CBP Partners' Healthy Waters and Watersheds Programs

7/31/2013

The purpose of this document is to provide information describing healthy waters and healthy watersheds identification and protection programs of the Chesapeake Bay Program partner States. This information was requested by a member of the CBP Principals' Staff Committee at the PSC's June 27, 2013 meeting. It was collected directly from the States' program web sites and its use in this document for this purpose was approved by the respective States' representatives to the CBP Maintain Healthy Watersheds Goal Implementation Team (GIT4).

Pennsylvania Department of Environmental Protection

Water Quality Standards Division

Division Mission

Determines the protected uses for all Pennsylvania surface waters, including fish and aquatic life, water supply, water contact recreation and special protection. Establishes the water quality criteria for physical, bacteriological, chemical and radiological contaminants to protect the surface water uses. Reports on the condition of the Pennsylvania's waters through the Integrated Water Quality Monitoring and Assessment Report and develops the protocols needed to assess the waters. Models pollutant loadings (TMDL) to impaired waters to determine the sources and load reductions necessary to correct problems. Monitors for and controls mosquitoes carrying the West Nile virus. Controls nuisance biting black flies.

Implements the statewide water quality monitoring network to determine the quality of Pennsylvania's surface waters and identify long-term trends in quality; conducts surveys to assess the quality of streams and lakes, and prepares reports identifying those streams and lakes with protected uses deemed to be impaired; processes public petitions to re-designate the protected use for lakes and streams; and administers the anti-degradation program in surface waters designated for special protection. Reviews and proposes water quality criteria based upon good science. Annually completes numerous TMDL analyses and reports. Manages aerial blackly spraying and conducts spraying to protect the public from mosquitoes carrying the West Nile virus.

http://www.portal.state.pa.us/portal/server.pt/community/about_water_supply/10536/division_missions/553825#Water

7/2/2013

PENNSYLVANIA, Continued

Water Quality Antidegradation Implementation Guidance

http://www.elibrary.dep.state.pa.us/dsweb/Get/Version-47704/

1. Background

Antidegradation is a concept and policy created by the Department of the Interior in 1968 and was included in EPA's first water quality standards regulation in 1975. The federal basis for the program is contained in the federal Clean Water Act, and is set forth in regulations at 40 CFR

§131.12, which is a part of the overall EPA water quality standards regulation promulgated in

1983, and 40 CFR §131.32, which was promulgated by EPA for the Commonwealth in 1996. States are required to adopt an antidegradation policy meeting minimum requirements and must include this policy as a required element of their surface water quality standards programs in order to gain federal approval of the standards. This requirement complements the Pennsylvania Clean Streams Law available on DEP's website at www.dep.state.pa.us, enacted to preserve and

improve the purity of the waters of the Commonwealth for the protection of public health, animal life, aquatic life, and other beneficial uses.

The basic concept of antidegradation is to promote the maintenance and protection of existing water quality for High Quality (HQ) and Exceptional Value (EV) waters, and protection of existing uses for all surface waters because it recognizes that existing water quality and uses have inherent value worthy of protection and preservation. As a required element of a state's water quality standards, the Antidegradation Program introduces levels of protection for deserving waterbodies above the basic standards. It should be noted that the level of protection of HQ waters may be reduced from maintenance of existing quality, if necessary, to accommodate important economic or social development in the area in which the waters are

located. This Social or Economic Justification (SEJ) process is discussed in detail in Chapter 10.

"Water quality standards" for any surface waterbody are the combination of "water uses" and the instream "water quality criteria" necessary to protect and maintain those uses. The uses of a waterbody are determined by considering the values a waterbody has for such things as water supply, propagation of fish and wildlife, recreation in and on the water, and other uses. The adopted water quality criteria are the numerical and descriptive chemical, biological, or physical stream conditions which must be maintained to support the uses. Uses may be either "designated uses," that is, water uses specifically contained, for each waterbody, in Title 25 Pa. Code

Sections 93.9a - 93.9z, or "existing uses." Existing water uses are those actually attained by the waterbody whether or not they are listed in §§93.9a - 93.9z as designated uses. These distinctions are further explained later in this Chapter.

