**NOTICE OF FINAL RULEMAKING**
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**
**ENVIRONMENTAL QUALITY BOARD**
**25 Pa. Code, Chapter 93**
**Stream Redesignations (Clarks Creek, *et al*.)**

## Order

The Environmental Quality Board (Board) by this order amends 25 Pa. Code §§93.9f, 93.9j, 93.9o, and 93.9r to read as set forth in Annex A.

## A. Effective Date

These amendments are 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 Water Standards and Facility Regulation, 11th Floor, Rachel Carson State Office Building, P.O. Box 8467, 400 Market Street, Harrisburg, PA 17105-8467, 717-787-9637 or Michelle Moses, Assistant Counsel, Bureau of Regulatory Counsel, 9th Floor, Rachel Carson State Office Building, P.O. Box 8464, Harrisburg, PA 17105-8464, 717-787-7060. Persons with a disability may use the AT&T Relay Service by calling 1-800-654-5984 (TDD-users) or 1-800-654-5988 (voice users). This proposal is available electronically through the Department of Environmental Protection (Department) web site (http://www.depweb.state.pa.us).

## C. Statutory and Regulatory Authority

This final-form rulemaking is being 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 the 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. § 1313) sets forth requirements for water quality standards.

## D. Background of the Proposed Amendments

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) on individual sources of pollution.

The Department may identify candidates for redesignation during routine waterbody investigations. Requests for consideration may also be initiated by other agencies. Organizations, businesses, or individuals may submit a rulemaking petition to the Board.

The Department considers candidates for High Quality (HQ) or Exceptional Value (EV) Waters and all other designations in its ongoing review of water quality standards. In general, HQ and EV waters must be maintained at their existing quality and permitted activities shall ensure the protection of designated and existing uses.

Existing use protection is provided when the Department determines, based on its evaluation of the best available scientific information, that a surface water attains water uses identified in regulations at 25 Pa. Code sections 93.3 and 93.4. Examples of water uses protected include the following: Cold Water Fishes (CWF), Warm Water Fishes (WWF), HQ and EV. A final existing use determination is made on a surface water at the time the Department takes a permit or approval action on a request to conduct an activity that may impact surface water. If the determination demonstrates that the existing use is different than the designated use, the water body will immediately receive the best protection identified by either the attained uses or the designated uses. A stream will then be "redesignated" through the rulemaking process to match the existing uses with the designated uses. For example, if the designated use of a stream is listed as protecting WWF but the redesignation evaluation demonstrates that the water attains the use of CWF, the stream would immediately be protected for CWF, prior to a rulemaking. Once the Department determines the water uses attained by a surface water, the Department will recommend to the Board that the existing uses be made "designated" uses, through rulemaking, and be added to the list of uses identified in the regulation at 25 Pa. Code section 93.9.

The following streams were evaluated in response to four petitions, as well as requests from the Department's Southcentral Regional Office (SCRO) and the Pennsylvania Fish and Boat Commission (PFBC), and a corrective amendment by the Bureau of Water Standards and Facility Regulation (BWSFR):

**Pine Creek** (Schuylkill Co) - Petition: (Friends of Pine Creek)
**Cacoosing Creek** (Berks Co) - SCRO
**Unnamed Tributary 00926 to Schuylkill River; *locally Spring Mill Run*** (Montgomery Co) - Petition: (Steven S. Brown, Chairman; Whitemarsh Township Environmental Advisory Board)
**Unnamed Tributary 28600 to Lackawanna River; *locally Clarks Creek*** (Wayne Co) - Petition: (Glen Abello)
**Unnamed Tributary 07792 to Conestoga River** (Lancaster Co) - PFBC
**Hammer Creek** (Lebanon and Lancaster Co's) – Petition: (Heidelberg Township)
**Toms Run** (Clarion and Forest Co's) – Correction (BWSFR)

The regulatory changes included in this rulemaking were developed as a result of aquatic studies conducted by the BWSFR. The physical, chemical, and biological characteristics and other information on these waterbodies were evaluated to determine the appropriateness of the current and requested designations using applicable regulatory criteria and definitions. In reviewing whether waterbodies qualify as HQ or EV waters, the Department considers the criteria in § 93.4b (relating to qualifying as High Quality or Exceptional Value Waters). Based upon the data and information collected on these waterbodies, the Board has made the designations in Annex A.

