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Stream Redesignation Handbook

A Step-by-Step Guide
for Petitioning to
Upgrade Your Stream
to High Quality or
Exceptional Value
Special Protection in
Pennsylvania

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Acknowledgements

Introduction

Section 1: An Overview of Pennsylvania Water Quality Standards

- § 1.1: Water Quality Standards: Roots in the Federal Clean Water Act and the Pennsylvania Clean Streams Law.
- § 1.2: Designated Uses in Pennsylvania.

Section 2: Determining Your Stream's Current Designated Use for Aquatic Life

- § 2.1: Categories of Designated Uses.
- § 2.2: Determining Designated Uses for Aquatic Life.

Section 3: The Benefits of High Quality or Exceptional Value Designation

- § 3.1: Protection Afforded to High Quality Waters.
- § 3.2: Protection Afforded to Exceptional Value Waters.

Section 4: Standards for Qualifying As High Quality or Exceptional Value Streams

- § 4.1: High Quality Streams.
 - § 4.1(a): Water chemistry qualifier.
 - § 4.1(b): Biological assessment qualifier.
 - § 4.1(c): Class A Wild Trout Stream qualifier.
- § 4.2: Exceptional Value Streams.
 - § 4.2(a): Location in National Wildlife Refuge or state game propagation and protection area.
 - § 4.2(b): Location in a State Park Natural Area, State Forest Natural Area, National Natural Landmark, Federal or State Wild River, Federal Wilderness Area or National Recreational Area.
 - § 4.2(b)(i): State Park Natural Areas.
 - § 4.2(b)(ii): State Forest Natural Areas.
 - § 4.2(b)(iii): National Natural Landmarks.
 - § 4.2(b)(iv): Federal or State Wild River.
 - § 4.2(b)(v): Federal Wilderness Areas.
 - § 4.2(b)(vi): National Recreation Areas.
 - § 4.2(c): Outstanding national, state, regional or local resource water.
 - § 4.2(d): Surface water of exceptional recreational significance.
 - § 4.2(e): Biological assessment qualifier.
 - § 4.2(f): Wilderness Trout Stream qualifier.
 - § 4.2(g): Surface water of exceptional ecological significance.

Section 5: Building Consensus and Support for Your Petition

- § 5.1: Building local community support.
- § 5.2: Contacting the Department of Environmental Protection (DEP).
- § 5.3: Contacting Other Interested Agencies and Organizations.

Section 6: Upgrading Your Stream to High Quality or Exceptional Value: The Petition Process

- § 6.1: The Right to Petition for an Amendment to Existing Regulations.
- § 6.2: The Petition Process.
 - § 6.2(a): Stage 1: Submission, Review and Acceptance of Petition.
 - § 6.2(a)(i): Petition, together with supporting information, is submitted to DEP.
 - § 6.2(a)(ii): DEP reviews petition for completeness and notifies petitioner.
 - § 6.2(a)(iii): Petition is presented to the EQB.
 - § 6.2(a)(iv): EQB publishes notice of acceptance.
 - § 6.2(b): Stage 2: DEP Stream Assessment and Evaluation.
 - § 6.2(b)(i): DEP publishes notice of intent to assess the stream.
 - § 6.2(b)(ii): DEP holds public meetings or hearings (optional).
 - § 6.2(b)(iii): DEP biologists conduct stream assessments.
 - § 6.2(b)(iv): DEP evaluates the assessment data and prepares a draft evaluation report.
 - § 6.2(b)(v): The draft evaluation report is sent to the petitioner, municipalities.
 - § 6.2(b)(vi): Public comment period on the draft evaluation report.
 - § 6.2(b)(vii): DEP considers comments and prepares a revised report.
 - § 6.2(c): Stage 3: The Regulatory Process.
 - § 6.2(c)(i): EQB adopts the proposed regulation.
 - § 6.2(c)(ii): Attorney General reviews the proposed regulation.
 - § 6.2(c)(iii): DEP submits the proposed regulation to the Standing Committees and IRRC.
 - § 6.2(c)(iv): DEP publishes the proposed regulation.
 - § 6.2(c)(v): Comments from the Standing Committees and IRRC.
 - § 6.2(c)(vi): DEP drafts the final regulation.
 - § 6.2(c)(vii): EQB adopts the final regulation.
 - § 6.2(c)(viii): DEP submits the final regulation to the Standing Committees, IRRC and public commenters.
 - § 6.2(c)(ix): IRRC considers the final regulation.
 - § 6.2(c)(x): The Standing Committees consider the final regulation.
 - § 6.2(c)(xi): Attorney General reviews the final regulation.
 - § 6.2(c)(xii): Final regulation published.
 - § 6.2(d): What if IRRC or the Standing Committees Disapprove the Regulation?
 - § 6.2(d)(i): IRRC disapproves the regulation.
 - § 6.2(d)(ii): Standing Committees disapprove the regulation.

Section 7: Filling Out Your Petition: A Step-By-Step Guide

- § 7.1: Section I: Petitioner Information.
- § 7.2: Section II: Petition Information.
 - § 7.2(a): Subsection A.
 - § 7.2(b): Subsection B.
 - § 7.2(b)(i): Describe problems encountered under the current designation.
 - § 7.2(b)(ii): Describe the changes being recommended to address the problems.
 - § 7.2(b)(iii): State factual and legal contentions and include supporting documentation that establishes a clear justification for the requested redesignation.
 - § 7.2(c): Subsection C.

- § 7.2(d): Subsection D.
- § 7.3: Section II, Subsection E: Specific Information Required of Stream Redesignation Petitions.
 - § 7.3(a): A clear delineation of the watershed or stream segment to be redesignated.
 - § 7.3(a)(i): Narrative description.
 - § 7.3(a)(ii): Watershed map.
 - § 7.3(b): The current designated use(s) of the watershed or segment.
 - § 7.3(c): The requested designated use(s) of the watershed or segment.
 - § 7.3(d): Available technical data on instream conditions for the following: water chemistry, the aquatic community (benthic macroinvertebrates and/or fishes), or instream habitat.
 - § 7.3(d)(i): How much data is needed?
 - § 7.3(d)(ii): What outside data sources are available?
 - § 7.3(d)(iii): How can you gather your own data?
 - § 7.3(d)(iv): What if you are unable to include data in support of your petition?
 - § 7.3(e): A description of existing and proposed point and nonpoint source discharges and their impact on water quality and/or the aquatic community.
 - § 7.3(e)(i): Information on existing point source discharges.
 - § 7.3(e)(ii): Information on proposed point source discharges.
 - § 7.3(e)(iii): Information on existing nonpoint source discharges.
 - § 7.3(e)(iv): Information on proposed nonpoint source discharges.
 - § 7.3(e)(v): Information regarding the impact on water quality and/or the aquatic community from point and nonpoint source discharges.
 - § 7.2(f): Information regarding any of the qualifiers for designation as HQ or EV waters in 25 Pa. Code § 93.4b used as a basis for the requested designation.
 - § 7.3(f)(i): HQ Qualifiers.
 - § 7.3(f)(i)(A): Water chemistry qualifier.
 - § 7.3(f)(i)(B): Biological assessment qualifier.
 - § 7.3(f)(i)(C): Class A Wild Trout Stream qualifier.
 - § 7.3(f)(ii): EV Qualifiers.
 - § 7.3(f)(ii)(A): Location in National Wildlife Refuge or state game propagation and protection area.
 - § 7.3(f)(ii)(B): Location in a State Park Natural Area, State Forest Natural Area, National Natural Landmark, Federal or State Wild River, Federal Wilderness Area or National Recreational Area.
 - § 7.3(f)(ii)(C): Outstanding national, state, regional or local resource water.
 - § 7.3(f)(ii)(D): Surface water of exceptional recreational significance.
 - § 7.3(f)(ii)(E): Biological assessment qualifier.
 - § 7.3(f)(ii)(F): Wilderness Trout Stream qualifier.
 - § 7.3(f)(ii)(G): Surface water of exceptional ecological significance.
 - § 7.3(g): A general description of land use and development patterns in the watershed.
 - § 7.3(h): The names of all municipalities through which the watershed or segment flows, including an official contact name and address.
 - § 7.3(i): Locational information relevant to items four through eight (except for contact names and addresses) displayed on a map or maps, if possible.

Section 8: After Your Petition Is Filed: Opportunities for Public Participation and Comment

- § 8.1: Initial EQB meeting.
- § 8.2: Submission of relevant data or information.
- § 8.3: Public meeting or hearing (optional).
- § 8.4: Comment period on draft evaluation report.
- § 8.5: Comment period on proposed regulation.
- § 8.6: IRRC meeting on final regulation.

[Appendix A: Petition Form](#)

[Appendix B: Links to Sample Petitions](#)

[Appendix C: Sample Letters of Support](#)

[Appendix D: Selected Regulations](#)

[Appendix E: Tables](#)

[Appendix F: Contacts](#)

[Appendix G: List of Acronyms and Abbreviations Used in This Handbook](#)



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Introduction

The Commonwealth of Pennsylvania is blessed with over 83,000 miles of rivers and streams. Although many thousands of these stream miles are polluted by a variety of sources, we are fortunate to find other rivers and streams in excellent health, capable of supporting a variety of fish and other aquatic life.

The federal Clean Water Act and the Pennsylvania Clean Streams Law are laws that exist to protect and maintain the existing water quality of our rivers and streams, and to restore those rivers and streams that suffer from the ill effects of pollution.

Pennsylvania's Chapter 93 "Water Quality Standards" are regulations with roots in both the Clean Water Act and the Clean Streams Law. These regulations provide the Pennsylvania Department of Environmental Protection (DEP) with tools to protect, maintain and restore the water quality of our rivers and streams. The Chapter 93 regulations establish "designated uses" for each water body in Pennsylvania and require the protection of such uses. The rivers and streams with the most outstanding water quality are afforded the greatest degree of protection, and are designated High Quality (HQ) or Exceptional Value (EV).



Presently, more and more citizens across Pennsylvania are taking an interest in the rivers and streams of their community and region, with new grassroots watershed groups forming all across the Commonwealth. Concerned citizens are taking environmental protection and improvement into their own hands through volunteer stream monitoring, stream cleanups and stream restoration activities. As Pennsylvanians learn more about their rivers and streams, and as they see water quality improvements take place as a result of their restoration efforts, they may see the benefit of and need for a redesignation of their stream to HQ or EV.

Citizens can play a critical role in improving the protections placed on their stream. A process exists in Pennsylvania whereby citizens may petition for redesignation of a stream or stream segment to HQ or EV status. It is a lengthy, complex process, often taking years before a redesignation request comes to fruition. However, the special protections afforded your stream by HQ or EV status are well worth the effort.

This handbook will help you through the process, by providing valuable information and detailed step-by-step guidance on how to petition for HQ or EV redesignation. The handbook is organized into the following eight sections:

- **Section 1** provides a background overview of Pennsylvania's Water Quality Standards, including what is meant by "designated use."
- **Section 2** explains how to determine your stream's current designated use for aquatic life.
- **Section 3** describes the benefits of an HQ or EV designation.
- **Section 4** details the various standards by which a stream may qualify for HQ or EV status.
- **Section 5** provides suggestions on how to build public consensus and support for your petition effort.
- **Section 6** describes the petition process.
- **Section 7** provides a detailed, step-by-step guide to filling out your petition.
- **Section 8** describes the opportunities for public comment and participation that are available to you after your petition is filed.

The **Appendices** provide helpful information, including a sample petition form and letters of support, links to sample petitions, selected regulations and information, a list of contacts, and a list of acronyms and abbreviations used in this handbook.

Section 1: An Overview of Pennsylvania Water Quality Standards

§ 1.1: Water Quality Standards: Roots in the Federal Clean Water Act and the Pennsylvania Clean Streams Law.

Pennsylvania's Water Quality Standards are regulations that stem from both federal and state law. They are found in Chapter 93 of Title 25 of the Pennsylvania Code, 25 Pa. Code §§ 93.1 – 93.9z.

The federal law that governs clean water is the Federal Water Pollution Control Act, 33 U.S.C. §§ 1251 – 1387, commonly referred to as the “Clean Water Act.” In order to meet the Clean Water Act's objective to “restore and maintain the chemical, physical, and biological integrity of the Nation's waters,” Section 303 of the Act requires that states establish Water Quality Standards.

The Water Quality Standards set forth in Chapter 93 also have their roots in state law. The Pennsylvania state law that governs clean water is the Clean Streams Law, 35 P.S. §§ 691.1 – 691.1001. Section 4 of the Clean Streams Law sets forth the statute's objective as “not only to prevent further pollution of the waters of the Commonwealth, but also to reclaim and restore to a clean, unpolluted condition every stream in Pennsylvania that is presently polluted.” The Clean Streams Law authorizes the Pennsylvania Department of Environmental Protection (DEP) to establish regulations necessary to carry out the objectives of the statute. The Chapter 93 Water Quality Standards are regulations established under this authority, to carry out the Clean Streams Law's objectives of pollution prevention and stream reclamation and restoration.

The Water Quality Standards consist of three interrelated elements:

- **Designated Uses;**
- **Water Quality Criteria;** and
- **Antidegradation Policy**

Designated uses are uses specified in the Chapter 93 regulations for each water body, whether or not they are being met. (25 Pa. Code § 93.1.) DEP has established one or more designated uses for every surface water in the Commonwealth. These designated uses reflect a variety of human and ecological needs, such as propagation and support of aquatic life, recreation, and providing a water supply. (See 25 Pa. Code §§ 93.9, 93.9a-93.9z.)

Water quality criteria are conditions that must be met in a water body in order for it to meet its designated use. Pennsylvania's water quality criteria include general criteria and specific criteria. The general criteria are narrative in form. The specific criteria are numeric standards that must be met for certain chemical and physical parameters, such as ammonia nitrogen, dissolved oxygen, pH and temperature. (25 Pa. Code § 93.6 (general water quality criteria); 25 Pa. Code § 93.7 (specific water quality criteria); 25 Pa. Code § 16.1 et seq. (water quality criteria for toxic substances))

Antidegradation policy is the term that is given to the provisions of the Water Quality Standards that ensure the protection and maintenance of all existing instream water uses and the water quality necessary to meet those uses. Pennsylvania's antidegradation regulations also provide special protection to waters of the highest quality, categorized as “High Quality” (HQ) and “Exceptional Value” (EV). (See 25 Pa. Code §§ 93.4a – 93.4d.)

§ 1.2: Designated Uses in Pennsylvania.

Designated uses are those uses specified in the Chapter 93 regulations for each surface water body in Pennsylvania, whether or not they are being met. (25 Pa. Code § 93.1) DEP establishes its designated uses based on the best available data and information concerning each water body. See Water Quality Antidegradation Implementation Guidance, Policy Document No. 391-0300-002 (November 29, 2003), p. 9 (hereinafter "Antidegradation Manual").¹

Designated uses are established based on the ecological and human health uses of a particular water body. Pennsylvania's designated uses are grouped into the following three categories: aquatic life; water supply; and recreational uses. The Chapter 93 Water Quality Standards require that the designated uses of each water body in Pennsylvania be protected. Thus, for example, if a stream has a designated use for aquatic life of Warm Water Fishes (WWF), the stream must be protected so that it provides suitable habitat for survival and reproduction of warm water fish and other aquatic organisms.

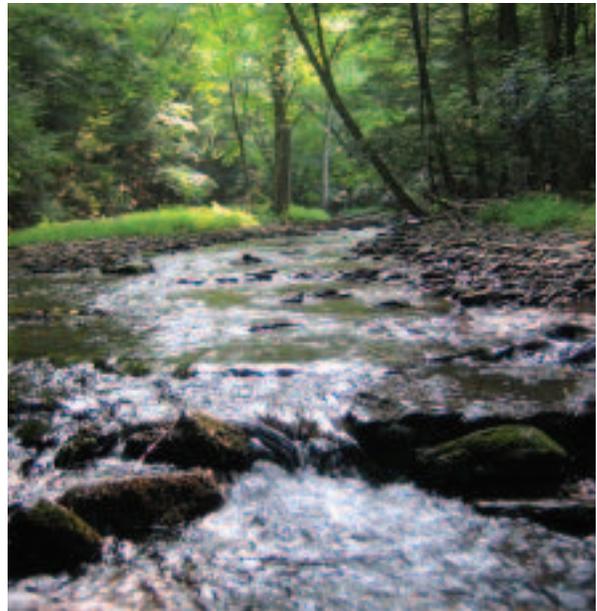
As a general rule, in *all* water bodies across the Commonwealth, the following designated uses are established and must be protected:

- **Aquatic Life Uses:** Warm Water Fishes (WWF);
- **Water Supply Uses:** Potable Water Supply (PWS); Industrial Water Supply (IWS); Livestock Water Supply (LWS); Wildlife Water Supply (AWS); and Irrigation (IRS)²;
- **Recreational Uses:** Boating (B); Fishing (F); Water Contact Sports (WC) and Esthetics (E)³.

Chapter 93 also establishes certain additional designated uses for aquatic life on a stream-by-stream basis. These uses include:

- Cold Water Fishes (CWF);
- Trout Stocking Fishery (TSF);
- High Quality Warm Water Fishes (HQ-WWF);
- High Quality Cold Water Fishes (HQ-CWF);
- High Quality Trout Stocking Fishery (HQ-TSF); and
- Exceptional Value (EV).

The specific aquatic life uses that must be protected for each surface water body in Pennsylvania are listed in the tables in Chapter 93 at 25 Pa. Code §§ 93.9a – 93.9z. The next Section in this handbook provides instructions on how to determine your stream's designated use for aquatic life.



¹ The Antidegradation Manual is a DEP policy guidance document designed to provide guidance in the implementation of the antidegradation regulations.

² The only streams in Pennsylvania that are not designated for all five water supply uses are a portion of the Delaware Estuary and several streams in Allegheny and Westmoreland Counties.

³ A portion of the Delaware Estuary is not designated for water contact sports (WC). All other waters in Pennsylvania are protected for all four recreational uses.

Section 2: Determining Your Stream's Current Designated Use for Aquatic Life

§ 2.1: Categories of Designated Uses.

As was discussed in Section 1, there are three categories of designated uses in Pennsylvania:

- **Aquatic Life Uses;**
- **Water Supply Uses; and**
- **Recreational Uses.**

In Pennsylvania, the special protection designations of HQ and EV are available to protect the aquatic life uses of eligible streams. Because this handbook provides guidance on how to petition for redesignation of your stream to HQ or EV status, this Section will focus on how to determine your streams' current designated use for aquatic life only, and will not discuss the water supply and recreational uses that are designated for your stream.

§ 2.2: Determining Designated Uses for Aquatic Life.

Pennsylvania has established the following designated uses for aquatic life:

- Warm Water Fishes (WWF);
- Cold Water Fishes (CWF);
- Trout Stocking Fishery (TSF);
- Migratory Fishes (MF)⁴;
- High Quality Warm Water Fishes (HQ-WWF);
- High Quality Cold Water Fishes (HQ-CWF);
- High Quality Trout Stocking Fishery (HQ-TSF);
- Exceptional Value (EV).

WWF requires the minimum amount of protection in order to sustain its designated use. It is the baseline protection for every water body in Pennsylvania. In other words, every water body is, at a minimum, designated WWF for aquatic life.

Many water bodies, however, have received one of the upgraded designated uses, such as CWF, TSF, HQ or EV. In order to determine what specific aquatic life use has been designated for your stream (WWF, CWF, TSF, HQ or EV), follow this procedure:

Find Section 93.9 of the Chapter 93 regulations. Begin by consulting Section 93.9 of the Chapter 93 regulations, 25 Pa. Code § 93.9. These regulations can be found online at the Pennsylvania Code website, www.pacode.com. Click on the "Browse" feature, select "25 ENVIRONMENTAL PROTECTION," then click on "Chapter 93: Water Quality Standards."