Water quality standards govern the degree of degradation a waterbody may incur without causing the loss of a use. They provide a base level of protection-maintenance of designated water uses. The antidegradation concept adds an additional level of protection by providing for protection of existing uses of all surface waters and, for selected waterbodies that represent significant aquatic resources, the maintenance of existing water quality.

Antidegradation requirements in Pennsylvania are designed to provide this protection in discrete levels or tiers, as explained in the next chapter. These levels of protection are appropriately

matched to categories of waterbodies, based on their existing uses, level of water quality, and environmental characteristics.

Pennsylvania DEP 2013 grant guidance:

2013 Guidance for Specific Watershed Protection Project Types

I. Healthy Waters Initiative

The Department is interested in protecting Pennsylvania's most valuable waters and watersheds, by funding projects that, through early detection, can reduce an impending threat to that watershed. The goal is to protect intact aquatic ecosystems and watersheds and prevent their degradation from threats outside of point source pollution causes. This generally means using existing long-term data sets for projecting, to a vulnerability threshold and beyond, trends in factors that can be shown to threaten environmental integrity, and then planning and implementing practices to curtail the forecasted problems. Qualifying watersheds are those carrying Exceptional Value (EV) and High Quality (HQ) stream or lake designations or having a Source Water Protection Plan already in place or waterbodies that were previously impaired and are now attaining their designated uses and that are vulnerable to degradation because of changing land use, non-point source pollution, invasive species or other demographic(s) associated with reduced environmental health or integrity. Added consideration may be given to watersheds having demonstrated local interest and involvement in protection and restoration.

-10-

In addition to the general growing greener application requirements, the application must clearly identify that it is intended for consideration under HWI.

The application and any HWI proposal should describe and identify the following:

 The complete watershed under consideration, identifying its qualifying designation(s);

 A description of the perceived or tangible threat(s) to the watershed's health or integrity;

 Methods used to show that one or more indicators of integrity are statistically trending toward, and projected to go beyond, a reasonably established vulnerability point at a specific time;

 Proposed practices or activities recommended to curtail the threat of degradation;

 A reasonable time schedule and activity schedule which includes planning, designing and implementing practices to prevent degradation along with promoting and educating the public, officials, planners, and/or other stakeholders on findings and recommendations.

http://www.portal.state.pa.us/portal/server.pt

6/19/2013

Virginia Department of Conservation & Recreation

What is the Healthy Waters approach?

At a time when so much of the news about the environment is negative, some biologists have been wading through Virginia's streams in search of some positive information. What they've found suggests that there is another very important story. Virginia has nearly 200 ecologically healthy streams, creeks and rivers throughout the state, and there are more yet to be identified. That's nearly 10 percent of the streams sampled.

Virginia's Healthy Waters initiative is an effort to broaden conservation efforts to include these critical healthy resources before they are compromised. This seems in contrast to water quality programs that focus on repairing degraded streams, but is meant to work in concert and protect living resources.

This approach encompasses protecting everything from aquatic insect larvae and bugs hidden in gravelly stream bottoms, to forested buffers alongside streams, to natural stream flow, to the water we drink. It's all interconnected and is an effort to maintain ecological balance.

What defines healthy waters?

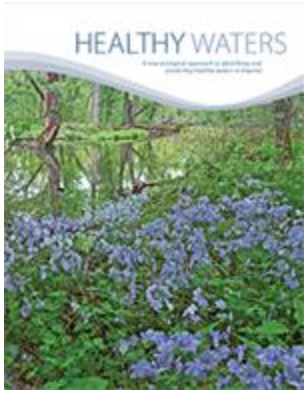
- A high number of native species and a broad diversity of species
- Few or no non-native species
- Few generalist species that are tolerant of degraded water quality
- A high number of native predators
- Migratory species whose presence indicates that river or stream systems are not blocked by dams or other impediments
- Low incidence of disease or parasites
- Intact buffers of vegetation in the riparian zone

How are healthy waters identified and assessed?