## E. Summary of Comments and Responses on the Proposed Rulemaking

The Board approved the proposed rulemaking for the Clarks Creek, et al. package at its February 16, 2010 meeting. The proposed rulemaking was published in the *Pennsylvania Bulletin* on April 24, 2010 (40 Pa.B 2122) with provision for a 45-day public comment period that closed on June 8, 2010. Comments were received from ten commentators during the official comment period. One commentator was discouraged that Pine Creek did not qualify for special protection. The other nine commentators were largely opposed to redesignating Hammer Creek from HQ-CWF, MF to CWF, MF for the portion of the basin extending from the second Rexmont Road crossing to but not including UNT 07678. These commentators included concerned residents, conservancy and watershed organizations, the Lebanon and Lancaster County Conservation Districts, the Chesapeake Bay Foundation (CBF), and one Pennsylvania State Representative.

***PINE CREEK COMMENTS***

Friends of Pine Creek (petitioner) submitted comments expressing dissatisfaction that Pine Creek did not qualify for special protection. Along with their comments, they submitted additional water chemistry data in hopes that the Department would evaluate it and find the additional data to be sufficient to redesignate Pine Creek as a special protection water.

The Board is encouraged that it received public support for elevated protection of Pine Creek; however, the Department examined the newly submitted data and found it was insufficient to redesignate Pine Creek. The Board's final regulations retain the designated use of Pine Creek found in 25 Pa. Code §93.9f.

***HAMMER CREEK: SUPPORTIVE COMMENTS***

The Board received comments that applaud efforts to redesignate Walnut Run (a tributary to Hammer Creek in Lancaster County) to EV.

***HAMMER CREEK: OPPOSING COMMENTS***

Nine commentators were largely opposed to the redesignation of Hammer Creek from HQ-CWF, MF to CWF, MF for the portion of the basin extending from the second Rexmont Road crossing to but not including UNT 07678.

The Board disagrees with the commentators assessments. The Department conducted an extensive review of historical data, recent field surveys and land use reviews. The review has determined that the portion of the upper Hammer Creek basin from the second Rexmont Road crossing to but not including UNT 07678 does not now display and has not in the past displayed existing uses characteristic of special protection classification. Correctly defining the designated use based on the appropriate existing use will not have a negative impact on current water quality. The Department is required to periodically review and revise its water quality standards as necessary. This correction to Hammer Creek's designated use is such an action that strives for designation accuracy, while preserving the integrity of existing and designated use classifications in this Commonwealth.

Two of the Hammer Creek commentators expressed concern for the potential degradation of downstream waters if the upstream restrictions are loosened.

Providing the appropriate (albeit less restrictive) designated use for these reaches will not adversely affect conditions in downstream waters with a more restrictive designated use. Hammer Creek basin from and including UNT 07678 to the inlet of Speedwell Forge Lake will retain its special protection designation and its water quality will be protected under the antidegradation requirements.

Comments were received that identified ongoing collaborative efforts to restore and improve the Hammer Creek watershed. Such efforts include restoration by watershed associations, county conservation districts, residents, local communities, and other local organizations. The work has included offering technical assistance and cost-share opportunities to watershed landowners and farmers to implement best management practices reducing sediment and nutrients to the Hammer Creek. These efforts have been bolstered by support from the United States Fish and Wildlife Service and a Growing Greener Grant which allowed the completion of 9916 feet of stream bank fencing and the establishment of 9916 feet of riparian buffer zone. Additional fencing and stream bank stabilization work was also completed. In addition, concern was raised that the proposed regulation did not comply with the Executive Order from President Barrack Obama to accelerate improvements in the Chesapeake Bay watershed.

The Board recognizes that the Department continuously seeks to restore and improve water quality by working with watershed associations, local residents and farmers, communities and organizations and the Department is grateful for their hard work which is often conducted by volunteers and funded through donations and state funds. Defining the correct existing use will not diminish the value of these local efforts. The final regulations do not undermine the Executive Order from President Barrack Obama by accurately categorizing the surface water of Hammer Creek.

Comments were received regarding whether the Department had considered the approval requirements of the Act 537 Plan for Heidelberg Township in its determination of the recommendation for Hammer Creek.

The Board acknowledges that the Department did not consider the approval requirements of the Act 537 Plan for Heidelberg Township while determining its recommendation of the existing and designated use for the Hammer Creek basin. When evaluating the correct existing use, the BWSFR considers the factors in 25 Pa. Code §§ 93.4 and 93.4b. The type of sewage system needed in an area is not a factor in determining this recommendation.

Comments received suggest that with further restorative work, the stream would actually improve and could be classified as exceptional value. The Board concurs with the Department in that restorative work completed to date has led to some water quality improvements and that additional restorative work could result in further improvements. However, past and present land use conditions and the Department's data and modeling review, all indicate the improvements requisite for HQ existing uses, let alone EV, are not realistically achievable without long term changes in land use conditions. If land use changes occur in the watershed that positively affect the water quality, then the stream may be reevaluated in the future.