Determine your Drainage List. Section 93.9 organizes Pennsylvania's water bodies into 26 "Drainage Lists", grouped regionally by river or lake basin (Delaware River, Susquehanna River, Ohio River, Genessee River, Potomac River, and Lake Erie Basins). Each Drainage List is assigned a letter A through Z, which corresponds to a lettered section of the regulations (§ 93.9a through § 93.9z).

In order to find your stream, you will have to determine under which Drainage List it is grouped. To help you do this, each Drainage List is named for its main regional water bodies, such as "Lackawaxen River Basin" or "Clarion River Basin." A map showing the boundaries of each Drainage List is also found at the end of Section 93.9 for your assistance.

⁴ The migratory fishes (MF) designation is afforded to certain streams which support fish species that migrate from large water bodies (Lake Erie, Atlantic Ocean) to rivers and streams for spawning purposes, such as Steelhead trout and American shad.

Determine your stream's designated use in the applicable corresponding section (§ 93.9a through § 93.9z). Once you find your drainage list, go to the section of the Chapter 93 regulations to which it corresponds. For example, if your stream is located in Drainage List F (Schuylkill River Basin), go to Section 93.9f. The name of your stream should be listed. The designated use is listed under the column entitled "water uses protected." The number to the left of the stream name indicates its hydrologic order (one being the largest water body, seven being the smallest tributary).

Note: Some rivers and streams have different designations for different stream segments or tributaries. In order to determine if this is so for your stream, carefully review the information described in the column entitled "zone." If your stream and its tributaries have been given different designated uses, the description of where those uses begin and end will be given in the "zone" column.

Example: Hay Creek in Berks County is listed on Drainage List F (Section 93.9f). Information in the "zone" column shows that it is EV from its headwaters to unnamed tributary No. 63882; CWF/MF from unnamed tributary No. 63882 to Beaver Run; EV again from Beaver Run to the boundary of the Borough of Birdsboro; and CWF/MF from Birdsboro to its mouth at the Schuylkill River. In addition, unnamed tributary No. 63882 is designated CWF/MF, and Beaver Run is designated as HQ-CWF/MF.

If the "zone" column contains the description "Basin" for your stream, the listed designated use applies to your entire watershed, from headwaters to mouth, including all named and unnamed tributaries.

In some cases, your specific stream may be a tributary of a stream listed on the appropriate Chapter 93 Drainage List, but may not, itself, be listed. If this is the case, then you must look for the listing of the water body into which your stream drains. In such a case, your stream's designated use is the same as the designated use for the listed downstream water body.

Example: Jack Run is a tributary of Leatherwood Creek in Clarion County and, based on its location, should be listed on Drainage List S (Section 93.9s). However, Jack Run is not specifically listed on Drainage List S. Rather, its receiving stream, Leatherwood Creek, is listed. The "zone" column for Leatherwood Creek contains the description "Basin," and the designated use is CWF. Accordingly, CWF is also the designated use for Jack Run, and all other named and unnamed tributaries of Leatherwood Creek.

Section 3: The Benefits of High Quality or Exceptional Value Designation

So why would you want to have your stream redesignated HQ or EV? The answer lies in the **anti-degradation regulations**,⁵ part of Pennsylvania's Water Quality Standards. In a nutshell, the anti-degradation regulations give special protection to HQ streams, and even greater protection to EV streams.

§ 3.1: Protection Afforded to High Quality Waters.

The antidegradation regulations mandate that the water quality of HQ waters shall be *maintained and protected*, with one exception. (25 Pa. Code § 93.4a(c)) This exception is in a case where a person seeking a permit or approval that affects water quality is able to successfully demonstrate that a lower water quality is necessary to accommodate an important economic or social development. This exception is commonly referred to as the "social or economic justification," or simply "SEJ."

Accordingly, for HQ streams, with respect to any activity for which DEP must issue a permit or approval where water quality may be affected, DEP must ensure, prior to issuing the permit or approval, that the water quality of the stream will not be degraded, except where the applicant is able to meet the SEJ standard.

For those seeking permits to discharge to HQ waters, this means that prospective dischargers must do the following:



- Evaluate **nondischarge alternatives** to the proposed discharge. Examples of nondischarge alternatives would be reuse or recycling of wastewater, infiltration of stormwater, or alternative site locations;
- Where no environmentally sound or cost effective nondischarge alternatives are available, use the "best available combination of cost-effective treatment, land disposal, pollution prevention and wastewater reuse technologies" (**ABACT requirement**);
- Where no environmentally sound or cost effective nondischarge alternatives are available, prove that the discharge will "maintain and protect the existing quality of receiving surface waters." This is often referred to as the "**nondegrading discharge**" requirement;
- Where neither nondischarge alternatives nor nondegrading discharges are found to be feasible, successfully demonstrate to DEP that "allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located" (the **SEJ requirement**). (25 Pa. Code § 93.4c(b))⁶

DEP reviews all of this information and determines whether the applicant has met the requirements for obtaining a permit. Where the prospective discharger is unable to demonstrate a nondischarge alternative, is unable to show that using the best available combination of treatment technologies (ABACT) will protect and maintain water quality, is unable to show that the proposed discharge will maintain and protect existing water quality, and is unable to provide social or economic justification (SEJ) for its discharge, DEP must deny the requested permit or approval.

⁵ A complete copy of the antidegradation regulations, 25 Pa. Code §§ 93.4a – 93.4d, are provided in Appendix D.

⁶ The antidegradation regulations include some special provisions with respect to SEJs for proposed sewage facilities in HQ waters. (25 Pa. Code § 93.4c(c)(1), (2))

§ 3.2: Protection Afforded to Exceptional Value Waters.

EV waters are afforded even greater protection under the antidegradation regulations. The anti-degradation regulations mandate that the water quality of Exceptional Value waters shall be maintained and protected, period. (25 Pa. Code § 93.4a(c)) There is no SEJ exception in EV watersheds.

Thus in any activity for which DEP must issue a permit or approval where water quality of an EV stream may be affected, DEP must ensure, prior to issuing the permit or approval, that the water quality of the stream will not be degraded. The person seeking approval for the activity is not given an opportunity to justify a lowering of water quality.

For those seeking permits to discharge to EV waters, the implementation requirements are the same as in HQ waters, with the exception that the SEJ step is eliminated. Accordingly, prospective dischargers to EV waters must do the following:

- Evaluate **nondischarge alternatives** to the proposed discharge. Examples of nondischarge alternatives would be reuse or recycling of wastewater, infiltration of stormwater, or alternative site locations.
- Where no environmentally sound or cost effective nondischarge alternatives are available, use the “best available combination of cost-effective treatment, land disposal, pollution prevention and wastewater reuse technologies” (**ABACT requirement**).
- Where no environmentally sound or cost effective nondischarge alternatives are available, prove that the discharge will “maintain and protect the existing quality or receiving surface waters” (“**nondegrading discharge**” requirement). (25 Pa. Code § 93.4c(b))

Where the prospective discharger is unable to demonstrate a nondischarge alternative, is unable to show that using the best available combination of treatment technologies (ABACT) will protect and maintain water quality, and is unable to show that the proposed discharge will maintain and protect existing water quality, DEP must deny the requested permit or approval.



Section 4: Standards for Qualifying As High Quality or Exceptional Value Streams

§ 4.1: High Quality Streams.

A stream is eligible for designation as HQ if it meets any one of the following three qualifiers:

- Water chemistry qualifier;
- Biological assessment qualifier;
- Class A Wild Trout Stream qualifier.

§ 4.1(a): Water chemistry qualifier.

Under this category, an HQ stream is one that has long term water quality (based on at least one year of data) that is better than the specific water quality criteria set forth in Section 93.7 of the Chapter 93 regulations for all of the following 12 parameters at least 99 percent of the time:

dissolved oxygen	temperature
iron	pH
dissolved copper	dissolved arsenic
dissolved cadmium	dissolved lead
aluminum	ammonia nitrogen
dissolved nickel	dissolved zinc

The calculations required in order to determine the specific water quality criteria for some of these parameters are somewhat complex. Tables 1 and 2 in Appendix E show the applicable water quality criteria for these parameters.

The regulations require at least one full year of monitoring data. In its Antidegradation Manual, DEP requests that at least 24 grab samples be collected at even intervals over the flow year, but that additional samples “always provide better characterization of a water body,” and should be included if available. (Antidegradation Manual p. 23-24) The Antidegradation Manual also discusses additional considerations regarding chemical sampling, such as: time of day; stream hardness; and the duration (or exposure period) associated with different components of the certain chemical parameters. (Antidegradation Manual p. 24) DEP protocols for chemical sampling are available upon request. (Antidegradation Manual p. 25)

§ 4.1(b): Biological assessment qualifier.

Under this category, an HQ stream is one that supports a high quality aquatic community. Whether the stream supports such a community is determined by conducting a biological assessment that surveys benthic macroinvertebrates (the invertebrates that live in and on the stream bed). The methodology that DEP uses for the assessment is that set forth in Pennsylvania’s Rapid Bioassessment Protocol (RBP), which is adopted from EPA’s “Rapid Bioassessment Protocols For Use in Wadeable Streams and Rivers – Periphyton, Benthic Macroinvertebrates and Fish” Second Edition (Plafkin, et al.; EPA 841-B-99-002; July 1999).

The macroinvertebrate survey results are then compared to the results for a comparable “reference” stream with high water quality. The stream seeking qualification must achieve an **integrated benthic macroinvertebrate score of at least 83 percent** of the score for the reference stream.

The integrated benthic macroinvertebrate score is determined by evaluating macroinvertebrate sampling results using five different metrics:

- **Taxa Richness.** The total number of taxa;
- **Modified EPT Index.** The total number of pollution sensitive mayflies, stoneflies and caddisflies;
- **Modified Hilsenhoff Index.** An index that reflects the tolerance of different macroinvertebrates to pollution;
- **Percent Dominant.** The percentage of total abundance made up by the single most abundant taxon;
- **Percent Modified Mayflies.** The percentage of total abundance made up of pollution sensitive mayflies.

Table 3 in Appendix E of this handbook shows how an integrated benthic macroinvertebrate score is calculated using these metrics. Additional details on how the metrics are analyzed and a score is calculated for a candidate stream are provided in Appendix A of the Antidegradation Handbook, p. 93-96.

In order to meet the biological assessment qualifier, the Chapter 93 regulations also allow DEP to consider data and information that has been gathered using other widely accepted and published peer-reviewed biological assessment procedures, or other biological information that indicates the quality of the stream. (25 Pa. Code § 93.4b(a)(2)(i)(B),(C))

Note: As discussed further in Section 7.3(d)(i) of this handbook, groups that submit a petition for redesignation need not spend years gathering benthic macroinvertebrate data in support of their petition. Moreover, with respect to data they do collect, they need not follow the RBP protocols, suggest a reference stream, and calculate the integrated benthic macroinvertebrate score to make their petition successful. DEP will conduct these assessments and calculations when it evaluates the petition. Nonetheless, groups should submit to DEP, as part of their petitions, any benthic macroinvertebrate sampling data they have, regardless of the sampling protocol followed or the taxonomic level of identification used. Although groups need not spend years collecting the most sophisticated data scientifically available, any macroinvertebrate data will provide a better understanding of the biological diversity of the stream, and allow DEP to better assess whether the stream is worthy of consideration for redesignation.

§ 4.1(c): Class A Wild Trout Stream qualifier.

A stream can be designated as HQ if it has been listed as a Class A Wild Trout Stream by the Pennsylvania Fish and Boat Commission. Class A Wild Trout Streams do not include all streams where wild trout have been found; rather, they represent the best of Pennsylvania's naturally reproducing trout fisheries, as determined by evidence of natural reproduction and the total amount of trout biomass present in the stream. The minimum biomass criteria for listing as a Class A Wild Trout Stream are set forth in Title 58, Chapter 57 of the Pennsylvania Code at 58 Pa. Code § 57.8a. The criteria differ depending on the species of wild trout present (brook, brown, mixed brook/brown, or rainbow). Table 4 in Appendix E shows the criteria for each species. Whether a stream meets the biomass criteria is determined through electroshocking.

The Fish and Boat Commission maintains a list of Class A Wild Trout Streams on its website, http://sites.state.pa.us/PA_Exec/Fish_Boat/. The list is updated on a yearly basis as the Fish and Boat Commission conducts additional stream sampling.

If your watershed group has conducted electroshocking as part of your stream monitoring work, and you feel that the amounts of wild trout encountered in your stream meet the minimum biomass criteria set forth in Table 4, you should contact your Fisheries Management Area Office (contact information is provided in Appendix F of this Handbook) to see if the Fish and Boat Commission may be interested in assessing the stream to determine its candidacy as a Class A Wild Trout Stream.

§ 4.2: Exceptional Value Streams.



There are seven ways a stream can qualify as EV:

- Location in a National Wildlife Refuge or state game propagation and protection area;
- Location in a State Park Natural Area, State Forest Natural Area, National Natural Landmark, Federal or State Wild River, Federal Wilderness Area or National Recreational Area;
- Outstanding national, state, regional or local resource water;
- Surface water of exceptional recreational significance;
- Biological assessment qualifier;
- "Wilderness trout stream" qualifier; or
- Surface water of exceptional ecological significance.

In order to be qualified under the first six of these, the stream must also qualify as HQ under one of the three HQ qualifiers (water chemistry, biological assessment or Class A Wild Trout Stream). If your stream is not presently HQ, you may still petition for a redesignation directly to EV status, provided the stream can meet one of the three HQ qualifiers.

Only a water body that is designated as EV under the last qualifier (surface water of exceptional ecological significance) need not qualify as HQ.

§ 4.2(a): Location in a National Wildlife Refuge or state game propagation and protection area.

This EV qualifier is location specific. If your stream meets at least one of the three criteria for being designated as HQ, and is located in either a National Wildlife Refuge or a state game propagation and protection area, it meets the requirements of this qualifier.

The only National Wildlife Refuges in Pennsylvania are the Erie National Wildlife Refuge in Crawford County and the John Heinz at Tincum National Wildlife Refuge in Delaware and Philadelphia Counties, so unless your stream is in one of these two refuges, this will not be a basis for your EV petition.

State game propagation and protection areas are areas established by the Pennsylvania Game Commission for the propagation and protection of game or wildlife. (25 Pa. Code § 93.1; 58 Pa. Code §§ 135.101; 135.161) Your stream must be located in one of these areas in order to qualify under this criterion. Presently, there are two known state game propagation and protection areas: Middle Creek Wildlife Management Area in Lancaster and Lebanon Counties and Pymatuning Wildlife Management Area in Crawford County. For more information on these two propagation areas, visit the Game Commission's website at www.pgc.state.pa.us and click on the "Pymatuning/Middle Creek" icon on the right hand menu.

Although at one time other propagation areas were established on specific State Game Lands throughout the state, most, if not all, of these areas have been discontinued. To determine whether your stream flows through an existing propagation area, you should contact your Game Commission Regional Office (see Appendix F for contact information).

§ 4.2(b): Location in a State Park Natural Area, State Forest Natural Area, National Natural Landmark, Federal or State Wild River, Federal Wilderness Area or National Recreational Area.

As with the previous qualifier, this qualifier is location specific. Presence in one of these designated areas and qualification as an HQ stream under one of the three HQ qualifiers means the stream qualifies as EV.

§ 4.2(b)(i): State Park Natural Areas.

State Park Natural Areas are areas within State Parks that have been designated by the Pennsylvania Department of Conservation and Natural Resources (DCNR) as having “unique scenic, geologic or ecological value which will be maintained in a natural condition by allowing physical and biological processes to operate, usually without direct human intervention.” (*State Parks 2000*, Bureau of State Parks Strategic Plan) Presently, there are twenty-one designated State Park Natural Areas in Pennsylvania, though consideration and review of additional areas is an ongoing process. A list of the State Park Natural Areas can be found on the DCNR website at www.dcnr.state.pa.us. Choose “State Parks”; then “Find a Park”; then “With Natural Areas.”

§ 4.2(b)(ii): State Forest Natural Areas.

State Forest Natural Areas are designated natural areas within the boundaries of one of Pennsylvania’s State Forests. Presently, there are over forty such areas designated by DCNR. A list of State Forest Natural Areas is found at www.dcnr.state.pa.us. Choose “State Forests,” then click on the “Find a Forest” map. Click on information for the specific State Forest in your area to see if any natural areas are present.

§ 4.2(b)(iii): National Natural Landmarks.

National Natural Landmarks are nationally significant natural areas that have been designated by the United States Department of Interior. Presently, there are twenty-six such designated sites in Pennsylvania. To find National Natural Landmarks in Pennsylvania, visit the National Natural Landmarks website at www.nature.nps.gov/nnl/ and click on “National Natural Landmarks Guide (by state).”

§ 4.2(b)(iv): Federal or State Wild River.

A Federal or State Wild River is a body of water designated as “Wild” under either Pennsylvania’s Scenic River Program or the Federal Wild and Scenic Rivers Program. Pennsylvania’s Scenic River Program provides for the designation of rivers and streams as “Wild”; “Scenic”; “Pastoral”; “Recreational”; or “Modified Recreational.” Presently seventeen Pennsylvania streams or stream segments are designated as “Wild.” See Table 5, Appendix E. For more information on Pennsylvania’s State Scenic Rivers Program, visit www.dcnr.state.pa.us and click on “Rivers”; then “Scenic Rivers.”

Currently there are no Pennsylvania rivers designated as “Wild” in the Federal Wild and Scenic Rivers Program (though several are designated as “Scenic” and/or “Recreational”). For a complete list of Federal Wild and Scenic Rivers, visit www.nps.gov/rivers/.

§ 4.2(b)(v): Federal Wilderness Areas.

Federal Wilderness Areas are those areas designated under the National Wilderness Preservation System, established by the Wilderness Act of 1964. Under the Act, a Wilderness Area is defined as “an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain.” Presently there are two Wilderness Areas designated in Pennsylvania, both in the Allegheny National Forest: Hickory Creek Wilderness Area in Warren

County; and Allegheny Islands Wilderness Area, a series of islands in a 56 mile stretch of the Allegheny River in Forest and Warren Counties. For more information, visit www.wilderness.net. Although topographic maps of Wilderness Areas are not available on this website, by clicking on the "National Wilderness" search map, you can obtain detailed information and points of contact for both the Hickory Creek and Allegheny Island Wilderness Areas.

§ 4.2(b)(vi): National Recreation Areas.

National Recreation Areas are areas so designated by the federal government. Presently there are 77 National Recreation Areas designated in Pennsylvania. To determine whether your stream flows through a Recreation Area, visit www.recreation.gov. In the "Find Recreation Areas" section of the home page, click on Pennsylvania and access information on each Recreation Area from the list.

§ 4.2(c): Outstanding national, state, regional or local resource water.

Qualification as an HQ stream coupled with this criterion qualifies the stream as EV. A water body is considered an "outstanding national, state, regional or local resource water" if:

- **a national or state government agency has adopted water quality protective measures in a resource management plan; or**
- **regional or local governments have adopted coordinated water quality protective measures along a watershed corridor.**
(25 Pa. Code § 93.1)

1. Water quality protective measures adopted by a national or state government agency in a resource management plan. The term "water quality protective measures in a resource management plan" in the context of national or state government agencies is not further defined in the Chapter 93 regulations or discussed in DEP's Antidegradation Manual. However, based on the plain meaning of the language, it appears that potentially eligible streams would be those that flow through federally or state owned or managed lands for which management plans are in place that include measures to protect the water quality of those streams.