Healthy streams in Virginia have been identified and ranked through a stream ecological integrity assessment known as the **In**teractive **St**ream **A**ssessment **R**esource (INSTAR) as "exceptionally healthy," "healthy," or "restoration candidate."

Developed by the Center for Environmental Studies at Virginia Commonwealth University, INSTAR is an online interactive database application that identifies healthy streams using stream data that includes information about fish communities and bugs, in-stream habitat and riparian borders.

Available to the public through a free, user-friendly website, **http://instar.vcu.edu**, INSTAR is designed primarily to assist regional and local planners, advocacy groups and individuals with planning and land use decisions. INSTAR does this by helping to identify healthy streams in their communities and encourage their protection.



For a complete PDF version of "Healthy Waters - A New Ecological Approach to Identifying and Protecting Healthy Waters in Virginia," **click here** (PDF). To order a copy of the publication by mail, contact Todd Janeski at **todd.janeski@dcr.virginia.gov**, 804

http://www.dcr.virginia.gov/water_quality/healthy_waters/index.shtml

July 2, 2013

INSTAR (Virginia) Healthy Waters

Welcome to INSTAR

INSTAR (***IN****teractive* ***ST****ream* ***A****ssessment* ***R****esource*) is a dynamic and interactive mapping and data visualization application. INSTAR allows users to access and manipulate a comprehensive (and growing) database representing over 2,000 aquatic (stream and river) collections statewide. Data represent fish and macroinvertebrate assemblages, instream habitat, and stream health assessment, based on integrative, multimetric indices at the watershed scale and a stream reach scale. The application supports user-driven database queries, mapping functions, and online editing capabilities.

The INSTAR program began in 2003 as a collaboration between the Center for Environmental Studies at VCU and several agencies, including the Virginia Department of Conservation and Recreation and the Virginia Coastal Zone Management Program. The goal of INSTAR is to develop complementary, synoptic, and geospatial database for fish and macroinvertebrate community composition and abundance at stream locations throughout the state, including larger (4th order or greater), non-wadeable streams and rivers. INSTAR**,** and the extensive aquatic resources database on which it runs, support a wide variety of stream assessment, management, and conservation activities aimed at restoring and protecting aquatic living resources throughout the Commonwealth.

VCU Center for Environmental Studies in Partnership with:

