy the antidegradation requirements found in § 93.4c(b)(1). An applicant for any new, additional or increased point source discharge to special protection waters must evaluate nondischarge alternatives, and the applicant must use an alternative that is environmentally sound and cost effective when compared to the costs associated with achieving a nondegrading discharge. If a nondischarge alternative is not environmentally sound and cost-effective, an applicant for a new, additional or increased discharge must utilize antidegradation best available combination of technologies (ABACT), which include cost-effective treatment, land disposal, pollution prevention and wastewater reuse technologies.

The permit applicant must demonstrate in the permit application that their new or expanded activities will not lower the existing water quality of special protection streams. If an applicant cannot meet these nondegrading discharge requirements, a person who proposes a new, additional or increased discharge to HQ waters is given an opportunity to demonstrate there is a social or economic benefit of the project that would justify a lowering of the water quality. The social and economic justification (SEJ) demonstration must show that the discharge is necessary to accommodate important economic or social development in the area in which the waters are located and that a lower water quality will protect all other applicable water uses for the waterbody. SEJ is not available for proposed discharges to EV waters. The water quality of EV streams must be maintained and protected.

There are approximately 10,300 facilities across this Commonwealth that hold permits issued under Chapter 92a (relating to National Pollutant Discharge Elimination System (NPDES) permitting, monitoring and compliance). This Statewide number of approximately 10,300 includes NPDES permits for concentrated animal feeding operations, industrial waste, municipal separate storm sewer systems (MS4), treated sewage, and stormwater associated with industrial activities. This total does not include NPDES permits for stormwater associated with construction activities, which is discussed as follows. Out of this Statewide total of approximately 10,300, only nine facilities currently hold active NPDES permits for discharges to the stream segments being considered for redesignation in this final-form rulemaking.

The types of discharges with active NPDES permits located in waters affected by this final-form rulemaking include industrial wastewater and industrial stormwater. There is also one Chapter 91 (relating to general provisions) pesticide permit within the waters affected by this final-form rulemaking. Since the presence of such discharge activities did not preclude the attainment of the HQ or EV use, the discharges to these waters may continue as long as the discharge characteristics of both quality and quantity remain the same. Thus, redesignation to special protection does not impose any additional special treatment requirements on existing permitted discharges.

As previously stated, discharge activities to special protection streams are not eligible for coverage under NPDES general permits and, therefore, require individual permits. Individual permits are required in special protection waters because the existing quality of the water must be protected. Therefore, each discharge must be evaluated individually for each stream. Site-specific characteristics of the stream water quality are used to determine effluent limitations for discharges to a stream. The individual permits are necessary to track the quality and quantity of any existing permitted discharges to ensure that additional or increased discharges to a special protection water do not occur without the Department's review in accordance with the antidegradation regulations.

There are no NPDES general permits available for discharges to special protection waters. In addition, there are no general permits available for discharges of treated sewage effluent or industrial waste effluent with the exception of the PAG-04 (general permit for small flow sewage treatment facilities). The Department identified four NPDES permits for discharges to waters proposed for redesignation to special protection, and all four permits are currently individual permits. Consequently, there would be no change in the permitting requirements for these activities.

The remaining five NPDES permits discharge into Two Lick Creek, which is recommended for redesignation from TSF to CWF. The types of discharges with active NPDES permits located in the Two Lick Creek basin include industrial waste and industrial stormwater. These permits will not be affected by the redesignation.

Although no stormwater discharges from MS4s have been identified in the waters being redesignated, in general, local governments that are MS4s will most likely have additional costs associated with MS4 permitting requirements for discharges to HQ or EV waters. Any MS4 that discharges to an HQ or EV water will be required to obtain an individual permit. The application fee for a new individual permit is \$5,000 compared to \$500 for the general permit (that is, NPDES General Permit for Stormwater Discharges from Small MS4s (PAG-13)). If there is an existing MS4 permit (whether it is currently the general permit or an individual permit) to discharge into one of the HQ or EV waters redesignated in this final-form rulemaking, any subsequent permit application fee for an individual permit is \$2,500. The annual fee for all MS4 permits is the same, whether it is for coverage under the general permit or for an individual permit. There is a difference in cost between the initial issuance of an individual permit and approval of coverage under the general permit due to increased staff time needed to review permit applications and implementation oversight that is associated with individual permits. An individual permit allows for the tailoring of an MS4's stormwater management program and its implementation of the minimum control measures.

Statewide, there are thousands of active earth disturbance activities requiring general or individual NPDES permits for stormwater discharges associated with construction activities issued under Chapter 102 (relating to erosion and sediment control). These permits for stormwater discharges associated with construction activities were not included in the preceding permit analyses because of the short-term, temporary nature of these permitted discharges.

A person proposing a new earth disturbance activity requiring a permit under Chapter 102 with a discharge to an HQ or EV water must obtain an individual permit and comply with the

antidegradation provisions, as applicable. Where a permitted discharge existed prior to the receiving waterbody attaining an existing or designated use of HQ or EV, those persons may continue to operate using BMPs that have been approved by the Department and implemented. Any new discharges to the waterbody would be required to comply with the antidegradation provisions, as applicable, and must undergo an antidegradation analysis. Based on the analysis, additional construction and post-construction BMPs may need to be implemented on the remaining area that will be disturbed.