Federally or state owned or managed lands. In order to determine whether your stream might be eligible under this qualifier, you must first determine whether any portion of it flows through a federally or state owned or managed land.

Federally owned or managed lands in Pennsylvania include the Allegheny National Forest, the Delaware Water Gap National Recreation Area, Erie National Wildlife Refuge, the John Heinz at Tinicum National Wildlife Refuge, several national historical parks and sites (such as Valley Forge National Historic Park), Department of Defense sites and Army Corps of Engineers reservoirs. A good resource for federal lands is the online National Atlas of the United States, www.nationalatlas.gov. Choose "Map Layers"; then "Boundaries". Under "Federal Lands" choose "View sample layer in Map Maker". A map of the United States will appear, with federal lands appearing in various colors according to their managing unit. You can zoom in on lands in Pennsylvania by highlighting the "Zoom In" function on the tool bar at the top of the map. Highlighting the "Identify" function on the tool bar and clicking on a specific colored land area will provide you with information regarding that land area.

State owned or managed lands include State Forests, State Parks and State Game Lands. Information on State Forests and State Parks can be found on DCNR's website, www.dcnr.state.pa.us. Click on "Find a Forest" or "Find a Park", respectively. Information on State Game Lands, including maps, can be found on the Pennsylvania Game Commission's website, www.pgc.state.pa.us, by clicking on "State Game Lands".

Water quality protective measures in a resource management plan. Your stream's location in a federally or state owned or managed land is not enough to meet this qualifier. A resource management plan must also be in place for the particular federal or state land in question, and that plan must include measures to protect the water quality of your stream.

Examples of resource management plans include the Allegheny National Forest Land and Resource Management Plan (or Forest Plan), which exists for Allegheny National Forest, and the State Forest Resource Management Plan, which DCNR has developed for the management of Pennsylvania's State Forests. Determining whether these plans include provisions to protect water quality of streams involves reviewing the plans themselves, which is beyond the scope of this handbook.



To determine whether a resource management plan is in place for the federal or state land through which your stream flows, contact the managing agency for the land in question. If a resource management plan does exist, ask for a copy so that you can review it to determine whether the plan includes measures to protect the water quality of your stream.

2. Coordinated water quality protective measures adopted by regional or local governments along a watershed corridor. "Coordinated water quality protective measures," which must be adopted by local or regional governments, are defined in 25 Pa. Code § 93.1. Such measures must consist of two elements:

- legally binding sound land use water quality protective measures (surface or groundwater protection zones, enhanced stormwater management measures, wetland protection zones, etc.); *coupled with*
- a real estate interest which expressly provides for long term water quality protection (ownership by a conservancy, conservation easements, government parks or natural areas, etc.)

Legally binding sound land use water quality protective measures. Under this qualifier, one or more municipalities or counties within your watershed must have adopted, within their land use plans and ordinances, measures to protect water resources and water quality in your watershed. Examples include: surface or groundwater protection zones; riparian buffer ordinances; wetland protection zones and ordinances; enhanced stormwater management ordinances (particularly those that emphasize the use of infiltration techniques and other Best Management Practices (BMPs) to protect water quality); and open space ordinances (particularly as they relate to preserving open space adjacent to water resources).

Real estate interests that protect water quality. By definition, "coordinated water quality protective measures" must also include use of real estate interests to protect water quality. Thus protection for the stream must go beyond mere requirements on paper; there must be evidence of actual, long term protection for the stream (such as ownership by a municipality, county or conservancy as a park or natural area, or development restrictions provided by a conservation easement on the property).

§ 4.2(d): Surface water of exceptional recreational significance.

Qualification as HQ is also a prerequisite for this category. These waters are those that provide a water-based, water quality-dependent recreational opportunity (such as fishing for a species with limited distribution) that is unique because only a limited number of naturally occurring areas and waterbodies across Pennsylvania exist where the activity is available or feasible. (25 Pa. Code § 93.1) In its Antidegradation Manual, DEP explains that it generally considers a “limited number” of naturally occurring areas and waterbodies to be less than 10. A “species of limited distribution” (for example, Coho salmon or Steelhead trout), include those whose range has been restricted by natural barriers, man-made barriers, or management programs. (Antidegradation Manual p. 38)

§ 4.2(e): Biological assessment qualifier.

The EV biological assessment qualifier is implemented in the same manner as the biological assessment qualifier for HQ waters. Macroinvertebrate surveys are conducted on the water body using Pennsylvania's Rapid Bioassessment Protocol (RBP) and the stream is compared to a reference stream. In order to qualify as EV, the stream must achieve an **integrated benthic macroinvertebrate score of at least 92 percent** of the reference stream's score. As with the HQ biological qualifier discussed in Section 4.1(b) of this handbook, the integrated benthic macroinvertebrate score is determined by evaluating macroinvertebrate sampling results using the five metrics of **Taxa Richness, Modified EPT Index, Modified Hilsenhoff Index , Percent Dominant, and Percent Modified Mayflies**. See Section 4.1(b). For details on how the score is calculated using these metrics, see Table 3, Appendix E of this handbook. For additional information, consult Appendix A of the Antidegradation Handbook, pages 93-96.

Note: As was true with HQ streams, groups petitioning for EV status based on the biological assessment qualifier need not spend years gathering macroinvertebrate data, and need not follow DEP's protocols in collecting and assessing data, as DEP will conduct its own stream assessment and data analysis. Groups should, however, submit all data available to them at the time they are ready to submit their petition, regardless of the sampling protocols followed. See Sections 4.1(b) and 7.3(d)(i) of this handbook.

§ 4.2(f): Wilderness Trout Stream qualifier.

HQ status coupled with designation as a Wilderness Trout Stream satisfies this criterion. Similar to the Class A Wild Trout Stream qualifier for HQ streams, the Wilderness Trout Stream qualifier is dependent on the stream being listed by the Pennsylvania Fish and Boat Commission as a wilderness trout stream. In order to qualify for listing by the Commission, the stream must be in a remote location and have high populations of naturally reproducing trout so that they combine to offer a sport fishing opportunity in a wilderness setting away from roads or vehicular access. (58 Pa. Code § 57.4) The Chapter 93 definitions further state that the purpose of such listing is “to protect and promote native trout fisheries and maintain and enhance wilderness aesthetics and ecological requirements necessary for the natural reproduction of trout.” (25 Pa. Code § 93.1)

Unlike Class A Wild Trout Streams, minimum trout biomass criteria need not be met in order to be listed as a Wilderness Trout Stream. Rather, the criteria are more subjective, as listing depends upon the stream's ability to offer a quality fishing experience in a wilderness setting.

A list of Wilderness Trout Streams can be found on the Fish and Boat Commission's website, http://sites.state.pa.us/PA_Exec/Fish_Boat/. The Commission does periodically update this list, but does not do so on an annual basis. Because of the subjective nature of the criteria involved, it is more difficult for members of the public to provide useful data to the Commission regarding a stream's Wilderness Trout Stream candidacy than it is for potential Class A Wild Trout Streams. Nonetheless, if your stream is not listed as a Wilderness Trout Stream but you believe it offers the kind of remote wilderness trout fishing experience that meets the requirements of this category, you may contact your local Fisheries Management Area office and make them aware of the stream and its characteristics. See Appendix F for contact information.

§ 4.2(g): Surface water of exceptional ecological significance.

This is the lone EV qualifier that does not require, as a prerequisite, qualification as an HQ water body. Such a surface water is defined as one that is “important, unique or sensitive ecologically, but whose water quality as measured by traditional parameters (for example, chemical, physical or biological) may not be particularly high, or whose character cannot be adequately described by these parameters.” (25 Pa. Code § 93.1) The regulations give two examples: thermal springs; and exceptional value wetlands (as defined in the Section 105 wetlands regulations at 25 Pa. Code § 105.17(1)).

The Antidegradation Manual provides some further explanation of what is a “surface water of exceptional ecological significance”:

Such aquatic systems may be considered “important” if they occupy a position or perform a function critical to an ecosystem, “unique” if they represent the only example or one of a very few examples of a particular type of aquatic system in the state, and “sensitive” because they may be intolerant of chemical, physical, or hydraulic changes imposed by man. Their status as EV waters acknowledges the significance of the ecosystems they represent. (Antidegradation Manual p. 38)



Since July 17, 1999, when the antidegradation regulations were revised to expressly include this qualifier, at least one stream segment has been redesignated as EV based upon it—the headwaters of Buck Hill Creek in Monroe County. Benthic macroinvertebrate sampling was conducted on this stream, but the headwaters segment did not score high enough to be eligible for EV status. Nonetheless, DEP noted that this segment, which emanates from acidic swamps and bogs in the Glaciated Pocono Plateau region, represents a unique resource for which an appropriate reference stream could not be identified, and thus recommended it for redesignation as EV pursuant to the “exceptional ecological significance” qualifier.

Another stream worth mentioning is an unnamed tributary to Starrucca Creek in Susquehanna and Wayne Counties. Although it was redesignated EV prior to the 1999 revisions to the antidegradation regulations, it is nonetheless instructive regarding characteristics that may support EV qualification as a stream of “exceptional ecological significance”. The unnamed tributary to Starrucca Creek originates in and flows through the “Thompson Wetlands”, a stream/bog/pond complex in Pennsylvania’s Glaciated Low Plateau Province. Varying natural conditions throughout the watershed result in a wide array of plant communities that support extremely diverse flora and fauna. Many of the plants are rare locally or restricted in range. The fact that the watershed supports a diverse and rare plant community was one of the factors on which the EV redesignation was based.

Section 5: Building Consensus and Support for Your Petition

§ 5.1: Building local community support.

From the outset, it is important to make others in your community and region aware of your plans to petition for a redesignation of your stream to HQ or EV. For your petition to be successful, the redesignation of your stream will have to be adopted as a regulation. As described in detail in Section 6, before a regulation becomes final, it is published as a proposed regulation for public comment. In addition, committees of the Pennsylvania General Assembly, as well as a body known as the Independent Regulatory Review Commission, will get to comment and make recommendations on whether to adopt the regulation. The General Assembly has the power to disapprove the regulation, which can bar promulgation.⁷ Thus any serious opposition to your petition can threaten to derail the process.

Moreover, reaching out to potentially interested parties early in the process can provide you with the opportunity to dispel myths that may exist regarding HQ and EV designations. One of the most common misconceptions about the special protection waters program is that it will stop economic growth and development. As discussed in more detail in Section 7, these fears are unfounded; in fact, an HQ or EV designation can benefit business and the local economy, especially if the designated stream offers outstanding recreational opportunities like fishing, whitewater rafting or hiking.

You can call or write to individuals and entities that you think may be supportive of your petition. You may want to ask them to sign a resolution or letter of support for the petition, which you can then submit with the petition. Sample letters of support are provided in Appendix C. In the case of some entities, such as municipalities and counties, you may be able to convince them to join the effort as co-petitioners.

The following is a list of some entities you may wish to contact to support your petition:

- municipalities;
- County Conservation Districts, County Planning Commissions, County Commissioners;
- local state representatives;
- local U.S. Congressional representatives;
- watershed groups;
- land trusts and conservancies;
- environmental organizations;
- Trout Unlimited Chapters;
- sporting and fishing clubs;
- environmental educational and research centers;
- local colleges and universities;
- local school districts;
- local businesses (guide services, outfitters, restaurants, inns, hotels, shops, farms, campgrounds, nurseries, orchards, etc.);
- water suppliers.

You may also want to contact certain individuals with a particular interest in the stream, such as riparian landowners.

⁷ The Governor has the power to veto any disapproval resolution passed by the General Assembly. However, this veto can be overridden by a two-thirds majority vote of the General Assembly. For more details on the petition process, see Section 6 of this Handbook.

§ 5.2: Contacting DEP.

It is also a good idea to contact DEP early in the process and let them know you are preparing a stream redesignation petition. DEP will be the agency responsible for reviewing the substance of the petition, making a recommendation to the Environmental Quality Board (EQB) to accept the petition, and doing the stream survey work necessary to determine whether redesignation is warranted. Thus early involvement, interest and support for your petition from DEP can only help your cause.

It is especially important to contact DEP early if you are relying on benthic macroinvertebrate data in support of your redesignation request. As DEP evaluates your petition, it will have to select a reference stream for purposes of comparing macroinvertebrate data collected from your candidate stream. Preliminary data that you may have on stream type (i.e., freestone, limestone, limestone-influenced), stream order and size; instream habitat, alkalinity, gradient and land use will be useful to DEP as it seeks to choose a reference stream with similar natural conditions and characteristics.

When you notify DEP of your plan to prepare and submit a petition, start by contacting your regional watershed manager. The DEP watershed managers act as liaisons between DEP and watershed groups, and provide support and guidance to such groups on a variety of watershed projects and initiatives. Contact information for each regional watershed manager is provided in Appendix F.

You may also want to contact DEP's Division of Water Quality Assessment and Standards, a division of the Office of Water Management. Biologists in this division will be responsible for reviewing the petition, making recommendations on whether to accept it, and conducting the stream assessment work necessary to determine whether redesignation is warranted. Other DEP points of contact include the DEP Citizens Volunteer Monitoring Program, and aquatic biologists within the Regional Water Management Programs in your DEP regional office. (See Appendix F for full list of DEP contacts.)

§ 5.3: Contacting Other Interested Agencies and Organizations.

If your petition is based on your stream's location in a particular land owned or managed by a state or federal agency (Pennsylvania Game Commission, DCNR, U.S. Forest Service, National Park Service, etc.), as outlined in Sections 4.2(a) – 4.2(c), be sure to contact that agency to let them know of your intentions and to seek their support for your petition. If your petition is based on the Class A Wild Trout Stream or Wilderness Trout Stream qualifiers, contact the Pennsylvania Fish and Boat Commission.

Biologists and other staff at other agencies may be interested in and supportive of your petition effort, particularly if your petition is based on the biological assessment qualifier. Interested agencies may have stream data available that you can use to support your petition. Such agencies include the Pennsylvania Fish and Boat Commission; County Conservation Districts; Delaware or Susquehanna River Basin Commissions; Department of Conservation and Natural Resources; United States Geological Survey; and United States Fish and Wildlife Service. (See Appendix F for contact information.)

Nongovernmental organizations may also be interested in supporting your effort and providing you with valuable data and other information. Organizations that you may want to contact include the Pennsylvania Organization for Watersheds and Rivers (POWR); Delaware Riverkeeper Network; Alliance for Aquatic Resource Monitoring at Dickinson College (ALLARM); Stroud Water Research Center; local watershed groups or land conservancies; Trout Unlimited Chapters; local colleges and school districts; and public water departments or authorities. (See Appendix F for contact information.)

As the petition process progresses, be sure to let all interested agencies and organizations know when opportunities for public comment and data submission arise. A description of the various opportunities for public comment and participation is provided in Section 8 of this handbook.

Section 6: Upgrading Your Stream to High Quality or Exceptional Value: The Petition Process

§ 6.1: The Right to Petition for an Amendment to Existing Regulations.



As discussed in Section 2, the designated uses of Pennsylvania's water bodies are found in the Chapter 93 regulations. Thus, each designated use for each stream in the Commonwealth is, itself, a regulation. These regulations are issued by a body known as the Environmental Quality Board (EQB). The EQB issues all of the regulations related to environmental protection in Pennsylvania, which DEP is then authorized to carry out.

The EQB consists of twenty members, including the heads of eleven state agencies, five members of the Citizens Advisory Council (elected annually by the Council), and four members of the

General Assembly (appointed by leaders of the General Assembly). The EQB is chaired by the Secretary of DEP. It meets on the third Tuesday of each month.

All Pennsylvania citizens have the right to petition for an amendment to existing regulations. This includes amendments to stream designations. In order to request a change in your stream's designated use, you must do so through the petition process before the EQB.

§ 6.2: The Petition Process.

In order to petition the EQB to change a stream's designated use, you must begin by filling out a Petition Form. The Petition Form is available on the web at <http://164.156.71.80/VWRQ.asp?docid=cb7cd840f80b000000001480000148&context=2&back-link=WXOD.aspx%3ffs%3dcb7cd840f80b00008000014600000146%26ft%3d1> Or, go to the DEP website at www.dep.state.pa.us, choose "Forms & Publications"; " "Policy and Communications" and "Environmental Quality Board Petition Form." A form is also included in Appendix A of this handbook.

The Petition Form is a short two pages, with relatively few sections. This belies the time required for the stream redesignation petition process, which can often take years from initial submission to final regulation.

There are three basic stages to the petition process. They are:

- Submission, Review and Acceptance of the Petition
- DEP Stream Assessment and Evaluation
- The Regulatory Process

There are numerous steps to each of these three stages. To see a petition through to successful adoption of a final regulation changing your stream's designated use, as many as twenty-six steps must be successfully navigated. These steps are presented in Table 6 in Appendix E of this handbook. This Section discusses each step.

§ 6.2(a): Stage 1: Submission, Review and Acceptance of Petition.

§ 6.2(a)(i): Petition, together with supporting information, is submitted to DEP.

In order to initiate the process, you must fill out a Petition Form provided by DEP. Links to a downloadable Petition Form and a copy of it are provided in Appendix A. The form asks petitioners to describe the problems encountered under the current designated use, the changes being recommended to address the problems, persons, businesses and organizations impacted by the proposed redesignation and the justification for the requested redesignation. Additional information must be included for stream redesignation petitions, including descriptions and maps of the watershed, technical data if available (chemical, biological, physical, etc.), information on point and nonpoint pollution sources, land use information and identification of municipalities within the watershed.

A step-by-step guide to filling out your petition and finding and developing supporting information is set forth in Section 7 of this handbook. Once the petition is complete, it should be submitted to the Secretary of DEP.

§ 6.2(a)(ii): DEP reviews petition for completeness and notifies petitioner.

DEP has thirty days to conduct its completeness review and notify the petitioner whether the petition is complete. If DEP notifies the petitioner that the petition is incomplete, the petitioner is given 30 days to amend and resubmit the petition.

§ 6.2(a)(iii): Petition is presented to EQB.

At the first regularly scheduled EQB meeting at least fifteen days after DEP finishes its completeness review, the petition will be presented to the EQB for consideration. At this meeting, DEP will make a recommendation to the EQB whether to accept or reject the petition. In addition, the petitioner is given an opportunity to make a five minute presentation in support of the petition.

§ 6.2(a)(iv): EQB publishes notice of acceptance.

If the EQB accepts the petition for further consideration, it will publish notice of this acceptance in the *Pennsylvania Bulletin*, www.pabulletin.com.

The EQB does not necessarily accept every petition for stream redesignation submitted to it. Under 25 Pa. Code § 23.5, the EQB is authorized to reject a petition for any of the following reasons.

- Within the last two years, the EQB has considered the redesignation of the stream as part of an earlier decision to amend a regulation;
- Redesignation of the stream concerns a matter currently in litigation;
- Redesignation of the stream is not appropriate due to policy or regulatory considerations;
- Redesignation of the stream is an issue previously considered by the EQB, and the petition does not contain information that is new or sufficiently different to warrant reconsideration. Any new or sufficiently different information that is presented must have been unavailable or not contained in the record of the proceeding in which the previous decision was made.

Because the EQB is authorized to reject a petition if it had previously considered the redesignation within the last two years or if the petition does not contain new information that was unavailable to the petitioners during the earlier request for redesignation, the opportunities to resubmit your petition after it is rejected are limited. Therefore, it is important to be thorough in your initial petition request and ensure that you have a good basis for the request before moving forward.

If the EQB rejects your petition, unfortunately, this is the end of the process, unless new information or changes in stream conditions support resubmission at a later date. Since the decision whether to accept a petition for further assessment is left to the complete discretion of the EQB, it is not reviewable by a court of law or similar adjudicatory body.