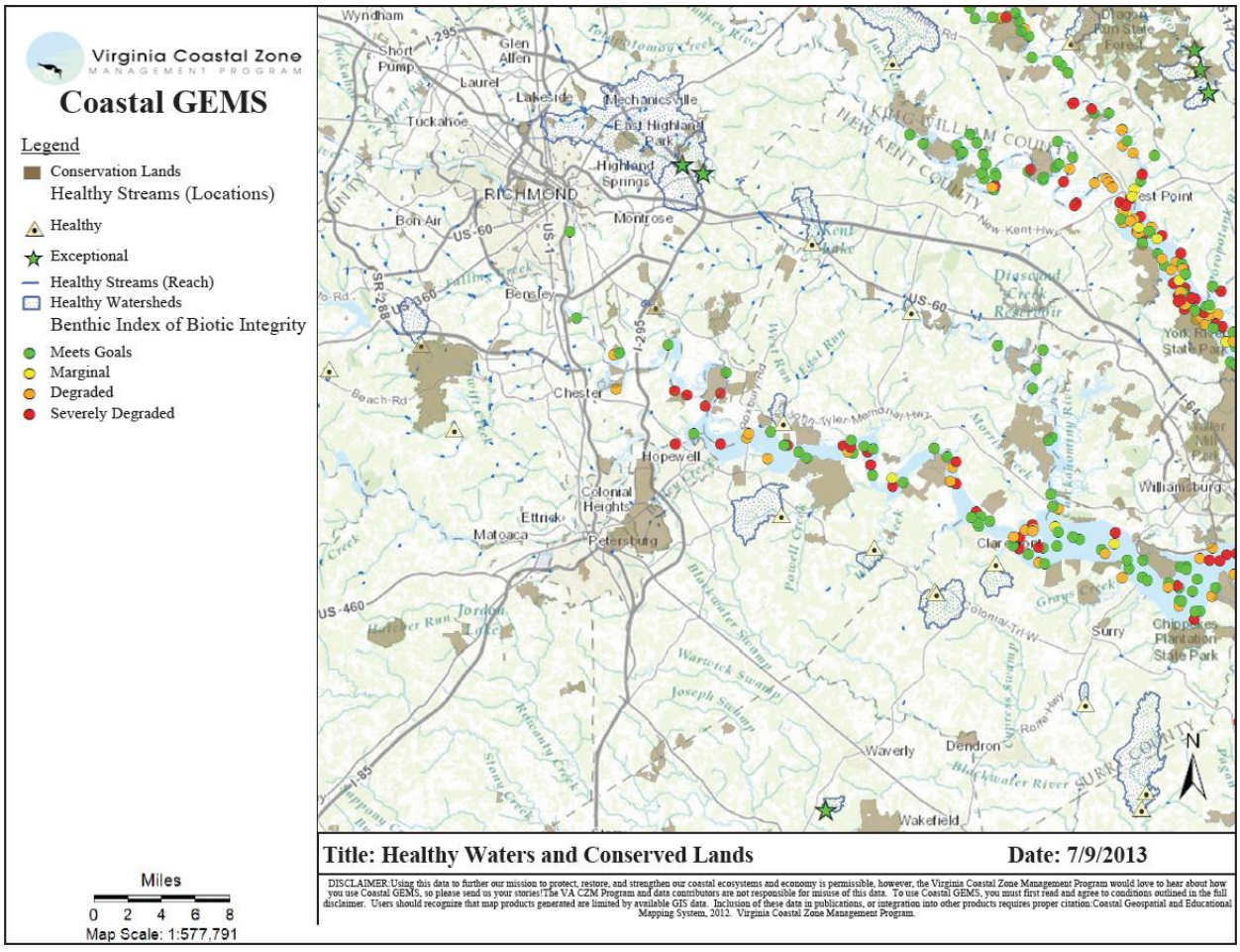
http://gis.vcu.edu/instar/

July 2, 2013

Virginia Coastal Zone Management Program's Coastal GEMS Data Portal

Coastal GEMS (Virginia CZM's Coastal Geospatial and Educational Mapping System) provides over 50 data layers (including a user-friendly fact sheet for each data layer) for the coastal zone of Virginia. "Healthy Streams" is one of the data layers which can be viewed along with other relevant and related layers such as "Benthic Index of Biotic Integrity," "Shellfish Aquaculture Sites," "SAV," "Anadromous Fish Use Areas," "Threatened and Endangered Species Waters," "Wetlands," "Conservation Lands," "Essential Wildlife Habitat," and the overall "Ecological Value Assessment" to name just a few. The portal can be accessed at http://www.deq.virginia.gov/Programs/CoastalZoneManagement/CoastalGEMSGeospatialData.aspx or at www.coastalgems.org

Http://gis.vcu.edu/coastalgems



Maryland Department of the Environment

Maryland's High Quality Waters (Tier II)

The Clean Water Act requires three components to water quality standards that set goals for and protect each States' waters. The three components are: (1) designated uses that set goals for each water body (e.g., recreational use), (2) criteria that set the minimum conditions to support the use (e.g., bacterial concentrations below certain concentrations) and (3) an antidegradation policy that maintains high quality waters so they are not allowed to degrade to meet only the minimum standards. The designated uses and criteria set the minimum standards for Tier I.

Maryland's antidegradation policy has been promulgated in three regulations: COMAR 26.08.02.04 sets out the policy itself, COMAR 26.08.02.04-1, which is discussed here, provides for implementation of Tier II (high quality waters) of the antidegradation policy, and COMAR 26.08.02.04-2 that describes Tier III (Outstanding National Resource Waters or ONRW), the highest quality waters. No Tier III waters have been designated at this time.