The administrative filing fee for an individual earth disturbance permit is \$1,500 compared to \$500 for a general permit, as set forth in § 102.6(b)(1) (relating to permit applications and fees). A person proposing a new earth disturbance activity requiring a permit under Chapter 102 must comply with the antidegradation provisions, as applicable. The erosion and sediment (E&S) BMPs and their ABACT rating, if applicable, are identified in the Department's *Erosion and Sedimentation Pollution Control Manual*, 363-2134-008, (2012) and the Department's Alternative E&S and Post-Construction Stormwater Management BMPs list, Version 2.2. (March 18, 2022). The Department may also approve alternative BMPs that maintain and protect the existing water quality and water uses.

Where onlot sewage systems are planned, compliance with the sewage facilities planning and permitting regulations in 25 Pa. Code Chapters 71, 72 and 73 (relating to the administration of sewage facilities planning program; administration of sewage facilities permitting program; and standards for onlot sewage treatment facilities) will continue to satisfy § 93.4c. Permit applicants of sewage facilities with proposed discharges to HQ waters, subject to antidegradation requirements, may demonstrate SEJ at the sewage facilities planning stage and need not re-demonstrate SEJ at the discharge permitting stage. The SEJ demonstration process is available to sewage and non-sewage discharge applicants for any naturally occurring substances identified in accordance with the Department's *Water Quality Antidegradation Implementation Guidance*, 391-0300-002, (DEP 2003).

A more detailed description of cost is discussed in the Regulatory Analysis Form, required under the Regulatory Review Act (71 P.S. §§ 745.1—745.14), that accompanies this rulemaking.

#### *Compliance assistance plan*

This final-form rulemaking does not impose any new compliance requirements on persons engaged in regulated activities under existing individual permits or approvals from the Department. When applying for permits or approvals for new, additional or increased discharges, the Department will provide compliance assistance.

#### *Paperwork requirements*

NPDES general permits are not available for discharges to HQ or EV waters. Applications for individual permits will require additional paperwork. The individual permits are necessary to track the quality and quantity of any existing permitted discharges to ensure that additional or increased discharges to a special protection water do not occur without the Department's review in accordance with the antidegradation regulations.



This final-form rulemaking does not, however, impose any new paperwork requirements on persons engaged in regulated activities under existing individual permits or approvals from the Department. When applying for permits or approvals for new, additional or increased discharges to HQ or EV waters, additional information may need to be submitted to the Department as part of the permit application or approval request. As discussed above, the permit applicant will complete an antidegradation analysis. The applicant will describe how the proposed activity will be conducted to maintain existing water quality. If water quality cannot be maintained and the proposed discharge will be to an HQ water, the applicant may submit an SEJ demonstration for the lowering of water quality.

#### *H. Pollution Prevention*

The Federal Pollution Prevention Act of 1990 (42 U.S.C.A. §§ 13101—13109) 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, or 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.

The water quality standards and antidegradation program are major pollution prevention tools because the objective is to prevent degradation by maintaining and protecting existing water quality and existing uses. Although the antidegradation program does not prohibit new or expanding wastewater discharges, nondischarge alternatives must be implemented when environmentally sound and cost-effective. Nondischarge alternatives, when implemented, remove impacts to surface water and may reduce the overall level of pollution to the environment by remediation of the effluent through the soil. In addition, if no environmentally sound and cost-effective alternatives are available, discharges must be nondegrading except as provided in § 93.4c(b)(1)(iii) regarding SEJ in HQ waters.

#### *I. Sunset Review*

These 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.

#### *J. Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on June 24, 2021, the Department submitted a copy of the notice of proposed rulemaking, published at 51 Pa.B. 4062 (July 31, 2021), to the Independent Regulatory Review Commission (IRRC) and the Chairpersons of the House and Senate Environmental Resources and Energy Committees for review and comment.

Under section 5(c) of the Regulatory Review Act, IRRC and the Committees were provided with copies of the comments received during the public comment period, as well as other

documents when requested. In preparing this 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, on  (DATE) , this 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  (DATE)  and approved this final-form rulemaking.

#### *K. 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), referred to as the Commonwealth Documents Law, and regulations promulgated thereunder at 1 Pa. Code §§ 7.1 and 7.2 (relating to notice of proposed rulemaking required; and adoption of regulations).

(2) A 45-day public comment period was provided as required by law, and all comments were considered.

(3) This final-form rulemaking does not enlarge the purpose of the proposed rulemaking published at 51 Pa.B. 4062.

(4) These regulations are necessary and appropriate for administration and enforcement of the authorizing acts identified in section C of this order.

(5) These regulations are reasonably necessary to maintain the Commonwealth's water quality standards and to satisfy related CWA requirements.

#### *L. Order of the Board*

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

(a) The regulations of the Department, §§ 93.9c, 93.9k, 93.9l, 93.9o, 93.9r, 93.9t and 93.9v, are amended to read as set forth in Annex A.

(b) The Chairperson of the Board shall submit this final-form rulemaking to the Office of General Counsel and the Office of Attorney General for review and approval as to legality and form, as required by law.

(c) The Chairperson of the Board shall submit this final-form rulemaking to IRRC 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 final-form rulemaking and deposit it with the Legislative Reference Bureau, as required by law.

(e) This final-form rulemaking shall take effect immediately upon publication in the *Pennsylvania Bulletin*.

RICHARD NEGRIN,  
*Acting Chairperson*