§ 6.2(b): Stage 2: DEP Stream Assessment and Evaluation.

§ 6.2(b)(i): DEP publishes notice of intent to assess the stream.

After the petition is accepted by the EQB for further study, the DEP publishes, in the *Pennsylvania Bulletin* (www.pabulletin.com), a notice of intent to assess the stream. In this notice, DEP also invites the submission of any data or information relevant to the assessment of the stream.

§ 6.2(b)(ii): DEP holds public meetings or hearings (optional).

DEP has the option of holding public meetings or hearings for the purpose of sharing information about the petition and assessment process, and to solicit additional information or data from members of the public. Hearings are not required, and are held at DEP's discretion.

§ 6.2(b)(iii): DEP biologists conduct stream assessments.

DEP then assigns the petition to staff biologists, who begin to conduct biological assessments of the stream to see if the aquatic life in the stream warrants the requested redesignation to HQ or EV.

This process can often be a lengthy one. DEP is under no regulatory timeline to complete the assessment, and staffing limitations and changes in priorities make it difficult to predict when the assessment process will be undertaken and completed. In addition, the DEP biologists may feel that several years of data collection is necessary to adequately assess the aquatic life uses of the stream. Moreover, yearly weather and precipitation fluctuations may make it difficult to collect sufficient information in a timely manner. All of these factors mean that the assessment process may take several years to complete.

As discussed in Section 5.2 of this handbook, it is beneficial to contact the DEP biologists in the Division of Water Quality Assessment and Standards who will be conducting the stream assessment. By building a good relationship, you may be able to check in with the biologists periodically to inquire about the status of your petition.

§ 6.2(b)(iv): DEP evaluates the assessment data and prepares a draft evaluation report.

After completing the assessment, DEP evaluates all of the data and prepares a draft evaluation report for the stream. Again, depending on the amount of data to be analyzed, staffing concerns, internal priorities and other factors, it may take several years from the commencement of the assessment to the completion of DEP's draft evaluation report.

§ 6.2(b)(v): The draft evaluation report is sent to the petitioner, municipalities.

Once completed, the draft report will be sent to the petitioner and the municipalities within the area affected by the proposed redesignation. DEP will also post the reports on its website, www.dep.state.pa.us. Click on "Subjects," then "Stream Redesignation" to access reports that have been posted online.

§ 6.2(b)(vi): Public comment period on the draft evaluation report.

The sending of the draft report to the petitioner and municipalities triggers a public comment period. The petitioner and other members of the public have 30 days to comment on the report.

Unless DEP decides to hold a public hearing on the petition, this comment period is the only opportunity for the public (i.e., non-petitioners) to comment on the stream redesignation prior to the EQB's decision whether to adopt a proposed regulation redesignating the stream. Thus it is important for you to get the word out to interested organizations and individuals and encourage them to submit comments in support of your effort.

§ 6.2(b)(vii): DEP considers comments and prepares a revised report.

Within six months of sending the draft report to the petitioner and municipalities for comment, DEP must consider all comments received and prepare a revised report. In this report, DEP makes a recommendation as to whether the EQB should accept or deny the request to redesignate the stream. If DEP recommends redesignation, DEP also prepares a proposed regulation setting forth the change in the stream's designated use.

Note: If DEP recommends that the EQB deny the redesignation request, it need not prepare a revised report. Rather, DEP simply presents its recommendation to retain the current designated use to the EQB at the first regularly scheduled EQB meeting at least 15 days following the close of the public comment period. A decision by the EQB to adopt such a recommendation ends the petition process.

§ 6.2(c): Stage 3: The Regulatory Process.

§ 6.2(c)(i): EQB adopts the proposed regulation.

Once DEP recommends and the EQB adopts the requested redesignation as a proposed regulation, this starts the regulatory process. In Pennsylvania, the regulatory process is long and complex. Along with DEP and the EQB, the Office of Attorney General, the Senate and House Environmental Resources and Energy Committees (referred to as the "Standing Committees"), a body known as the Independent Regulatory Review Commission (IRRC), and members of the public all have roles to play in the process.



§ 6.2(c)(ii): General Counsel and Attorney General review the proposed regulation.

After the EQB adopts the proposed regulation, it is sent to the Office of General Counsel and the Office of Attorney General for legal review. There is no time limit on the Office of General Counsel's review. The Attorney General has 30 days to review the proposed regulation.

§ 6.2(c)(iii): DEP submits the proposed regulation to the Standing Committees and IRRC.

The EQB also submits the proposed regulation to the Standing Committees and IRRC for their review and comment.

§ 6.2(c)(iv): DEP publishes the proposed regulation.

Around the same time that the Standing Committees and IRRC are conducting their review, DEP publishes the proposed regulation in the *Pennsylvania Bulletin* (www.pabulletin.com). Publication in the *Bulletin* signals the start of a public comment period. The notice in the *Bulletin* will announce the deadline and address for submission of comments from the public. The length of this comment period varies, but it is often 30 or 60 days from the date of publication. Again, it is important to let interested organizations and individuals know of this opportunity to provide comment in support of the redesignation.

§ 6.2(c)(v): Comments from the Standing Committees and IRRC.

The Standing Committees may submit comments on the proposed regulation any time prior to submission of a final regulation. IRRC may submit comments within 30 days of the end of the public comment period.

§ 6.2(c)(vi): DEP drafts the final regulation.

After consideration of any comments received by the Standing Committees, IRRC and members of the public, DEP drafts the final regulation.

§ 6.2(c)(vii): EQB adopts the final regulation.

DEP then submits the final regulation to the EQB for adoption.

§ 6.2(c)(viii): DEP submits the final regulation to the Standing Committees, IRRC and public commenters.

DEP then submits the final regulation to the Standing Committees, IRRC, and any members of the public who commented on the proposed regulation.

§ 6.2(c)(ix): IRRC considers the final regulation.

At the first regularly scheduled IRRC meeting after the final regulation is submitted, IRRC will consider the final regulation and, if satisfied, approve it.

§ 6.2(c)(x): The Standing Committees consider the final regulation.

The Standing Committees are also given an opportunity to review the final regulation and approve it.

§ 6.2(c)(xi): Attorney General reviews the final regulation.

Once the Standing Committees and IRRC approve the final regulation, it goes back to the Office of Attorney General, which then has 30 days to review it for form and legality.

§ 6.2(c)(xii): Final regulation published.

After the Attorney General reviews the final regulation, it is published in the *Pennsylvania Bulletin*. The regulation is now final, and your stream has a new, more protective designated use for aquatic life!

§ 6.2(d): What if IRRC or the Standing Committees Disapprove the Regulation?

It is possible that, when a regulation is presented in final form to IRRC and the Standing Committees, those reviewing entities may disapprove the regulation. If this happens, additional steps in the process must occur.

§ 6.2(d)(i): IRRC disapproves the regulation.

If IRRC disapproves the regulation at its public meeting, DEP then has the following three options:

- resubmit the regulation with or without changes to IRRC and the Standing Committees within 40 days;
- withdraw the regulation;
- take no action.

If DEP **resubmits the regulation**, IRRC will reconsider the regulation at a second public meeting. IRRC disapproval, alone, does not prevent the regulation from becoming adopted. Even if IRRC disapproves the resubmitted regulation, so long as the Standing Committees and full General Assembly do not disapprove the regulation, or the Governor vetoes a General Assembly disapproval and is not overridden, the regulation will proceed to final publication and adoption.⁸

If DEP **withdraws the regulation**, this ends the process. DEP may resubmit the regulation in its final form within two years after the close of the public comment period. Any resubmissions by DEP after this two year period would send the entire regulatory process back to the beginning.

If DEP **takes no action**, the regulation is deemed withdrawn within 40 days of IRRC's disapproval.

§ 6.2(d)(ii): Standing Committees disapprove the regulation.

Either of the Standing Committees may disapprove the regulation. The Standing Committees have up to 24 hours before IRRC's first public meeting on the regulation to notify IRRC, the EQB and DEP if they will disapprove the regulation, or if they intend to review the regulation further.

If one of the Standing Committees decides to disapprove the regulation, it must approach the other Standing Committee in an attempt to reach a concurrent disapproval resolution within 14 days after the IRRC meeting. The disapproval resolution is then presented to both the Senate and the House of Representatives for adoption. The General Assembly has 30 calendar days or 10 legislative days to adopt the disapproval resolution, whichever is later.

If the General Assembly adopts the disapproval resolution, it then presents it to the Governor. The Governor has 10 calendar days to sign or veto the disapproval resolution. A veto can be overridden by a two-thirds majority vote of the General Assembly.

If the Governor signs a disapproval resolution, or if the General Assembly overrides the Governor's veto, the process ends and the EQB is barred from promulgating the regulation.

If, on the other hand, the Governor vetoes the disapproval resolution and the veto cannot be overridden, the regulation proceeds to final legal review by the Attorney General and final publication in the *Pennsylvania Bulletin*.

Tables 7 and 8 in Appendix E summarize the additional steps that may occur in the event of disapproval by IRRC or the Standing Committees.



⁸ As explained in Section 6.2(d)(ii), disapproval by the Standing Committees may bar the EQB from enacting the regulation, if the entire General Assembly votes to disapprove the regulation and the Governor fails to veto the disapproval.

Section 7: Filling Out Your Petition: A Step-By-Step Guide

This Section provides a step-by-step guide to filling out your stream redesignation petition. As you follow the steps below, please refer to the sample Petition Form provided in Appendix A of this handbook.⁹

§ 7.1: Section I: Petitioner Information.

Provide your name (organization or individual, whichever is applicable), mailing address, telephone number and date.

§ 7.2: Section II: Petition Information.

§ 7.2(a): Subsection A.

Subsection A asks you to check whether you are requesting that the EQB adopt, amend, or repeal a regulation. You are asking for a change in the designated use for your stream, so you should check "Amend a regulation."

This subsection also asks for the citation to the regulation you are seeking to amend, so you should provide the precise legal citation to Chapter 93 that sets forth your stream's designated use. *Example: Your stream is the Quittapahilla Creek in Lebanon County. This stream is listed in Drainage List O. Thus the correct legal citation is 25 Pa. Code § 93.9o.* See Section 2 of this handbook for more detailed instructions on how to determine your stream's current designated use and the proper legal citation.

§ 7.2(b): Subsection B.

Subsection B asks why you are requesting the redesignation. To answer this, you are asked to:

- describe problems encountered under the current designation;
- describe the changes being recommended to address the problems;
- state factual and legal contentions and include supporting documentation that establishes a clear justification for the requested redesignation.

§ 7.2(b)(i): Describe problems encountered under the current designation.

The likely reason you are petitioning the EQB to change your stream's designated use is that the stream's actual, existing use for aquatic life is greater than or requires more protection than is afforded by the current designated use. Thus, you should briefly discuss the reasons why your stream qualifies for HQ or EV protection. Perhaps recent stream improvement projects have resulted in improving water quality, macroinvertebrate communities, or wild trout populations. Mention specific projects such as clean up of contaminated industrial sites, stream bank fencing and riparian buffer plantings, and acid mine drainage treatment efforts, and explain the improvements that have been seen as a result of these projects.

In Subsection B, you should also mention any threats faced by your stream, and why HQ or EV status will help prevent degradation of water quality in the face of those threats. Your watershed may be poised for development, which will bring with it potential threats from increased stormwater runoff and industrial or sewage point source discharges. Perhaps your stream is a heavily used water

⁹ You may also find it helpful to review completed petitions that are currently posted on DEP's website. Visit www.dep.state.pa.us; click on "DEP Programs (A-Z)"; then "EQB." Links to petitions are provided under the agendas for the EQB meetings at which they were presented. For example, under the agenda for the February 17, 2004 meeting, you will find petitions to redesignate Beaver Run and Lower French Creek (Chester County) and Two Lick Creek (Indiana County). Appendix B provides a list of direct links to sample petitions that have been submitted over the last several years.

resource, and increasing water usage threatens to reduce stream flow significantly. Or maybe activities such as longwall mining are occurring in your watershed, carrying with it the threat of dewatering and degradation of aquatic habitat caused by mining subsidence.

Describing the threats or problems encountered will vary from stream to stream. The ideas given above are only examples of what might occur in any given watershed throughout Pennsylvania. Some may be applicable to your stream, some may not. Your stream may be faced with other threats not mentioned here. The point is to consider all of the threats to your stream, and articulate with specificity what they are. No one knows your watershed better than you and the fellow members of your watershed group.

§ 7.2(b)(ii): Describe the changes being recommended to address the problems.

Not only should you discuss the threats and problems faced by your stream, you should describe how a redesignation to HQ or EV status will address these problems.

As a general matter, HQ or EV status will afford greater protection to your stream by protecting its water quality. The specific nature of that protection will depend on two factors: the current designated use of your stream and which special protection status you are seeking (HQ or EV).

Example 1: Your stream is currently designated as WWF, TSF, or CWF. You are petitioning for a redesignation to HQ-WWF, HQ-TSF or HQ-CWF. An HQ designated use will afford your stream additional protection when DEP issues permits or approvals for activities that affect your stream. Specifically, the Chapter 93 antidegradation regulations require that, when DEP reviews and decides whether to issue such permits or approvals, the water quality of HQ waters shall be maintained and protected. (25 Pa. Code § 93.4a(c)) When seeking a permit or approval in an HQ watershed, the antidegradation regulations require that the applicant first evaluate nondischarge alternatives to the proposed discharge (for example, recycling and reuse of industrial wastewater; infiltration of stormwater). If the applicant demonstrates that no environmentally sound and cost effective alternative exists, the applicant must then use the best available combination of cost-effective treatment, land disposal, pollution prevention and wastewater reuse technology (ABACT), and must demonstrate that the discharge will maintain and protect existing water quality of the stream. The only exception to this is if the applicant can provide a "social or economic justification" (SEJ). To satisfy the SEJ requirement, the applicant must prove that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the stream is located. (25 Pa. Code § 93.4c(b))

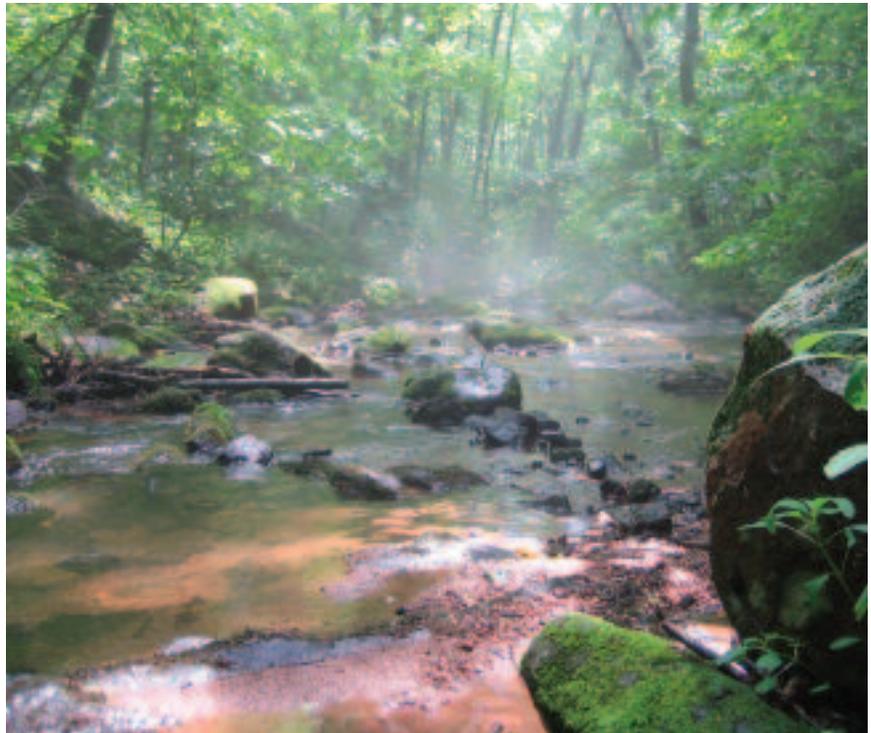
Example 2: Your stream is currently designated as WWF, TSF or CWF. You are petitioning for a redesignation to EV. An EV designated use will afford your stream additional protection when DEP issues permits or approvals for activities that affect your stream. Specifically, the Chapter 93 antidegradation regulations require that, when DEP reviews and decides whether to issue such permits or approvals, the water quality of EV waters shall, without exception, be maintained and protected. (25 Pa. Code § 93.4a(c)) When seeking a permit or approval in an EV watershed, the antidegradation regulations require that the applicant first evaluate nondischarge alternatives to the proposed discharge, such as recycling and reuse of industrial wastewater or infiltration of stormwater. If the applicant demonstrates that no environmentally sound and cost effective alternative exists, the applicant must then use ABACT and demonstrate that the discharge will maintain and protect existing water quality of the stream. (25 Pa. Code § 93.4c(b)) Unlike HQ waters, there is no SEJ exception to this rule. In EV streams, applicants must either provide and implement a nondischarge alternative, or, if nondischarge alternatives are not feasible, use ABACT and show that the discharge will not lower the existing water quality of the EV stream. (25 Pa. Code § 93.4c(b))

Example 3: Your stream is currently designated as HQ-WWF, HQ-TSF or HQ-CWF. You are petitioning for a redesignation to EV. Although your stream is already afforded the special protection of HQ status, an EV designated use will give your stream additional protection when DEP issues permits or approvals for activities that affect your stream. Specifically, the Chapter 93 antidegradation regulations require that, when DEP reviews and decides whether to issue such permits or approvals, the water quality of EV waters shall, without exception, be maintained and protected. (25 Pa. Code § 93.4a(c)) When seeking a permit or approval in an EV watershed, the antidegradation regulations require that the applicant first evaluate nondischarge alternatives to the proposed discharge such as recycling and reuse of industrial wastewater or infiltration of stormwater. If the applicant demonstrates that no environmentally sound and cost effective alternative exists, the applicant must then use ABACT and demonstrate that the discharge will maintain and protect existing water quality of the stream. Unlike HQ waters, there is no SEJ exception to this rule. In EV streams, applicants must either provide and implement a nondischarge alternative, or, if nondischarge alternatives are not feasible, show that the discharge will not lower the existing water quality of the EV stream. (25 Pa. Code § 93.4c(b))

§ 7.2(b)(iii): State factual and legal contentions and include supporting documentation that establishes a clear justification for the requested redesignation.

A description of your stream's importance to both the human and aquatic community should be included in this section. Describe the historical and natural importance of the stream, and its historical uses that made it a landmark feature in the community and region. Describe the richness of the aquatic community that the stream supports. Highlight any unique natural features, such as waterfalls or rare rock substrates, presence of aquatic species of concern and special riparian features, as well as important recreational uses of the stream, such as sport fishing, canoeing, rafting, hiking, photography, birding and wildlife viewing.

Some have raised a concern that affording a stream HQ or EV status means that economic growth and development can no longer occur in such a watershed. This is simply not the case. In its Antidegradation Manual, DEP lists several examples of residential and commercial developments that have been approved in EV watersheds. (Antidegradation Manual p. 42)



As explained above, the antidegradation regulations set forth a permitting process that allows activities to be permitted and proceed in HQ and EV watersheds through use of nondischarge alternatives and discharges that protect existing water quality. In order to prevent public opposition to your petition from occurring, it is important to point out this fact early on in your petition, and to reach out to your community and local officials to make them understand that HQ or EV status is not a bar to development and economic progress.

A good example of how this issue was addressed is provided in a petition recently submitted by a coalition of groups led by the Green Valleys Association to redesignate lower French Creek and Beaver Run in Chester County as EV:

What will it not do?