Tier II antidegradation implementation has the greatest immediate effect on local government planning functions so MDE has prepared the following discussion to provide technical assistance to local governments working to complete the Water Resources Element of their comprehensive plans as required by HB 1141.

1. 26.08.02.04 – 1(B)

"**General:** An applicant for proposed amendments to **county plans** or **discharge permits** for discharge to Tier II waters that will result in a new, or an increased, permitted annual discharge of pollutants and a potential impact to water quality, shall evaluate alternatives to eliminate or reduce discharges or impacts. **If impacts are unavoidable, an applicant shall prepare and document a social and economic justification.** The Department shall determine, through a public process, whether these discharges can be justified."

2. 26.08.02.04 – 1(F)(1) – (3)

"(1) Permits. Before submitting an application for a new discharge permit or major modification of an existing discharge permit (for example, expansion), the discharger or applicant shall determine whether the receiving water body is Tier II or, a Tier II determination is pending, by consulting the list of Tier II waters."

"(2) Water and Sewer Plans (County Plans). As part of its continuing planning process, the Department shall review proposed amendments to county plans for any new or major modifications to discharges to Tier II bodies of water. If a proposed amendment to a County Plan results in a new discharge or a major modification of an existing discharge to a Tier II water body, the applicant shall perform a Tier II antidegradation review."

"(3) Exemptions. The requirement to perform a Tier II antidegradation review does not apply to individual discharges of treated sanitary wastewater of less than 5,000 gallons per day, if all of the existing and current uses continue to be met."

3. 26.08.02.04 – 1(G)

(1) If a Tier II antidegradation review is required, the applicant shall provide an analysis of reasonable alternatives that do not require direct discharge to a Tier II water body (no-discharge

MARYLAND, Continued

alternative). The analysis shall include cost data and estimates to determine the cost effectiveness of the alternatives.

(2) If a cost effective alternative to direct discharge is reasonable, the alternative is required as a condition of the discharge permit or amendment to the county plan.

(3) If the Department determines that the alternatives that do not require direct discharge to a Tier II water body are not cost effective, the applicant shall:

(a) Provide the Department with plans to configure or structure the discharge to minimize the use of the assimilative capacity of the water body, which is the difference between the water quality at the time the water body was designated as Tier II (baseline) and the water quality criterion; and

(b) If an impact cannot be avoided, or no assimilative capacity remains as described in §G(3)(a) of this regulation, provide the Department with a social and economic justification for permitting limited degradation of the water quality.

(4) An applicant shall update an antidegradation review when applying for a new permit or major modification to an existing permit.

4. 26.08.02.04 – 1 – L

(1) Components of the SEJ may vary depending on factors including, but not limited to, the extent and duration of the impact from the proposed discharge and the existing uses of the water body.

(2) The economic analyses shall include impacts that result from treatment beyond the costs to meet technology-based or water quality-based requirements.

(3) The economic analysis shall address the cost of maintaining high water quality in Tier II waters and the economic benefit of maintaining Tier II waters.

(4) The economic analysis shall determine whether the costs of the pollution controls needed to maintain the Tier II water would limit growth or development in the watershed including the Tier II water.

Noteworthy Points

1. It is incumbent upon the Counties to know what waters in their jurisdiction are Tier II;

2. Amendments to county plans that result in a new discharge to Tier II waters require an antidegradation review. The antidegradation review must consider the following:

- Can the discharge be avoided or placed elsewhere? If so, that should be done.
- If the discharge is necessary, has everything been done to minimize that water quality impact? If the impact has been minimized to the greatest extent feasible, but an impact to water quality will still occur, a social and economic justification (SEJ) for that impact must be prepared and approved by the MDE before the discharge can be permitted (MDE, 2005).”—A User’s Guide to Watershed

Planning in Maryland. The SEJ shall demonstrate that alternatives are not economically feasible and are consistent with Smart Growth.

MARYLAND, Continued

- Must undergo a public process (Administrative Procedures Act) similar to that for all permits and the SEJ is thus open for public review.