A commentator disputes the assertion that best management practices (BMPs) cannot remedy the Hammer Creek. The Board concurs with the Department's supportive attitude regarding the

restorative efforts in the Hammer Creek watershed that incorporate BMPs. Such improvements involving BMPs in the Basin were acknowledged in the Hammer Creek report. However, the application of BMPs currently only affect a portion of the study area and on a larger scale, the watershed cannot achieve special protection unless permanent land use changes, such as forested buffers and conservation easements are widespread. The Department continues to promote and support best management practices and this redesignation does not indicate otherwise.

Comments suggested that the model employed by the Department to study the effects of BMPs on the Hammer Creek watershed was not appropriately calibrated and that reductions of groundwater inputs of nitrogen and phosphorus were not considered.

To limit error, steps were taken by the Department to match geology and land use as closely as possible. Also, the reference watersheds were in close proximity to each other and adjustments were made in some modeling parameters to account for BMPs and animals in each watershed.

The PredICT model groups BMPs into 8 general types and does not model specific practices. BMP efficiencies can be adjusted to reflect what is in place or available; therefore there is no actual limitation on the mixture of BMPs. The Department used applicable BMP efficiencies and considered all practical BMPs in its modeling analyses. No suburban or on-site septic system BMPs were included in the analysis because neither one would have provided any significant reduction in loadings. Suburban and urban areas accounted for only 9% of the basin area so those reductions were negligible. The assumption for on-site septic was that it would be converted to a point source discharge and the treatment system would have employed tertiary treatment resulting in very small nutrient loadings to Hammer Creek.

The model did not account for a reduction in groundwater inputs of nitrogen and phosphorus over time. However, for nutrients to appreciably diminish, significant BMP additions and land use conversions (e.g. forested buffers and cessation of agricultural uses) would need to occur. Given the long-term nutrient saturation of the soils since Hammer Creek was agriculturally developed it would take many years before a nutrient decrease would be evident in response to such BMP implementation or land use conversions. This potential delay in the remediation of water quality in response to agricultural BMP's resulting from the reserves of leachable nitrogen in heavily manured soils was recognized and addressed by Koerkle and Gustafson-Minnich, 1997 in a report titled *Surface-water Quality Changes After 5 Years of Nutrient Management in the Little Conestoga Creek Headwaters, Pennsylvania, 1989-91* (USGS: Water-Resources Investigations Report 97-4048). Another confounding factor which could contribute to the lag time between the implementation of BMP's and noted improvements in water quality is the unknown travel times for ground-water. "The time required for the effects of reduced nutrient inputs to travel from the land surface to the ground water, then to be discharged as base flow, could have exceeded the 3.5 year post-BMP monitoring period" in a study by Koerkle, et al. in 1996 titled *Evaluation of Agricultural Best-Management Practices in the Conestoga River Headwaters, Pennsylvania: Effects of Nutrient Management on Water Quality in the Little Conestoga Creek Headwaters,* 1983-89 (USGS: Water Resources Investigations Report 95-4046).

Concerns were raised that improvements through in-stream habitat restoration and the application of forested riparian buffers were not considered. The Board appreciates the Department's recognition of the ability of improved forested buffers to improve physical in-stream habitat and provide shade from the tree canopy. The benefits from improving forested buffers are vitally

supportive of macroinvertebrate and fish populations. These benefits can begin and become noticeable within the first 5 to 10 years of the implementation of the improvement. Over time the tree canopy will mature and provide more shade for the aquatic habitat. It will likely take at least 20 to 25 years for the benefits of newly planted forest buffers to improve the stream quality to a level commensurate with special protection qualifications. If stream improvements are demonstrated by such widespread land use conversions in the watershed, the stream may be eligible for special protection in the future.

***HAMMER CREEK: ADDITIONAL COMMENTS***

Additional remarks were received from the U.S. Environmental Protection Agency (EPA) Region 3 outside of the official comment period. The Department received the letter from the EPA on June 10, 2010. The EPA commended DEP on its continuing effort to evaluate and properly designate surface waters of the Commonwealth, especially protecting existing water quality and uses through its antidegradation program, but EPA raised some questions regarding the Hammer Creek stream report. The Department replied to the specific questions regarding the Hammer Creek stream report in a letter to EPA Region 3.

On April 14, 2010, the Department submitted a copy of the proposed rulemaking published at 40 Pa.B. 2122 to the Independent Regulatory Review Commission (IRRC) and to the Chairpersons of the Senate and House Environmental Resources and Energy Committees for review and comment in accordance with Section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)). IRRC did not raise any comments, recommendations, or objections to any portion of the proposed rulemaking, and no changes were made from the proposed rulemaking to this final-form regulation; therefore under Section 5(g) of Regulatory Review Act, the final rulemaking will be deemed approved by IRRC.