The EV designation will not prohibit or inhibit development. Rather, by using the required Best Management Practices (BMPs) it fosters better planning and execution of development plans. The main change for new developments is to provide high quality treated waste-water discharges or to use land application of such water.

There are several examples of large developments that have been successfully approved in the upper portion of French Creek watershed since EV designation was received in 1998. Among them are the French Creek Golf Course Community in Warwick and East & West Nanteal Townships and the Weatherstone development (Hankin Group) in West Vincent Township. It is also worth noting that individual property rights would not be violated by the granting of the EV designation.

Lower French Creek Petition p. 2.¹⁰

§ 7.2(c): Subsection C.

Subsection C asks you to describe the types of persons, businesses and organizations likely to be impacted by the proposed redesignation.

In this subsection, you will want to list all stakeholders that will be impacted in a positive manner by the redesignation. Describe in as much detail as possible how each stakeholder listed will benefit, referencing and attaching any relevant economic reports or studies. List and describe businesses and organizations that depend upon high quality water for the success of their ventures. Examples might include fishing guides and outfitters, tackle shops, canoeing or rafting guides and outfitters, outdoor camps, crop farmers and livestock operators, and schools and environmental education centers. If your stream supports a tourism industry (perhaps because of an outstanding sport fishery or outdoor recreational activity), businesses such as inns, motels, hotels, resorts, restaurants and shops may benefit as well. Water suppliers that draw from the stream may benefit from increased water quality and lower treatment costs. General citizens and residents of your community may also be impacted in a positive way by having an outstanding stream nearby. For example, the recently submitted petition to upgrade Two Lick Creek in Indiana County from TSF to HQ-CWF (recent acid mine drainage restoration activities have resulted in the reproduction of wild trout) states that the redesignation will *“help the partner organizations protect this valuable area commodity: a large wild trout stream in everyone’s backyard.”*

You may also want to include a statement indicating that any persons, businesses or organizations seeking to bring some form of residential, commercial or large scale agricultural development to your watershed will have to undergo HQ or EV antidegradation permit review. Again, it is important to note that additional permit review under the antidegradation regulations does not mean that development will cease and activities will no longer be permitted. All that it means is that, prior to proceeding with development plans, applicants will have to implement nondischarge alternatives, ensure that their discharges do not degrade the water quality of the stream, or, in the case of HQ waters, ensure that any reduction in water quality is socially or economically justified.

§ 7.2(d): Subsection D.

Subsection D asks whether the requested redesignation concerns a matter currently in litigation. The answer should be no, because having the matter currently in litigation is a reason for the EQB to reject the petition. See 25 Pa. Code § 23.5(2).

¹⁰ www.dep.state.pa.us/dep/subject/eqb/2004/GVA_Upgrade_Beaver_Run.pdf .

§ 7.3: Section II, Subsection E: Specific Information Required of Stream Redesignation Petitions

Subsection E of Section II applies exclusively to stream redesignation petitions, and requires nine additional items of information:

- A clear delineation of the watershed or stream segment to be redesignated, both in narrative form and on a map;
- The current designated use(s) of the watershed or segment;
- The requested designated use(s) of the watershed or segment;
- Available technical data on instream conditions for the following: water chemistry, the aquatic community (benthic macroinvertebrates and/or fishes), or instream habitat. If such data are not included, provide a description of the data sources investigated;
- A description of existing and proposed point and nonpoint source discharges and their impact on water quality and/or the aquatic community. The names, locations, and permit numbers of point source discharges and a description of the types and locations of nonpoint source discharges should be listed;
- Information regarding any of the qualifiers for designation as HQ or EV waters in 25 Pa. Code § 93.4b used as a basis for the requested designation;
- A general description of land use and development patterns in the watershed;
- The names of all municipalities through which the watershed or segment flows, including an official contact name and address; and
- Locational information relevant to items four through eight (except for contact names and addresses) displayed on a map or maps, if possible.

§ 7.3(a): A clear delineation of the watershed or stream segment to be redesignated.

Subsection E.1. requires both a narrative description and a map of the stream or stream segment to be redesignated.

§ 7.3(a)(i): Narrative description.

Your narrative description should include: a precise description of the beginning and end of your stream or stream segment (using landmarks such as roads, bridges, confluences, municipal boundaries, etc.); the length of the stream or stream segment in miles (to the nearest tenth of a mile); and a description of any tributaries included in the redesignation.

§ 7.3(a)(ii): Watershed map.

Your map should clearly mark the stream or stream segment, along with the watershed boundary if possible. Coloring the stream or stream segment at issue is helpful.

Geographic Information Systems (GIS) mapping technology provides an excellent opportunity to create watershed maps that show your stream, together with important political and geographic features and watershed boundary, in a clear and attractive manner. Many governmental agencies and other organizations have GIS mapping systems, and they may be able to provide you with maps of your watershed. Potential sources include:

- County Conservation Districts (a list of County Conservation District watershed specialists is provided in Appendix F);
- Susquehanna River Basin Commission (contact information is provided in Appendix F);
- Delaware River Basin Commission (contact information is provided in Appendix F);
- Pennsylvania Organization for Watersheds and Rivers (POWR) (contact information is provided in Appendix F);
- Local municipal or county government offices;
- Local watershed organizations;
- Local colleges and universities;
- Water suppliers.

If a GIS map from one of these sources is not an option for you, United States Geological Survey (USGS) topographic maps are a good alternative. USGS maps are available online free of charge at www.topozone.com. Or, you can order hard copy quadrangles directly from USGS (www.usgs.gov or **1-888-ASK-USGS**). Local outfitters, bookstores and other businesses may also distribute USGS topographic maps.

Another source for maps is the USGS National Map project, an online topographic map service. It can be accessed at www.nationalmap.usgs.gov. This map allows you to choose various layers, such as topographic relief, water bodies, stream names, roads, and political boundaries. You can download and print maps from the National Map free of charge.

§ 7.3(b): The current designated use(s) of the watershed or segment.

As explained in Section 2 of this handbook, the current designated uses for your stream are set forth in Section 93.9a through Section 93.9z of the Chapter 93 regulations, 25 Pa. Code §§ 93.9a – 93.9z. Follow the procedure described in Section 2 to determine the current designated use of your stream.

§ 7.3(c): The requested designated use(s) of the watershed or segment.

State the requested redesignation of your stream (HQ-WWF, HQ-TSF, HQ-CWF or EV).

§ 7.3(d): Available technical data on instream conditions for the following: water chemistry, the aquatic community (benthic macroinvertebrates and/or fishes), or instream habitat.

In many ways, this is the heart of your petition, the information and data that supports the claim that your stream is of outstanding quality and thus warrants special protection.

§ 7.3(d)(i): How much data is needed?

There is no set answer to this question. On one hand, you would like to submit as much chemical, biological and physical data for your stream as possible, and the more data that supports your request, the stronger it will be. On the other hand, if DEP feels that your petition warrants acceptance, it will recommend to the EQB that the petition be accepted for further study. DEP biologists will then assess the stream themselves, including the stream's chemical, biological and physical characteristics, and make an evaluation as to whether redesignation is warranted. Thus you may not want to spend several years collecting a voluminous data set for your stream, when, no matter how much you've collected, DEP will conduct its own complete stream assessment once the petition is accepted. This DEP assessment often takes years to complete.

Given these conflicting points of view, a good general rule to follow is, submit all data available to you at the time you are ready to submit your petition. This includes data that your organization has collected on its own, as well as any outside sources of data.

§ 7.3(d)(ii): What outside data sources are available?

You should seek to gather any available data for your stream from outside sources. There are many potential data sources to investigate. Many agencies, scientific institutions, educational institutions, and conservation organizations conduct stream sampling and monitoring, and most will be more than willing to provide you with data to support your application.

Some potential data sources include:

- DEP (call your regional DEP watershed manager to inquire about data, see Appendix F for contact information);
- County Conservation Districts (call your county watershed specialist to inquire about data, see Appendix F for contact information);
- Susquehanna River Basin Commission (see Appendix F for contact information);
- Delaware River Basin Commission (see Appendix F for contact information);
- Pennsylvania Organization for Watersheds and Rivers (POWR) (see Appendix F for contact information);
- United States Geological Survey (see Appendix F for contact information);
- Pennsylvania Fish and Boat Commission (see Appendix F for contact information);
- Public water suppliers;
- Trout Unlimited Chapters (see www.patROUT.org for a list of TU Chapters in Pennsylvania, including chapter contact information);
- Local watershed groups or land conservancies;
- Regional environmental groups (such as Delaware Riverkeeper Network, www.delawareriverkeeper.org);
- Local colleges and school districts (particularly biology or environmental studies departments);
- Scientific research institutions (such as Stroud Water Research Center, www.stroudcenter.org);
- Alliance for Aquatic Resource Monitoring at Dickinson College (ALLARM) (www.dickinson.edu/storg/allarm);
- Pennsylvania EASI Senior Environmental Corps. (www.dep.state.pa.us/hosting/pasec/)

This list certainly is not exhaustive. There may be organizations or individuals unique to your region that have collected usable data for your stream. As you search locally for data, you may be able to uncover such sources.

Most of the sources listed above maintain their own individual databases for storing data. POWR, however, is in the process of developing a comprehensive, statewide data system that will store stream monitoring data at a central location, make it available on its website, and allow for individual queries. One of the purposes of this system is to provide support for advocacy actions, such as stream redesignation petitions, by making the data available to the public. This system should reduce the time needed to collect data on a particular stream by centralizing the data at one specific location accessible through POWR's website, www.pawatersheds.org.



§ 7.3(d)(iii): How can you gather your own data?

There is no requirement that you collect your own data to support your stream redesignation petition. Similarly, no particular sampling protocols are required for the collection of such data should you choose to do it. However, DEP has established protocols for its own stream sampling. It may be advantageous to follow these protocols as closely as possible when you collect your own stream data, particularly if you are having professional biologists collect the data on your behalf.

DEP has established quality assurance standards and sampling protocols for **chemical sampling** which are available from DEP upon request. (Antidegradation Manual p. 25) For **biological sampling**, DEP requires adherence to Pennsylvania's Rapid Bioassessment Protocol (RBP), again available from DEP upon request. (Antidegradation Manual p. 28)

With respect to **chemical data**, the regulations require at least one full year of monitoring data for the stream to be eligible for special protection status. In its Antidegradation Manual, DEP requests that at least 24 grab samples be collected at even intervals over the flow year, but that additional samples "always provide better characterization of a water body," and should be included if available. (Antidegradation Manual p. 23-24) The Antidegradation Manual also discusses additional considerations regarding chemical sampling, such as: time of day; stream hardness; and the duration (or exposure period) associated with different components of the certain chemical parameters. (Antidegradation Manual p. 240)

With respect to **biological data**, DEP follows the RBP to collect data on the benthic macroinvertebrate community and available instream habitat. The RBP calls for the establishment of a representative number of sampling stations. The exact number of sampling stations will vary according to several factors, including the size of the stream, the number of tributaries, the variety of land uses, the number of point and nonpoint sources, etc. (Antidegradation Manual p. 29-30) Generally speaking, sampling stations should be placed at:

- the mouth of the main stem or endpoint of the stream segment under study;
- the mouth of major tributaries;
- along the main stem every two to three miles (or closer if there are noticeable changes in stream flow, instream habitat or riparian land use/land cover);
- upstream and downstream from population centers, reservoirs, nonpoint sources, point sources, land use changes, etc.

(Antidegradation Manual p. 29)

For benthic macroinvertebrates, the RBP requires three samples per station, with each sample consisting of two D-frame screen kicks. (Antidegradation Manual p. 33) Visual instream habitat assessments are conducted at each location as well, by evaluating and rating twelve established parameters (instream fish cover, embeddedness, channel alteration, sediment deposition, riparian vegetation, etc.). (Antidegradation Manual p. 91-92)

Fish data, collected using electrofishing techniques, may also be submitted in support of your application. (Antidegradation Manual p. 34)

DEP's Citizens' Volunteer Monitoring Program provides training to volunteer monitors so that you can collect usable data that follows acceptable protocols. For more information, visit www.dep.state.pa.us, click on "DEP Programs", and "Citizens Volunteer Monitoring Program."

Another organization that can help you gather stream monitoring data is the Consortium for Scientific Assistance to Watersheds (C-SAW). The C-SAW program, funded by Growing Greener, provides free technical assistance to watershed groups. C-SAW representatives will train volunteer monitors using

accepted protocols, and provide assistance in establishing a volunteer monitoring program. Groups that are members of the C-SAW consortium and that provide such assistance include:

- Alliance for Aquatic Resource Monitoring at Dickinson College (ALLARM);
- Delaware Riverkeeper Network;
- Stroud Water Research Center;
- United States Geological Survey (USGS);
- California University of Pennsylvania;
- Natural Resources Conservation Service (NRCS);
- Pennsylvania Association of Resource Conservation and Development (RC&D) Councils; and
- Pennsylvania Lake Management Society.

For more information on eligibility and how to apply for technical assistance from C-SAW, visit <http://pa.water.usgs.gov/csaw/>

You may also want to consult local colleges and universities. Such institutions often are willing and able to provide technical assistance or partner with watershed groups to conduct stream monitoring.

§ 7.3(d)(iv): What if you are unable to include data in support of your petition?

Data that shows your stream to be of excellent water quality certainly will make it easier for DEP and the EQB to accept your petition for further study. However, there is no requirement that petitions be supported by data. Subsection E.4 of the Petition Form states that, if data is not included in your petition, you should provide a description of the data sources investigated.

§ 7.3(e): A description of existing and proposed point and nonpoint source discharges and their impact on water quality and/or the aquatic community.

§ 7.3(e)(i): Information on existing point source discharges.

Each point source discharge to your stream will have a National Pollution Discharge Elimination System (NPDES) permit issued by DEP, and all relevant information regarding that permitted discharge is available through DEP.

There are several methods for gathering point source information on your own, most of them quite cumbersome. Perhaps the best method at present (although still plenty cumbersome) is **“What’s in My Watershed,”** DEP’s online GIS interactive watershed map. To access, go to www.dep.state.pa.us, click on “DEP Programs,” then “GIS, eMAP pa”, and click on the “What’s in My Watershed” icon. Once the map is uploaded, choose “Features” and click on the box to check “Streams and Water Resources.” In addition, you will want to choose “Facility” and scroll down to “Water Pollution Control Facility.” Click on the box to check it. Open the Water Pollution Control Facility folder and click on the box to check “Discharge Point-WPCF.” Finally, you should click on the circle to make Discharge Point-WPCF the “active layer.” This allows you to obtain information on each discharge point in your watershed.

You are now ready to zoom in on your watershed and obtain the information on point source discharge points. Make sure the “Zoom In” feature is highlighted at the toolbar at the top, and begin clicking on the state map in the vicinity of your watershed. Eventually, stream features will appear (red lines are for impaired segments, green lines are for unimpaired segments, and blue lines are for unassessed segments). You will also see the icon for “Discharge Point-WPCF.” Each icon represents a separate point source discharge in your watershed. By highlighting “Identify” at the top toolbar and then clicking on each point source icon, you can obtain relevant information on the discharge, including the permit holder’s name, the site facility name, latitude and longitude coordinates, NPDES permit number (expressed as PA#####), and type of discharge (industrial, sewage, etc.).

For other ideas on how to obtain point source information, you should contact your regional DEP watershed manager or County Conservation District watershed specialist (Appendix F). Even if you are able to successfully navigate “What’s In My Watershed” and obtain point source information from it, you may still want to make these contacts to ensure that you have complete information on all point sources on your stream. Moreover, DEP or the County Conservation Districts may have access to certain databases that provide the necessary information on point sources.

§ 7.3(e)(ii): Information on proposed point source discharges.

It is certainly possible that there are applications for NPDES permits for proposed new point source discharges pending before DEP, and a search for this information is a good place to start. DEP publishes weekly notice of applications which have been received and for which a draft permit has been developed in the *Pennsylvania Bulletin*, www.pabulletin.com. PennFuture compiles a weekly summary of *Pennsylvania Bulletin* notices affecting watersheds in the six-county region of Berks, Bucks, Chester, Delaware, Lehigh, Montgomery and Philadelphia Counties, and emails the list to interested citizens. If you are interested in being added to the distribution list, contact Brian Glass at PennFuture (1-215-545-9694, glass@pennfuture.org).

Another way of being notified of applications for new NPDES point source discharge permits is to register for DEP’s “eNOTICE” program. This program allows you to receive email notices of permit applications received by DEP. You can tailor the scope of your request to specific counties or municipalities. Once you have registered, you will receive periodic notices of applications upon their receipt by DEP. Visit www.dep.state.pa.us and click on “Sign Up For eNOTICE” to register.

Local municipalities may be another good source of information regarding proposed new point sources. New developments or facilities that require NPDES permits for point source discharges will likely need to submit land development plans to municipalities for approval, so they may have early knowledge of such projects.

You may simply learn of proposed new point source discharges in your watershed by word of mouth. If you do, you should search the *Pennsylvania Bulletin* or attempt to contact your DEP regional office to verify this information.

§ 7.3(e)(iii): Information on existing nonpoint source discharges.

Nonpoint source discharges may include erosion and sedimentation runoff from new construction sites, stormwater runoff from existing development, agricultural runoff, road runoff, acid mine runoff from abandoned waste coal piles, etc. There is no comprehensive database for specific nonpoint source discharges in Pennsylvania. Because of their very nature, nonpoint source discharges are not discrete pollution sources, and it may be difficult to pinpoint them.

Certain studies and other documents may exist that will help you identify nonpoint sources in your watershed. Perhaps your local watershed group or another organization has conducted a watershed assessment of your watershed that includes a survey of nonpoint sources in your watershed. If your stream serves as a public water supply, another possible source of information is a Source Water Assessment Protection (SWAP) Plan. To find out if a SWAP Plan has been conducted for your watershed, contact your DEP regional office. Again, DEP regional watershed managers and County Conservation District watershed specialists may be good sources of information on nonpoint sources discharges in your watershed (see Appendix F for contact information).

Barring the types of studies mentioned above, the best source of information on existing nonpoint source discharges may be the personal knowledge of you and other individuals involved in your petition effort. A field survey of your watershed will help to identify areas where possible nonpoint sources of pollution are located.



§ 7.3(e)(iv): Information on proposed nonpoint source discharges.

You or other individuals involved in your petition effort may have knowledge of proposed residential or commercial development, proposed road building projects, or proposed agricultural operations in your watershed. Good outside sources for information on proposed development include your local municipalities and local, county and/or regional planning commissions. The types of land use changes brought on by development could result in additional nonpoint source discharges, and you should provide information concerning them in this section.

§ 7.3(e)(v): Information regarding the impact on water quality and/or the aquatic community from point and nonpoint source discharges.

Subsection E.5 also asks for a description of the impact on water quality and/or the aquatic community from point and nonpoint source discharges. The stream data gathered in response to Subsection E.4 should provide you with the information necessary to answer this question. For example, if the data shows degradation in water quality below a specific point or nonpoint source discharge, you can expound upon the adverse impacts to the stream. Similarly, if monitoring data from above and below sources reveals that there is no change in water quality or the aquatic life community below the sources, you may be able to safely say that the discharges are having no adverse impact on the stream.

If there are new point or nonpoint sources proposed or projected for your watershed, you may also want to discuss concerns regarding the impacts to water quality from these new sources.

§ 7.2(f): Information regarding any of the qualifiers for designation as HQ or EV waters in 25 Pa. Code § 93.4b used as a basis for the requested designation.

Subsection E.6 asks for information regarding the HQ or EV qualifiers upon which you are relying (see Section 4 of this handbook for a discussion of each of the qualifiers). Depending on the factors that exist in your watershed, you may be relying upon one or more qualifiers. Suggested information and sources of information for each qualifier follow.

§ 7.3(f)(i): HQ Qualifiers.

§ 7.3(f)(i)(A): Water chemistry qualifier.

If you are relying upon this qualifier, water chemistry data should have already been provided in response to Subsection E.4's request for available technical data on instream conditions, and you can simply refer to that data in response to Subsection E.6.

§ 7.3(f)(i)(B): Biological assessment qualifier.

Again, data and information regarding benthic macroinvertebrates should have been provided in response to Subsection E.4. If the data is available, be sure to highlight assessment data that shows a robust community of benthic macroinvertebrates, especially pollution sensitive species.

§ 7.3(f)(i)(C): Class A Wild Trout Stream qualifier.

Provide evidence that your stream is listed on the Fish and Boat Commission's Class A Wild Trout Stream list. The list is available on the Commission's website at http://sites.state.pa.us/PA_Exec/Fish_Boat. Additional information that you may want to provide include results from fish electroshocking showing the presence of wild trout. Such information should already be provided in Subsection E.4, and reference should be made to it.

§ 7.3(f)(ii): EV Qualifiers.

Note: For all EV qualifiers except the last one (surface water of exceptional ecological significance), be sure to provide information showing that your stream meets the standards of an HQ stream under one or more of the HQ qualifiers discussed above. If your stream's designated use is already HQ, a statement to this fact should be sufficient.

§ 7.3(f)(ii)(A): Location in National Wildlife Refuge or state game propagation and protection area.

Refer to Section 4.2(a) of this handbook for information on how to determine whether your stream is located in one of these areas.

§ 7.3(f)(ii)(B): Location in a State Park Natural Area, State Forest Natural Area, National Natural Landmark, Federal or State Wild River, Federal Wilderness Area or National Recreational Area.

Refer to Section 4.2(b) of this handbook for definitions of each of these designated areas, and for information on how to determine whether your stream is located in one or more of these areas.

§ 7.3(f)(ii)(C): Outstanding national, state, regional or local resource water.

As stated in Section 4.2(c) of this handbook, streams meeting this criterion must show that one of the following has occurred:

- a national or state government agency has adopted water quality protective measures in a resource management plan; or
- regional or local governments have adopted coordinated water quality protective measures along a watershed corridor.

Water quality protective measures in a resource management plan adopted by a federal or state agency. For this criterion, you should include information showing that your stream flows through federally or state owned or managed land, a resource management plan is in place for that land, and the resource management plan includes provisions to protect the water quality of your stream. Refer to Section 4.2(c) for suggestions on how to gather such information.

Coordinated water quality protective measures adopted by regional or local governments. In order to satisfy this criterion, you should list and briefly describe all regional, county and/or municipal plans and ordinances designed to protect water resources and water quality in your watershed. Refer to Section 4.2(c) for examples of such plans and ordinances.

By definition, “coordinated water quality protective measures” must also include use of real estate interests to protect water quality. Thus you should describe all preserved lands along your stream, including: those preserved as parks or nature areas by federal, state, county or local government; private lands preserved through conservation easements; and lands preserved by land trusts and conservancies.

§ 7.3(f)(ii)(D): Surface water of exceptional recreational significance.

If your stream provides a unique recreational opportunity that is provided by few other places in Pennsylvania (i.e., generally less than 10), you should provide information about this recreational pursuit. Examples might be fishing for a unique species of fish (such as Steelhead trout); observing rare and unique aquatic and water-dependent species; or canoeing, kayaking or rafting in a unique aquatic and natural environment.

§ 7.3(f)(ii)(E): Biological assessment qualifier.

Any available data and information regarding macroinvertebrates should have been provided in response to Subsection E.4. If such data is available, be sure to highlight data that shows a robust community of benthic macroinvertebrates, especially pollution sensitive species.

§ 7.3(f)(ii)(F): Wilderness Trout Stream qualifier.

Provide evidence that your stream is listed on the Fish and Boat Commission's Wilderness Trout Stream List. The list is available on the Commission's website at http://sites.state.pa.us/PA_Exec/Fish_Boat. Additional information that you may want to provide include results from fish electroshocking that show the presence of wild trout. Such information should have already been provided in Subsection E.4, and reference should be made to that subsection.

§ 7.3(f)(ii)(G): Surface water of exceptional ecological significance.

This category is the only one that does not require qualification under one of the three HQ qualifiers. The regulations state that, even though waters under this category may not have water quality that is of HQ status, such waters are “important, unique or sensitive ecologically.” The two examples given in the regulations are exceptional value wetlands (which are defined at 25 Pa. Code § 105.17) and thermal springs.

Beyond these two specific examples, there may be other surface waters across Pennsylvania that can be described as “important, unique or sensitive ecologically.” If you are relying upon this qualifier, you should provide information regarding the ecologically important, unique or sensitive features of your stream. For example, as discussed in Section 4.2(g), the headwaters segment of Buck Hill Creek was redesignated as EV pursuant to this qualifier based on the unique nature of the acidic Pocono Plateau wetlands from which the stream originates. Streams that are part of these and other rare and fragile ecosystems might warrant such a designation.

The presence of rare, unique and sensitive species (especially aquatic or water-dependent species) may also be a reason to seek EV status under this category. Information on rare, threatened and endangered species and ecosystems is collected within the Pennsylvania Natural Heritage Program (PNHP), formally known as the Pennsylvania Natural Diversity Inventory (or PNDI). For more information, visit <http://www.naturalheritage.state.pa.us/>.

§ 7.3(g): A general description of land use and development patterns in the watershed.

In response to Subsection E.7, you should include information on both historic and current land use and development in your watershed. Uses such as water supply, industrial, agricultural and recreational should be described.

Sources of historic land use data and information may include local or county historical societies, or individuals within your community who have personal knowledge of historical uses of your stream and the land surrounding it.

Sources of information on current land use and development in your watershed are likely to be similar to the sources of information on nonpoint source discharges. Such sources may include watershed assessments, Source Water Assessment Protection (SWAP) Plans, or your own knowledge and the knowledge of other individuals involved in your petition effort.

Agencies such as DEP, County Conservation Districts, SRBC and DRBC may also have relevant land use information, or at least be able to point you in the right direction (see Appendix F for contact information).

§ 7.3(h): The names of all municipalities through which the watershed or segment flows, including an official contact name and address.

If you are not already aware of all of the municipalities in your watershed, you should be able to determine this through review of maps that include both municipal boundaries and topographic features or watershed boundaries. In addition, your DEP regional watershed manager or County Conservation District watershed specialist can help you to determine this information (see Appendix F for contact information). The official contact name and address for your municipalities can be obtained by calling the business office of each municipality.

As discussed in Section 5.1, you should strongly consider reaching out to each municipality within your watershed early in the process in order to make them aware of your efforts to redesignate your stream. Municipalities are provided with opportunity to comment on your petition, and it will be helpful to garner their support for the redesignation.

§ 7.3(i): Locational information relevant to items four through eight (except for contact names and addresses) displayed on a map or maps, if possible.

Today's GIS mapping capabilities allow you to create sophisticated and easy-to-read maps showing a variety of physical and political features. Possible sources for such maps are listed in Section 7.3(a)(ii) of this handbook. You should consider including a comprehensive, GIS-based watershed map showing watershed boundaries, stream sampling stations; point and nonpoint source discharges; any areas that may support qualification as HQ or EV status (such as National Natural Landmarks, State Forest Natural Areas, etc.); general patterns of land use; and municipal and county boundaries.

Section 8: After Your Petition Is Filed: Opportunities for Public Participation and Comment

Once your petition is filed, your job is not finished. The stream redesignation evaluation process can take years, so it is important for you to continue to cultivate the local support that you gathered when you were in the process of preparing the petition (See Section 5).

In addition, the process affords several opportunities to participate publicly and provide comment to the entities involved in investigating the stream and making the redesignation decision:

§ 8.1: Initial EQB meeting.

At the initial EQB meeting at which the petition is presented, the petitioner is permitted to make a five minute presentation in support of the petition.

§ 8.2: Submission of relevant data or information.

After the EQB accepts the petition for evaluation, DEP publishes notice in the *Pennsylvania Bulletin* of its intent to assess the stream at issue, and it invites the public to submit any relevant data and information on the stream. At this point, it is wise to reach out to other agencies and organizations that may have stream data, and encourage them to submit such data to DEP.

§ 8.3: Public meeting or hearing (optional).

Sometime after the EQB accepts the petition and DEP publishes notice of intent to assess the stream, DEP may hold a public meeting or hearing to provide the public with information about the process and to gather additional information regarding the petition and the stream. Whether to hold such meetings or hearings is at the discretion of DEP, so this opportunity may not exist in every instance.

§ 8.4: Comment period on draft evaluation report.

Once DEP finishes its assessment and draft evaluation report, it mails the report to the petitioner and municipalities within the watershed, and invites them to comment. The report is also placed on its website for public review (<http://www.depweb.state.pa.us/watersupply/cwp/view.asp?a=1261&q=449207&watersupplyNav=|30184>).

The petitioner, affected municipalities and the general public then have **30 days** to provide written comment on the draft report.

§ 8.5: Comment period on proposed regulation.

Sometime after DEP recommends the stream redesignation, prepares a proposed regulation setting forth the redesignation, and the EQB adopts the proposed regulation, the proposed regulation will be published in the *Pennsylvania Bulletin*. This will commence a public comment period. The *Bulletin* notice will specify a comment deadline. The length of the comment period on proposed regulations varies, but it is often 30 or 60 days from the date of publication. This comment period provides another opportunity to document the extent of support for your petition, so be sure to outreach to interested organizations and individuals and encourage them to submit comments.

§ 8.6: IRRC meeting on final regulation.

After DEP considers comments and develops a final regulation for the EQB's adoption, the regulation will be presented to IRRC for approval at a public meeting. At this meeting, IRRC will invite interested members of the public to express comments regarding the final regulation.

Appendix A: Petition Form

The Petition Form may be downloaded from DEP's website. It is available at the following link:
<http://164.156.71.80/VWRQ.asp?docid=cb7cd840f80b000000001480000148&context=2&back-link=WXOD.aspx%3ffs%3dcb7cd840f80b00008000014600000146%26ft%3d1>

A copy of the Petition Form is printed on the next two pages.



Appendix B: Links to Sample Petitions

For your reference, the following completed petitions for stream redesignations are available online.

Stream: Redesignation Request (Petitioner)	Link to Petition
Fishing Creek: HQ to EV (Patrick M. McClure)	www.dep.state.pa.us/dep/subject/eqb/2005/Jan18/FishingCreekLancCoPetition.pdf
Deer Creek: WWF to HQ-CWF (Shrewsbury Township)	www.dep.state.pa.us/dep/subject/eqb/Deer%20Creek/Deer_Creek.pdf www.dep.state.pa.us/dep/subject/eqb/Deer%20Creek/Deer_Creek2.pdf www.dep.state.pa.us/dep/subject/eqb/Deer%20Creek/Deer_Creek3.pdf
Little Falls: WWF to HQ-CWF (Shrewsbury Township)	www.dep.state.pa.us/dep/subject/eqb/Little%20Falls%20Creek/Little_Falls.pdf
Beaver Run, Lower French Creek: HQ to EV (Green Valleys Assoc. et al.)	www.dep.state.pa.us/dep/subject/eqb/2004/GVA_Upgrade_Beaver_Run.pdf
Two Lick Creek: TSF to HQ-CWF (Ken Sink Section of Trout Unlimited)	www.dep.state.pa.us/dep/subject/eqb/2003/Petition_Two_Lick_Creek.pdf
Upper Delaware River: CWF to HQ-CWF (Stanley Cooper, Sr. Section of Trout Unlimited)	www.dep.state.pa.us/dep/subject/eqb/2003/Upper_Delaware_River_Redesignation_Petition.pdf
Little Lehigh Creek: HQ-CWF to ONRW (Little Lehigh Coalition)	www.dep.state.pa.us/dep/subject/eqb/Little%20Lehigh%20Creek/LittleLehighPetition.pdf
Upper Lehigh River: HQ-CWF to EV (North Pocono C.A.R.E.)	www.dep.state.pa.us/dep/subject/eqb/Tobyhanna/Petition_Tobyhanna_Creek.pdf
Furnace Run: CWF to HQ or EV (Conestoga Valley HS Students)	www.dep.state.pa.us/dep/subject/eqb/2001/Sep/Petition.pdf
Pine Run: CWF to HQ or EV (Chest Twp. Road District)	www.dep.state.pa.us/dep/subject/eqb/2001/July/pinerun.pdf
UNT Lackawanna River ("Clarks Creek"): CWF to HQ or EV (Glenn Abello)	www.dep.state.pa.us/dep/subject/eqb/2001/July/clarkcreek.pdf

Appendix C: Sample Letters of Support

SAMPLE LETTER OF SUPPORT

DATE

PETITIONER NAME
PETITIONER ADDRESS

Dear PETITIONER:

We are pleased to support your Petition to change the designation of _____ [YOUR STREAM SEGMENT] from _____ [CURRENT DESIGNATED USE] to Exceptional Value (EV) [OR High Quality (HQ)]. We agree that these waters should be given the highest level of protection.

We want to protect this valuable resource which _____ [DESCRIBE IMPORTANT FEATURES OF STREAM, SUCH AS EXCELLENT WATER QUALITY, BENTHIC MACROINVERTEBRATE COMMUNITY, WILD TROUT POPULATIONS, RECREATIONAL OPPORTUNITIES, WATER SUPPLY USES, ETC.]

We hope that you will convey our support to the decision making bodies.

Sincerely,

SAMPLE LETTER TO LOCAL CONSERVATION ORGANIZATION SEEKING SUPPORT

DATE

ORGANIZATION NAME
ORGANIZATION ADDRESS

Dear ORGANIZATION:

We are working to prepare and submit a Petition to the Pennsylvania Department of Environmental Protection and the Environmental Quality Board to request that _____ [YOUR STREAM OR STREAM SEGMENT] be given the highest level of protection, Exceptional Value (EV) status. I have enclosed a map for your information.

In our view, the current designation, _____ [CURRENT DESIGNATED USE], does not reflect the quality of this water or the ecological significance of this watershed. In addition, the current designation would allow discharges to _____ [YOUR STREAM OR STREAM SEGMENT] to change and possibly degrade the water quality. The requested designation (EV) would protect the existing exceptional quality and would not allow any degradation.

As part of this Petition, we would like to obtain letters of support from individuals and organizations that value this resource. _____ [ORGANIZATION] and its members quickly come to mind. I have enclosed a sample letter for your use. Please address all letters to _____ [NAME OF PETITIONER] and send them to me the following address: _____ [ADDRESS OF PETITIONER].

As you probably know, public support has been an important component of previously successful petitions. We anticipate submitting the Petition by _____ [APPROXIMATE DATE] and would like to receive the letters as soon as possible.

If you have any questions please do not hesitate to call. Thank you in advance for your assistance in this matter.

Very truly yours,

SAMPLE LETTER TO MUNICIPALITY SEEKING SUPPORT

DATE

MUNICIPALITY NAME
MUNICIPALITY ADDRESS

Dear _____:

We are working to prepare and submit a Petition to the Pennsylvania Department of Environmental Protection and the Environmental Quality Board. The Petition requests that _____ [YOUR STREAM OR STREAM SEGMENT] be given the highest level of protection, Exceptional Value (EV) status. I have enclosed a map for your information. We are hoping that _____ [THE MUNICIPALITY] will support the Petition.

Let me explain some of the details. All waters in Pennsylvania have a designation which appears in the environmental protection regulations. The current designation of _____ [YOUR STREAM OR STREAM SEGMENT] is _____ [CURRENT DESIGNATED USE]. This designation does not accurately reflect the exceptional value or ecological significance of this water. In addition, the current designation would allow discharges to _____ [YOUR STREAM OR STREAM SEGMENT] to degrade the water quality under certain circumstances. The requested designation, Exceptional Value (EV), would protect the existing exceptional quality and would not allow any degradation.

_____ [THE MUNICIPALITY] is in this watershed. We would like to obtain a Resolution from _____ [THE MUNICIPALITY'S GOVERNING BODY] supporting the change in designation. In addition, we would be pleased to attend a [MUNICIPALITY GOVERNING BODY] meeting to provide additional information. Please do not hesitate to contact me with any questions.

Thank you in advance for your assistance in this matter.

Sincerely,

SAMPLE LETTER TO STATE LEGISLATOR SEEKING SUPPORT

DATE

NAME OF LEGISLATOR
ADDRESS OF LEGISLATOR

Dear Senator/Representative _____:

We are working to prepare and submit a Petition to the Pennsylvania Department of Environmental Protection and the Environmental Quality Board to requests that _____ [YOUR STREAM OR STREAM SEGMENT] be given the highest level of protection, Exceptional Value (EV) status. I have enclosed a map for your information. We are hoping that you will support the Petition.

We are preparing this Petition because our research on _____ [YOUR STREAM OR STREAM SEGMENT] persuades us that the current designation, _____ [CURRENT DESIGNATION], does not accurately reflect the value of _____ [YOUR STREAM OR STREAM SEGMENT] or adequately protect this important resource. An Exceptional Value (EV) designation is more appropriate. _____ [YOUR STREAM OR STREAM SEGMENT] warrants an EV designation because [STATE IMPORTANT FEATURES OF STREAM, SUCH AS EXCELLENT WATER QUALITY, BENTHIC MACROINVERTEBRATE COMMUNITY, WILD TROUT POPULATIONS, RECREATIONAL OPPORTUNITIES, WATER SUPPLY USES, ETC].

We have contacted all of the municipalities through which _____ [YOUR STREAM OR STREAM SEGMENT] flows and have met with many of the municipal officials. To date, we have letters or resolutions of support from some municipalities, as well as many groups and individuals.

I hope that this Petition demonstrates that it merits your support. If I can provide you with any additional information please do not hesitate to contact me.

Sincerely,

Appendix D: Selected Regulations

Title 25, Section 23 (25 Pa. Code §§ 23.1 – 23.8): Environmental Quality Board Policy for Processing Petitions – Statement of Policy

§ 23.1. Petitions.

- (a) Petitions shall be submitted on forms supplied by the Department to the Secretary of the Department of Environmental Protection, Rachel Carson State Office Building, Post Office Box 2063, Harrisburg, Pennsylvania 17105-2063, and shall contain the following information:
- (1) The petitioner's name, address and telephone number.
 - (2) A description of the action requested in the petition and one of the following:
 - (i) Suggested regulatory language if the petition requests that the EQB adopt or amend regulations.
 - (ii) A specific citation to the regulations to be repealed if the petition requests that the EQB repeal existing regulations.
 - (3) The reason the petitioner is requesting this action from the EQB, including factual and legal contentions as well as supporting documentation which establish the petitioner's justification for the requested action by the EQB.
 - (4) The types of persons, businesses and organizations likely to be impacted by this proposal.
 - (5) For petitions for redesignation of streams under Chapter 93 (relating to water quality standards) and The Clean Streams Law (35 P. S. § § 691.1—691.1001), the petition shall include the following information to satisfy paragraph (3):
 - (i) A clear delineation of the watershed or stream segment to be redesignated, both in narrative form and on a map.
 - (ii) The current designated uses of the watershed or segment.
 - (iii) The requested designated uses of the watershed or segment.
 - (iv) Available technical data on instream conditions for the following: water chemistry, the aquatic community (benthic macroinvertebrates or fishes, or both) or instream habitat. If these data are not included, provide a description of the data sources investigated.
 - (v) A description of existing and proposed point and nonpoint source discharges and their impact on water quality or the aquatic community, or both. The names, locations and permit numbers of point source discharges and a description of the types and locations of nonpoint source discharges should be listed.
 - (vi) Information regarding any of the qualifiers for designation as High Quality Waters (HQ) or Exceptional Value Waters (EV) in § 93.4b (relating to qualifying as high quality or exceptional value waters) used as a basis for the requested designation.
 - (vii) A general description of land use and development patterns in the watershed. Examples include the amount or percentage of public lands (including ownership) and the amount or percentage of various land use types (such as residential, commercial, industrial, agricultural and the like).