## F. Summary of Changes to the Proposed Rulemaking

No changes were made to the redesignations recommended in the proposed rulemaking.

## G. Benefits, Costs and Compliance

1. **Benefits** – Overall, the Commonwealth, its citizens and natural resources will benefit from these 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 provides economic value to present and future generations in the form of clean water for drinking, recreational opportunities, and aquatic life protection. It is important to realize these benefits to ensure opportunity and development continue in a manner that is environmentally, socially and economically sound. Maintenance of water quality ensures its future availability for all uses.

2. **Compliance Costs** – The streams recommended for redesignation are already protected at their existing use and therefore the designated use revision will not impose increased compliance costs on the regulated community.

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 or best management practices to meet the designated and existing uses of the stream. For example, these increased costs may take the form of higher engineering, construction or operating cost for point source discharges. 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. It is therefore 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 resulting from the installation of technologically advanced wastewater treatment processes and best management practices may be offset by potential savings from and increased value of improved water quality through more cost-effective and efficient treatment over time.

3. **Compliance Assistance Plan** - The regulatory revisions have been developed as part of an established program that has been implemented by the Department since the early 1980s. The revisions are consistent with and based on existing Department regulations. The revisions extend additional protection to selected waterbodies that exhibit exceptional water quality and are consistent with antidegradation requirements established by the Federal Clean Water Act and Pennsylvania Clean Streams Law. All surface waters in this Commonwealth are afforded a minimum level of protection through compliance with the water quality standards, which prevent pollution and protect existing water uses.

   The redesignations will be implemented through the Department's permit and approval actions. For example, the National Pollutant Discharge Elimination System (NPDES) permitting program bases effluent limitations on the use designation of the stream. These permit conditions are established to assure water quality criteria are achieved and designated and existing uses are protected. New and expanded dischargers with water quality based effluent limitations are required to provide effluent treatment according to the water quality criteria associated with existing uses and revised designated water uses.

4. **Paperwork Requirements** - The regulatory revisions should have no direct paperwork impact on the Commonwealth, local governments and political subdivisions, or the private sector. These regulatory revisions are based on existing Department regulations and simply mirror the existing use protection that is already in place for these streams. There may be some indirect paperwork requirements for new or expanding dischargers to streams upgraded to HQ or EV. For example, NPDES general permits are not currently available for new or expanded discharges to these streams. Thus an individual permit, and its associated paperwork, would be required. Additionally, paperwork associated with demonstrating social and economic justification (SEJ) may be required for new or expanded discharges to certain HQ Waters, and consideration of nondischarge alternatives is required for all new or expanded discharges to EV and HQ Waters.

## H. Pollution Prevention

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 expanded wastewater discharges, nondischarge alternatives are encouraged, and required when environmentally sound and cost effective. Nondischarge alternatives, when implemented, remove impacts to surface water and reduce the overall level of pollution to the environment by remediation of the effluent through the soil.

## I. Sunset Review

These amendments 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 April 14, 2010, the Department submitted a copy of the proposed rulemaking published at 40 Pa.B 2122 to the Independent Regulatory Review Commission (IRRC) and to the Chairpersons of the Senate and House Environmental Resources and Energy Committees for review and comment.

Under Section 5(c) of the Regulatory Review Act, the Department provided IRRC and the Committees with copies of the comments received, as well as other documentation. The Department has considered all public comments in preparing this final-form regulation. No comments were received on the proposed rulemaking from IRRC.

Under Section 5.1(j.2) of the Regulatory Review Act (71 P.S. § 745.5a(j.2)), this final-form regulation was deemed approved by the House and Senate Committees on _____. Under Section 5.1(e) of the Regulatory Review Act, IRRC met on _____ and approved the final-form regulation.

## K. Findings

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, 1 *Pa. Code* §§7.1 and 7.2.

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

(3) This final-form regulation does not enlarge the purpose of the proposal published at 40 Pa.B 2122 (April 24, 2010).

(4) This final-form regulation is necessary and appropriate for administration and enforcement of the authorizing acts identified in Section C of this Order.

(5) This final-form regulation does not contain standards or requirements that exceed requirements of the companion federal regulations.

**L. Order**

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

(a) The regulations of the Department, 25 *Pa. Code* Chapter 93, are amended by amending §§93.9f, 93.9j, 93.9o, and 93.9r to read as set forth in Annex A.

(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 IRRC and the Senate and House Environmental Resources and Energy Committees, as required by the Regulatory Review Act.

(d) The Chairperson 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*.

MICHAEL KRANCER,
Chairman