- (viii) The names of all municipalities through which the watershed or segment flows, including an official contact name and address.
 - (ix) Locational information relevant to subparagraphs (iv)—(viii) (except for contact names and addresses) displayed on maps, if possible.
- (b) The general procedures in this Section apply to petitions unless the EQB adopts specific procedures for a particular type of petition. Special procedures have been adopted for petitions requesting that the EQB designate an area as unsuitable for mining activity. These petitions are reviewed under Section 86 (relating to surface and underground coal mining: general)

§ 23.2. Departmental review.

The Department will examine the petition to determine if it meets the following conditions:

- (1) The petition is complete as required by § 23.1 (relating to petitions).
- (2) The petition requests an action that can be taken by the EQB.
- (3) The requested action does not conflict with Federal law

§ 23.3. Notification.

The Department will notify the EQB and petitioner of its determination within 30 days of receipt of the petition. If the Department determines that the petition is not appropriate for submittal to the EQB because it does not meet each of the conditions in § 23.2 (relating to Departmental review), the Department's notification shall state the reasons for its determination and give the petitioner 30 days to complete the petition or modify the request

§ 23.4. Oral presentation.

At the next EQB meeting occurring at least 15 days after the Department's determination that a petition is appropriate for consideration by the EQB, the Chairperson of the EQB shall inform the EQB of the petition for rulemaking, the nature of the request and the petitioner. The Chairperson shall give the petitioner or the petitioner's representative the opportunity to make a 5-minute oral presentation on why the EQB should accept the petition. The Department will also make a recommendation on whether the EQB should accept the petition

§ 23.5. Board determination.

The EQB may refuse to accept a petition if it determines that one or more of the following conditions exist:

- (1) The EQB has within the previous 2 years considered the issue addressed by the petition for rulemaking as part of an earlier decision concerning the adoption, amendment or deletion of a regulation.
- (2) The action requested by the petitioner concerns a matter currently in litigation.

- (3) The requested action is not appropriate for rulemaking by the EQB due to policy or regulatory considerations.
- (4) The petition involves an issue previously considered by the EQB, and it does not contain information that is new or sufficiently different to warrant reconsideration of that decision. If a petition does present new or sufficiently different information, this information must have been either unavailable at the time of the EQB's previous decision or not contained in the record of the proceeding in which the previous decision was made

§ 23.6. Notice of acceptance and Department report.

If the EQB accepts the petition, a notice of acceptance will be published in the *Pennsylvania Bulletin* within 30 days. In addition, a report will be prepared in accordance with one of the following procedures:

- (1) *Petitions other than stream redesignation petitions.* The Department will prepare a report evaluating the petition within 60 days. If the report cannot be completed within the 60-day period, at the next EQB meeting the Department will state how much additional time is necessary to complete the report. The Department's report will include a recommendation on whether the EQB should approve the action requested in the petition. If the recommendation is to change a regulation, the report will also specify the anticipated date that the EQB will consider a proposed rulemaking.
- (2) *Stream redesignation petitions.* The Department will publish notice of its intent to assess the waters subject to evaluation. The notice will include a request for submittal of technical data that interested persons have. Following the assessment and review of all technical data, the Department will prepare a draft evaluation report

§ 23.7. Response to report.

Upon completing the report, the Department will send a copy of the report to the petitioner. Within 30 days of the mailing of the report, the petitioner may submit to the Department a written response to the report

§ 23.8. Board consideration.

The Department will prepare a recommendation to the EQB based on the report and comments received from the petitioner. If regulatory amendments are recommended, the Department will develop a proposed rulemaking for EQB consideration within 6 months after the Department mailed its report to the petitioner. If regulatory amendments are not recommended, the Department will present its recommendation and basis to the EQB at the first meeting occurring at least 45 days after the Department mailed its report to the petitioner.

Title 25, Chapter 93 (25 Pa. Code §§ 93.4a – 93.4d): Water Quality Standards, Antidegradation Requirements

§ 93.4a. Antidegradation.

- (a) *Scope.* This section applies to surface waters of this Commonwealth.
- (b) *Existing use protection for surface waters.* Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
- (c) *Protection for High Quality Waters*—The water quality of High Quality Waters shall be maintained and protected, except as provided in § 93.4c(b)(1)(iii) (relating to implementation of antidegradation requirements).
- (d) *Protection for Exceptional Value Waters*—The water quality of Exceptional Value Waters shall be maintained and protected.

§ 93.4b. Qualifying as High Quality or Exceptional Value Waters.

- (a) *Qualifying as a High Quality Water.* A surface water that meets one or more of the following conditions is a High Quality Water.
 - (1) *Chemistry.*
 - (i) The water has long-term water quality, based on at least 1 year of data which exceeds levels necessary to support the propagation of fish, shellfish and wildlife and recreation in and on the water by being better than the water quality criteria in § 93.7, Table 3 (relating to specific water quality criteria) or otherwise authorized by § 93.8a(b) (relating to toxic substances), at least 99% of the time for the following parameters:

dissolved oxygen	aluminum
iron	dissolved nickel
dissolved copper	dissolved cadmium
temperature	pH
dissolved arsenic	ammonia nitrogen
dissolved lead	dissolved zinc
 - (ii) The Department may consider additional chemical and toxicity information, which characterizes or indicates the quality of a water, in making its determination.
 - (2) *Biology.* One or more of the following shall exist:
 - (i) *Biological assessment qualifier.*
 - (A) The surface water supports a high quality aquatic community based upon information gathered using peer-reviewed biological assessment procedures that consider physical habitat, benthic macroinvertebrates or fishes based on Rapid Bioassessment Protocols for Use in Streams and Rivers: Benthic Macroinvertebrates and Fish, Plafkin, et al., (EPA/444/4-89-001), as updated and amended. The surface water is compared to a reference stream or watershed, and an integrated benthic macroinvertebrate score of at least 83% shall be attained by the referenced stream or watershed.

- (B) The surface water supports a high quality aquatic community based upon information gathered using other widely accepted and published peer-reviewed biological assessment procedures that the Department may approve to determine the condition of the aquatic community of a surface water.
 - (C) The Department may consider additional biological information which characterizes or indicates the quality of a water in making its determination.
- (ii) Class A wild trout stream qualifier. The surface water has been designated a Class A wild trout stream by the Fish and Boat Commission following public notice and comment.
- (b) Qualifying as an Exceptional Value Water. A surface water that meets one or more of the following conditions is an Exceptional Value Water:
- (1) The water meets the requirements of subsection (a) and one or more of the following:
 - (i) The water is located in a National wildlife refuge or a State game propagation and protection area.
 - (ii) The water is located in a designated State park natural area or State forest natural area, National natural landmark, Federal or State wild river, Federal wilderness area or National recreational area.
 - (iii) The water is an outstanding National, State, regional or local resource water.
 - (iv) The water is a surface water of exceptional recreational significance.
 - (v) The water achieves a score of at least 92% (or its equivalent) using the methods and procedures described in subsection (a)(2)(i)(A) or (B).
 - (vi) The water is designated as a "wilderness trout stream" by the Fish and Boat Commission following public notice and comment.
 - (2) The water is a surface water of exceptional ecological significance

§ 93.4c. Implementation of antidegradation requirements.

- (a) Existing use protection.
- (1) *Procedures.*
 - (i) Existing use protection shall be provided when the Department's evaluation of information (including data gathered at the Department's own initiative, data contained in a petition to change a designated use submitted to the EQB under § 93.4d(a) (relating to processing of petitions, evaluations and assessments to change a designated use), or data considered in the context of a Department permit or approval action) indicates that a surface water attains or has attained an existing use.
 - (ii) The Department will inform persons who apply for a Department permit or approval which could impact a surface water, during the permit or approval application or review process, of the results of the evaluation of information undertaken under subparagraph (i).
 - (iii) Interested persons may provide the Department with additional information during the permit or approval application or review process regarding existing use protection for the surface water.

- (iv) The Department will make a final determination of existing use protection for the surface water as part of the final permit or approval action.
- (2) *Endangered or threatened species.* If the Department has confirmed the presence, critical habitat, or critical dependence of endangered or threatened Federal or Pennsylvania species in or on a surface water, the Department will ensure protection of the species and critical habitat.
- (b) *Protection of High Quality and Exceptional Value Waters.*
 - (1) *Point source discharges.* The following applies to point source discharges to High Quality or Exceptional Value Waters.
 - (i) *Nondischarge alternatives/use of best technologies.*
 - (A) A person proposing a new, additional or increased discharge to High Quality or Exceptional Value Waters shall evaluate nondischarge alternatives to the proposed discharge and use an alternative that is environmentally sound and cost-effective when compared with the cost of the proposed discharge. If a nondischarge alternative is not environmentally sound and cost-effective, a new, additional or increased discharge shall use the best available combination of cost-effective treatment, land disposal, pollution prevention and wastewater reuse technologies.
 - (B) A person proposing a new, additional or increased discharge to High Quality or Exceptional Value Waters, who has demonstrated that no environmentally sound and cost-effective nondischarge alternative exists under clause (A), shall demonstrate that the discharge will maintain and protect the existing quality of receiving surface waters, except as provided in subparagraph (iii).
 - (ii) *Public participation requirements for discharges to High Quality or Exceptional Value Waters.* The following requirements apply to discharges to High Quality or Exceptional Value Waters, as applicable:
 - (A) The Department will hold a public hearing on a proposed new, additional or increased discharge to Exceptional Value Waters when requested by an interested person on or before the termination of the public comment period on the discharge.
 - (B) For new or increased point source discharges, in addition to the public participation requirements in § § 92.61, 92.63 and 92.65 (relating to public notice of permit application and public hearing; public access to information; and notice to other government agencies), the applicant shall identify the anti-degradation classification of the receiving water in the notice of complete application in § 92.61(a).
 - (iii) *Social or economic justification (SEJ) in High Quality Waters.* The Department may allow a reduction of water quality in a High Quality Water if it finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the Commonwealth's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. A reduction in water quality will not be allowed under this subparagraph unless the discharger demonstrates that the High Quality Water will support applicable existing and designated water uses (other than the high quality and exceptional value uses) in § 93.3, Table 1 (relating to protected water uses).

- (2) *Nonpoint source control.* The Department will assure that cost-effective and reasonable best management practices for nonpoint source control are achieved.
- (c) *Special provisions for sewage facilities in High Quality or Exceptional Value Waters.*
- (1) *SEJ approval in sewage facilities planning and approval in High Quality Waters.* A proponent of a new, additional, or increased sewage discharge in High Quality Waters shall include an SEJ impact analysis as part of the proposed revision or update to the official municipal sewage facilities plan under Section 71 (relating to administration of sewage facilities planning program). The Department will make a determination regarding the consistency of the SEJ impact analysis with subsection (b)(1)(iii). The determination will constitute the subsection (b)(1)(iii) analysis at the National Pollutant Discharge Elimination System (NPDES) permit review stage under Section 92 (relating to National Pollutant Discharge Elimination System permitting, monitoring and compliance), unless there is a material change in the project or law between sewage facilities planning and NPDES permitting, in which case the proponent shall recommence sewage facilities planning and perform a new social or economic justification impact analysis.
- (2) *SEJ for sewage facilities in High Quality Waters correcting existing public health or pollution hazards.* A sewage facility, for which no environmentally sound and cost-effective nondischarge alternative is available under subsection (b)(1)(i)(A), proposed to discharge into High Quality Waters, which is designed for the purpose of correcting existing public health or pollution hazards documented by the Department, and approved as part of an official plan or official plan revision under § 71.32 (relating to Department responsibility to review and act upon official plans), satisfies the SEJ requirements in subsection (b)(1)(iii).
- (3) *Public participation requirements for official sewage facilities plans or revisions to official plans in High Quality or Exceptional Value Waters.* A proponent of a sewage facility in High Quality or Exceptional Value Waters seeking approval of an official plan or revision shall comply with the public participation requirements in § 71.53(d)(6) (relating to municipal administration of new land development planning requirements for revisions)

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

- (a) *Public notice of receipt of evaluation, or assessment of waters, for High Quality or Exceptional Value Waters redesignation.* The Department will publish in the Pennsylvania Bulletin and in a local newspaper of general circulation notice of receipt of a complete evaluation which has been accepted by the EQB recommending a High Quality or Exceptional Value Waters redesignation, or notice of the Department's intent to assess surface waters for potential redesignation as High Quality or Exceptional Value Waters. The assessments may be undertaken in response to a petition or on the Department's own initiative. The notice will request submission of information concerning the water quality of the waters subject to the evaluation, or to be assessed, for use by the Department to supplement any studies which have been performed. The Department will send a copy of the notice to all municipalities containing waters subject to the evaluation or assessment.
- (b) *Combined public meeting and fact-finding hearing.* As part of its review of an evaluation or performance of an assessment, the Department may hold a combined public meeting and fact finding hearing to discuss the evaluation or assessment, including the methodology for the evaluation or assessment, and may solicit information, including technical data, to be considered in the Department's evaluation or assessment.
- (c) *Submission to EQB to alter designated use.* Upon the completion of its assessment or review of a complete evaluation, and the satisfaction of the other applicable requirements of this section, the Department will submit the results of its assessment or review to the EQB for proposed rulemaking following review and comment by the petitioner, if applicable, in accordance with Section 23 (relating to Environmental Quality Board policy for processing petitions—statement of policy).

Appendix E: Tables

Table 1: Water Chemistry Qualifier for High Quality Waters: The 12 Parameters and the Applicable Water Quality Criteria for Each (HQ Waters Must Exceed Criteria for All 12 Parameters)

Parameter	Water Quality Criteria	Source(s)
dissolved oxygen	for HQ-WWF or HQ-TSF: 6.0 mg/l daily ave., 5.0 mg/l min. (rivers and streams) for HQ-CWF: 7.0 mg/l min.	25 Pa. Code § 93.7
iron	1.5 mg/l (30 day ave.)	25 Pa. Code § 93.7
dissolved copper	criteria continuous concentration (CCC) (in ug/L): $0.960 \times \text{Exp}(0.8545 \times \ln[H] - 1.702)$ (ex: @H=100, CCC=9.0) criteria maximum concentration (CMC) (in ug/L): $0.960 \times \text{Exp}(0.9422 \times \ln[H] - 1.700)$ (ex: @H=100, CMC=13)	25 Pa. Code §§ 93.8a(b), 16.51.
dissolved cadmium	criteria continuous concentration (CCC) (in ug/L): $\{1.101672 - (\ln[H] \times 0.041838)\} \times \text{Exp}(0.7852 \times \ln[H] - 2.715)$ (ex: @H=100, CCC=2.2) criteria maximum concentration (CMC) (in ug/L): $\{1.136672 - \ln[H] \times 0.041838\} \times \text{Exp}(1.128 \times \ln[H] - 3.6867)$ (ex: @H=100, CMC=4.3)	25 Pa. Code §§ 93.8a(b), 16.51.
aluminum	criteria maximum concentration (CMC): 750 ug/L	25 Pa. Code §§ 93.8a(b), 16.51.
dissolved nickel	criteria continuous concentration (CCC) (in ug/L): $0.997 \times \text{Exp}(0.846 \times \ln[H] + 0.0584)$ (ex: @H=100, CCC=52) criteria maximum concentration (CMC) (in ug/L): $0.998 \times \text{Exp}(0.846 \times \ln[H] + 2.255)$ (ex: @H=100, CMC=470)	25 Pa. Code §§ 93.8a(b), 16.51.
temperature	the maximum temperatures that must be maintained vary by time of year and designated use (WWF, TSF or CWF) See Table 2 for details.	25 Pa. Code § 93.7
pH	6.0 – 9.0	25 Pa. Code § 93.7
dissolved arsenic	criteria continuous concentration (CCC) (in ug/L): 150 (As3+) criteria maximum concentration (CMC) (in ug/L): 340 (As3+)	25 Pa. Code §§ 93.8a(b), 16.51.
dissolved lead	criteria continuous concentration (CCC) (in ug/L): $\{1.46203 - (\ln[H] \times 0.145712)\} \times \text{Exp}(1.273 \times \ln[H] - 4.705)$ (ex: @H=100, CCC=2.5) criteria maximum concentration (CMC) (in ug/L): $\{1.46203 - \ln[H] \times 0.145712\} \times \text{Exp}(1.273 \times \ln[H] - 1.460)$ (ex: @H=100, CMC=65)	25 Pa. Code §§ 93.8a(b), 16.51.
ammonia nitrogen	The maximum and average criteria for ammonia are derived using formulas that include factors for temperature and pH. Consult 25 Pa. Code § 93.7 for details.	25 Pa. Code §§ 93.7
dissolved zinc	criteria continuous concentration (CCC) (in ug/L): $0.986 \times \text{Exp}(0.8473 \times \ln[H] + 0.884)$ (ex: @H=100, CCC=120) criteria maximum concentration (CMC) (in ug/L): $0.978 \times \text{Exp}(0.8473 \times \ln[H] + 0.884)$ (ex: @H=100, CMC=120)	25 Pa. Code §§ 93.8a(b), 16.51.

Table 2: Applicable Temperature Criteria for CWF, WWF and TSF (HQ Waters Must Be Lower Than the Maximum Temperatures for Each Time Period for Applicable Aquatic Life Use)

Time of year	CWF Max. Temp. (°F)	WWF Max. Temp. (°F)	TSF Max. Temp. (°F)
January 1-31	38	40	40
February 1-29	38	40	40
March 1-31	42	46	46
April 1-15	48	52	52
April 16-30	52	58	58
May 1-15	54	64	64
May 16-31	58	72	68
June 1-15	60	80	70
June 16-30	64	84	72
July 1-31	66	87	74
August 1-15	66	87	80
August 16-30	66	87	87
September 1-15	64	84	84
September 16-30	60	78	78
October 1-15	54	72	72
October 16-31	50	66	66
November 1-15	46	58	58
November 16-30	42	50	50
December 1-31	40	42	42

Table 3: Biological Assessment Qualifier for High Quality and Exceptional Value Waters: How To Calculate the Integrated Benthic Macroinvertebrate Score

Step 1: Determine individual Biological Condition Score for each of the 5 metrics for candidate stream					
Taxa Richness (C/R)	Modified EPT (C/R)	Modified Hilsenhoff Index (C-R)	Percent Dominant (C-R)	Percent Modified Mayflies (R-C)	Biological Condition Score
>80.0%	>80.0%	<0.71	<11.0%	<12.0%	8
80.0 – 77.2%	80.0 – 75.8%	0.71 – 0.79	11.0 – 12.5%	12.0 – 15.9%	7
71.1 – 74.4%	75.7 – 71.5%	0.80 – 0.87	12.6 – 14.0%	16.0 – 19.9%	6
74.3 – 71.5%	71.4 – 67.2%	0.88 – 0.97	14.1 – 15.6%	20.0 – 23.9%	5
71.4 – 68.7%	67.1 – 63.0%	0.98 – 1.04	15.7 – 17.2%	24.0 – 27.9%	4
68.6 – 65.8%	62.9 – 58.7%	1.05 – 1.13	17.3 – 18.8%	28.0 – 31.9%	3
65.7 – 63.0%	58.6 – 54.4%	1.14 – 1.21	18.9 – 20.3%	32.0 – 35.9%	2
62.9 – 60.0%	54.3 – 50.0%	1.22 – 1.31	20.4 – 22.0%	36.0 – 40.0%	1
<60.0%	<50.0%	>1.31	>22.0%	>40.0%	0
Step 2: Determine Total Biological Condition Score for candidate stream by adding up the individual scores for each of the 5 metrics (for a maximum score of 40)					
Step 3: Determine Integrated Benthic Macroinvertebrate Score percentage for candidate stream as compared to reference stream ($[\text{Total Biological Condition Score}/40] \times 100$). 83% or greater=HQ; 92% or greater=EV.					

Taxa Richness: The total number of taxa.

Modified EPT Index: The total number of pollution sensitive mayflies, stoneflies and caddisflies.

Modified Hilsenhoff Index: An index that reflects the tolerance of different macroinvertebrates to pollution.

Percent Dominant: The percentage of total abundance made up by the single most abundant taxon.

Percent Modified Mayflies: The percentage of total abundance made up of pollution sensitive mayflies.

C: Candidate stream.

R: Reference stream.

Table 4: Minimum Biomass Criteria for Class A Wild Trout Streams

Trout Species	Total Trout Biomass (lbs/acre)	Total Biomass of Trout <15 cm (lbs/acre)	Percent Abundance of Total Trout Biomass
Wild Brook Trout	26.7	0.089	75%
Wild Brown Trout	35.6	0.089	75%
Mixed Wild Brook and Brown Trout	35.6	Brook: 0.089 Brown: 0.089	Brook: <75% Brown: <75%
Wild Rainbow Trout	N/A	1.78	N/A

Table 5: Streams and stream segments designated as “Wild” in Pennsylvania’s Scenic Rivers Program.

Stream	County
Stony Creek	Dauphin
segment of Sandy Run	Luzerne
segment of Stony Creek	Carbon
segment of Bear Creek	Carbon
Little Bear Creek	Carbon
Jeans Run	Carbon
segment of Lick Run	Clinton
West Branch Lick Run	Clinton
segment of Campbell Run	Clinton
segment of Staver Run	Clinton
segment of Craig Fork	Clinton
segment of Tucquan Creek	Lancaster
segment of Pine Creek	Tioga
segment of Fourmile Run	Tioga
segment of Right Branch Fourmile Run	Tioga
segment of Campbell’s Run	Tioga
segment of Pine Island Run	Tioga

Table 6: The Petition Process

Step	Deadline
Stage 1: Submission, Review and Acceptance of Petition	
Petition, together with supporting information, is submitted to DEP	
DEP reviews petition for completeness and notifies petitioner	30 days
Petition presented to EQB. DEP makes recommendation to accept or reject; petitioner may give five minute presentation	first regularly scheduled EQB meeting at least 15 days after DEP finishes its completeness review.
EQB publishes notice of acceptance in <i>Pennsylvania Bulletin</i>	within 30 days of acceptance
Stage 2: DEP Stream Assessment and Evaluation	
DEP publishes notice of intent to assess water body at issue and invites submission of relevant data and information	after acceptance
DEP holds public meetings or hearings to share information and solicit more data on water body (optional)	
DEP biologists conduct stream assessments on water body in question	
DEP evaluates data and prepares draft evaluation report	(lengthy period; these last two steps may take a number of years)
Draft evaluation report sent to petitioner and municipalities, and is posted on DEP website	
Public comment period on draft evaluation report	30 days after mailing/posting draft report
DEP considers comments and prepares revised report, recommendation regarding designated use, and proposed regulation	6 months after mailing/posting draft report
Stage 3: The Regulatory Process	
EQB adopts proposed regulation	first regularly scheduled EQB meeting after proposed regulation is presented
General Counsel reviews proposed regulation	
Attorney General reviews proposed regulation	30 days after EQB adoption
DEP submits proposed regulation to Senate and House Environmental Resources and Energy Committees (Standing Committees) and Independent Regulatory Review Commission (IRRC)	
DEP publishes proposed regulation in <i>Pennsylvania Bulletin</i>	
Public comment period on proposed regulation	length of comment period specified in <i>Bulletin</i> notice
Standing Committees submit comments, if any	any time prior to submittal of final regulation
IRRC submits comments, if any	within 30 days of end of public comment period
DEP drafts final regulation	
EQB adopts final regulation	
DEP submits final regulation to Standing Committees IRRC, and any person who submitted comments	
IRRC approves regulation	first regularly scheduled IRRC meeting after final regulation is submitted
Standing Committees approve regulation	14 days after IRRC approval
If IRRC approves, Attorney General reviews final regulation	30 days after IRRC approval
Final regulation published in <i>Pennsylvania Bulletin</i>	

Table 7: The Regulatory Process Following IRRC Disapproval

Step	Deadline
DEP submits final regulation to Standing Committees, IRRC, and any person who submitted comments	
IRRC disapproves	first regularly scheduled IRRC meeting after final regulation is submitted
DEP responds in one of three ways: (1) resubmit regulation with or without changes; (2) withdraw regulation; (3) take no action (deemed withdrawn after 40 days)	
Resubmitted regulation again presented to IRRC for consideration. Final disapproval by IRRC does not bar EQB from promulgating regulation.	second IRRC public meeting
Assuming Standing Committees approval, or Governor vetoes disapproval resolution and veto is not overridden, regulation proceeds to Attorney General for review	30 days
Final regulation published in <i>Pennsylvania Bulletin</i>	

Table 8: The Regulatory Process Following Standing Committee Disapproval

Step	Deadline
DEP submits final regulation to Standing Committees, IRRC, and any person who submitted comments	
One or both Standing Committees disapprove final regulation, or notify the EQB, DEP and IRRC of intent to review	up to 24 hours prior to IRRC meeting
Joint disapproval resolution must be reported	14 days after final IRRC approval or disapproval
Joint disapproval resolution must be adopted by both Houses of General Assembly and presented to Governor	the longer of 30 calendar days or 10 legislative days
Governor signs or vetoes disapproval resolution	10 calendar days
General Assembly may override veto with two-thirds majority	
If Governor signs resolution, or if veto is overridden, process ends and the EQB is barred from promulgating regulation	
If Governor vetoes resolution and General Assembly does not override veto, regulation proceeds to Attorney General for review	30 days
Final regulation published in <i>Pennsylvania Bulletin</i>	

Appendix F: Contacts

Department of Environmental Protection (DEP) Contacts

Watershed Managers			
Name	DEP Office	Address	Phone
Diane Neukum Richard Neville	Northwest Regional Office	230 Chestnut St. Meadville, PA 16335	(814) 332-6848
Joan Sattler Jennifer Means	Northcentral Regional Office	208 W. 3rd St Suite 101 Williamsport, PA 17701	(570) 327-3423
Ron Yablonsky Andrew Schweitzer	Northeast Regional Office	2 Public Square Wilkes-Barre, PA 18711	(570) 826-2511
Rita Coleman Jeff Flish Greg Holesh	Southwest Regional Office	400 Waterfront Drive Pittsburgh, PA 15222	(412) 442-4000
Jineen Boyle Rick DeVore Mary Golab Mark Mathews	Southcentral Regional Office	909 Elmerton Ave. Harrisburg, PA 17110	(717) 705-4700
Desiree Henning-Dudley James Grabusky Donna Suevo	Southeast Regional Office	2 East Main Street Norristown, PA 19401	(484) 250-5900
Other DEP Contacts			
Name	DEP Office	Address	Phone
Rick Shertzer	Office of Water Mgt, Division of Water Quality Assessment and Standards	Rachel Carson State Office Building P.O. Box 2063 Harrisburg, PA 17105	(717) 787-9637
Kevin Kelly	Citizens Volunteer Monitoring Program	Rachel Carson State Office Building P.O. Box 2063 Harrisburg, PA 17105	(717) 783-2300

County Conservation District Watershed Specialists

County	Name	Phone	Email
Adams	Vy Trinh	(717) 334-0636	vtrinh@acc.pa.net
Allegheny	Richard Kowalski	(412) 241-7645	richk@covad.net
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Bedford	Guy Stottlemyer	(814) 623-7900 x123	gmstottlemyer@earthlink.net
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Cambria	Jacqueline Ritko	(814) 472-2120	ritko@co.cambria.pa.us
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Centre	Ann Donovan	(814)355-6817	amdonova@co.centre.pa.us
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Crawford	Brian Pilarcik	(814) 724-1793	brian@crawfordconservation.com
Cumberland	Vincent McCollum	(717) 249-1037 x111	vmccollum@ccpa.net
Dauphin	Jeremy Trexel Andrew McAllister	(717) 921-8100	jtrexeldccd@pa.net amcallisterdccd@pa.net
Delaware	William Gothier	(610) 892-9484	gothierw@co.delaware.pa.us
Elk		(814) 776-5373	
Erie	Amy Jo Smith	(814) 825-6403	amyjosmith@adelphia.net
Fayette	Heather Fowler	(724) 438-4497	heatherdfowler@yahoo.com
Franklin	Tammy Gross	(717) 264-8074 x5	tammygross@inner.net.net
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Greene	Lisa Bennett	(724) 852-5278	lbennett@co.greene.pa.us
Huntingdon	Pamela Spayd	(814) 627-1627 x114	pshuntingdon@yahoo.com
Indiana	Thomas Clark	(724) 465-9319	tclark66@hotmail.com
Jefferson	Todd Beers	(814) 849-7463	tjbeers@alltel.net

County	Name	Phone	Email
Juniata	Chris Snyder	(717) 436-8953 x5	Chris-snyder@pa.nacdnet.org
Lackawanna	John Clune	(570) 282-8732 x616	jwclune@lccd.net
Lancaster	Matt Kofroth	(717) 299-5361 x124	matt-kofroth@pa.nacdnet.org
Lawrence	Megan Gahring	(724) 652-4512	Mgahring@lawrenceconservationdistrict.org
Lebanon	Stephanie Harmon	(717) 272-3908 x114	Stephanie.harmon@pa.nacdnet.net
Lehigh	Rebecca Hayden	(610) 391-9583 x18	rhayden@lehighconservation.org
Luzerne	Josh Longmore	(570) 674-3412	j.longmore@luzerneccd.org
Mercer	Jill Shankel	(724) 662-2242	mercercdd@pathway.net
Mifflin	Catherine Pruss	(717) 248-4695	Cadie-pruss@pa.nacdnet.org
Monroe	Darryl Speicher	(570) 629-3061	dsmccd@ptd.net
Montgomery	Susan Greth	(610) 489-4506 x19	sgreth@montgomeryconservation.org
Montour	Joshua Tryniewski	(570) 275-9560	joshmontourccd@netzero.net
Northampton		(610) 746-1971	
Northumberland	Carey Entz	(570) 286-7114 x115	Carey.entz@pa.nacdnet.net
Perry	Sally Tengeres	(717) 582-5139	stengeres@perryco.org
Philadelphia	Glen Abrams	(215) 685-6039	glen.abrams@phila.gov
Pike	John Jose	(570) 226-8220	jjose@pikepa.org
Potter	John Fleckenstein	(814) 274-8411 x4	pccd@adelphia.net
Schuylkill	Tom Davidock	(570) 622-3742 x120	tdavidock@co.schuylkill.pa.us
Snyder	Jim Roush	(570) 837-0007 x5	Jim-roush@pa.nacdnet.org
Somerset	Carl Jones	(814) 445-4652	Carl-jones@pa.nacdnet.org
Sullivan/Lycoming	Corey Richmond	(570) 928-7057	h2osp@epix.net
Susquehanna	Steve Barondeau	(570) 278-4600 x289	sbarondeau@susqco.com
Tioga	Terra Dillman	(570) 724-1801	Terra.dillman@pa.nacdnet.net
Union	Shanon Burkland	(570) 523-8782	burk24@dejazzd.com
Venango	Lance Bowes	(814) 676-2832	lbowes@csonline.net
Warren	Kim Lanich	(814) 563-3117	Kim.lanich@pa.nacdnet.net
Washington	Susie Carmichael	(724) 222-3060 x117	wccdws@yahoo.com
Wayne	Mike Roche	(570) 253-0930	mroche@co.wayne.pa.us
Westmoreland	Mike Barrick	(724) 837-5271 x104	mike@wcdpa.com
Wyoming	Cathy Hilscher	(570) 836-2589 x106	Cathy.Hilscher@pa.nacdnet.net
York	Gary Peacock	(717) 840-7430	gpeacock@yorkccd.org

Pennsylvania Fish and Boat Commission Fisheries Management Areas

Area	Counties	Address	Phone
1	Lawrence, parts of Erie, Crawford, Mercer, Butler, Beaver	13300 Hartstown Rd. Linesville PA 16424	(814) 683-4451
2	Warren, Forest, Venango, Clarion, Jefferson, parts of Erie, Crawford, Mercer, Butler, Armstrong, Indiana, Clearfield, Elk, McKean, Potter	Route 62 HCR2, Box 1 Tionesta PA 16353-9729	(814) 755-3890
3	Cameron, Clinton, Lycoming, Union, Montour, parts of Elk, Clearfield, Cambria, Centre, Snyder, Northumberland, Sullivan, Bradford Tioga, Potter, McKean	450 Robinson Lane Pleasant Gap PA 16823-9620	(814) 359-5118
4	Susquehanna, Wyoming, parts of Bradford, Tioga, Sullivan, Columbia, Luzerne, Lackawanna, Wayne	Main Road P.O. Box 88 Sweet Valley PA 18656-0088	(570) 477-5717
5	Pike, Monroe, Northampton, parts of Wayne, Lackawanna, Luzerne, Carbon, Schuylkill, Lehigh, Berks	Route 209 P.O. Box 155 Bushkill PA 18324	(570) 588-6388
6	Philadelphia, Delaware, Montgomery, Berks, Chester, parts of York, Lancaster, Lebanon, Schuylkill, Carbon, Berks, Lehigh	448 Haycock Run Road Bucksville PA 18953	(610) 847-2442
7	Dauphin, Perry, Cumberland, Adams, Franklin, Fulton, Bedford, Blair, Huntingdon, Mifflin, Juniata, parts of York, Lancaster, Lebanon, Berks, Schuylkill, Columbia, Northumberland, Snyder, Centre, Somerset	844 Big Spring Road Newville PA 17241-9473	(717) 776-3170
8	Allegheny, Washington, Greene, Fayette, Westmoreland, parts of Somerset, Cambria, Indiana, Armstrong, Butler, Beaver	236 Lake Road Somerset PA 15501-1644	(814) 445-3454

Pennsylvania Game Commission Regional Offices

Area	Counties	Address	Phone
Northwest	Butler, Clarion, Crawford, Erie, Forest, Jefferson, Lawrence, Mercer, Venango, Warren	P.O. Box 31 Franklin PA 16323	(814) 432-3187 or 1-877-877-0299
Southwest	Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington, Westmoreland	P.O. Box A Ligonier PA 15658	(724) 238-9523 or 1-877-877-7137
Northcentral	Cameron, Centre, Clearfield, Clinton, Elk, Lycoming, McKean, Potter, Tioga, Union	P.O. Box 5038 Jersey Shore PA 17740-5038	(570) 398-4744 or 1-877-877-7674
Southcentral	Adams, Bedford, Blair, Cumberland, Franklin, Fulton, Huntingdon, Juniata, Mifflin, Perry, Snyder	8627 William Penn Highway Huntingdon PA 16652	(814) 643-1831 or 1-877-877-9107
Northeast	Bradford, Carbon, Columbia, Lackawanna, Luzerne, Monroe, Montour, Northumberland, Pike, Sullivan, Susquehanna, Wayne, Wyoming	P.O. Box 220 Dallas PA 18612-0220	(570)-675-1143 or 1-877-877-9357
Southeast	Berks, Bucks, Chester, Dauphin, Delaware, Lancaster, Lebanon, Lehigh, Montgomery, Northampton, Philadelphia, Schuylkill, York	448 Snyder Road Reading PA 19605	(610) 926-3136 or 1-877-877-9470

Other Helpful Contacts

Organization	Address	Phone	Web Address
Pennsylvania Fish and Boat Commission Division of Environmental Services	450 Robinson Lane Bellefonte, PA 16823	(814) 359-5147	http://sites.state.pa.us/PA_Exec/Fish_Boat
Pennsylvania Department of Conservation and Natural Resources (DCNR)	Rachel Carson State Office Building P.O. Box 8767 400 Market Street Harrisburg, PA 17105-8767	(717) 787-2829	www.dcnr.state.pa.us
Pennsylvania Game Commission	2001 Elmerton Ave. Harrisburg, PA 17110-9797	(717) 787-4250	www.pgc.state.pa.us
Delaware River Basin Commission	P.O. Box 7360 West Trenton, NJ 08628-0360	(609) 883-9500	www.state.nj.us/drbc/
Susquehanna River Basin Commission	1721 North Front Street Harrisburg, PA 17102	(717) 238-0423	www.srbcc.net
U.S. Geological Survey (USGS)	Pennsylvania State Office 215 Limekiln Road New Cumberland, PA 17070-2424	(717) 730-6900	www.usgs.gov
U.S. Fish and Wildlife Service	Pennsylvania Field Office 315 South Allen Street Suite 322 State College, PA 16801-4850	(814) 234-4090	www.fws.gov
Alliance for Aquatic Resource Monitoring at Dickinson College (ALLARM)	Dickinson College P.O. Box 1773 Carlisle, PA 17013	(717) 245-1565	www.dickinson.edu/storg/allarm
Delaware Riverkeeper Network	P.O. Box 326 Washington Crossing, PA 18977-0326	(215) 369-1188	www.delawareriverkeeper.org
Stroud Water Research Center	970 Spencer Road Avondale, PA 19311	(610) 268-2153	www.stroudcenter.org
Pennsylvania Organization for Watersheds and Rivers	610 North Third Street Harrisburg, PA 17101	(717) 234-7910	www.pawatersheds.org
Consortium for Scientific Assistance to Watersheds (C-SAW)	various regional Resource Conservation and Development (RC&D) Councils, see C-SAW website for addresses	various regional RC&D Councils, see C-SAW website for phone numbers	http://pa.water.usgs.gov/csaw/

Appendix G: List of Acronyms and Abbreviations Used in This Handbook

ABACT:	Best available combination of cost-effective treatment, land disposal, pollution prevention and wastewater reuse technologies
ALLARM:	Alliance for Aquatic Resource Monitoring at Dickinson College
AWS:	Wildlife Water Supply
B:	Boating
BMPs:	Best Management Practices
C-SAW:	Consortium for Scientific Assistance to Watersheds
CWF:	Cold Water Fishes
DEP:	Pennsylvania Department of Environmental Protection
DCNR:	Pennsylvania Department of Conservation and Natural Resources
DRBC:	Delaware River Basin Commission
E:	Esthetics
EQB:	Environmental Quality Board
EV:	Exceptional Value
F:	Fishing
GIS:	Geographic Information Systems
HQ:	High Quality
IRS:	Irrigation
IRRC:	Independent Regulatory Review Commission
IWS:	Industrial Water Supply
LWS:	Livestock Water Supply
MF:	Migratory Fishes
NPDES:	National Pollution Discharge Elimination System
POWR:	Pennsylvania Organization for Watersheds and Rivers
PWS:	Potable Water Supply
RC&D:	Resource Conservation and Development
RBP	Rapid Bioassessment Protocol
SEJ:	Social or economic justification
SRBC:	Susquehanna River Basin Commission
SWAP:	Source Water Assessment Protection
TSF:	Trout Stocking Fishery
USGS:	United States Geological Survey
WC:	Water Contact Sports
WWF:	Warm Water Fishes