3. Baselines have been established using biological community metrics that provide a cumulative assessment of water quality. This is very helpful for determining that waters are actually of a high quality, but makes it difficult to project what stressors, and the magnitude of those stressors, that will result in unacceptable impacts. MDE will provide technical assistance on this issue and solicits approaches from the local governments on how they would like to address this technically difficult issue.

High Quality Waters Resources

Maryland's High Quality (Tier II) Waters Maps

Additional Water Quality Planning Information for Tier II

Water Quality Mapping Center

http://www.mde.state.md.us/programs/Water/TMDL/Integrated303dReports/Documents/Water_Quality_PlanningHB1141/WQM_Tier_II_narrative_082809.pdf

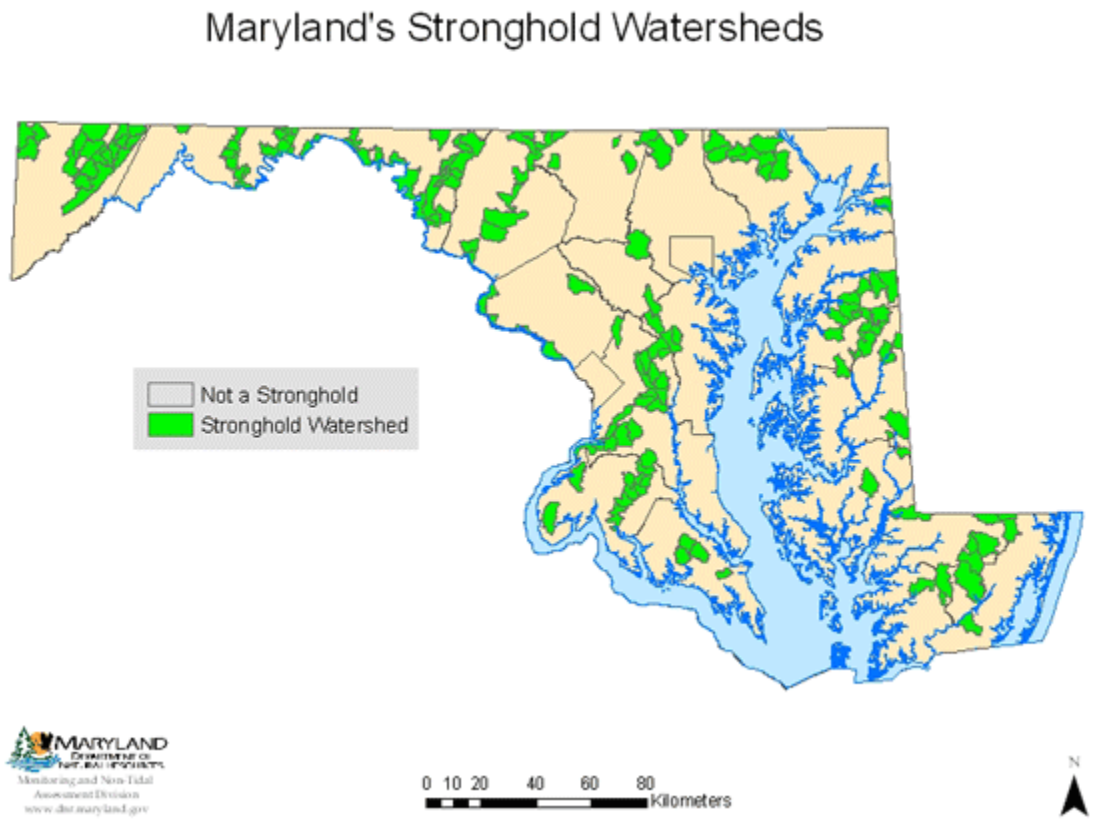
http://www.mde.maryland.gov/programs/Water/TMDL/Water%20Quality%20Standards/Pages/Antidegradation_Policy.aspx

Contact Info

Please direct questions or comments concerning Maryland's Antidegradation Program to Angel Valdez at Angel.Valdez@maryland.gov or 410-537-3606.

Maryland's Stronghold Watersheds

In its 17 years of assessing the health of Maryland's streams, the Maryland Biological Stream Survey has identified those watersheds around the State that are most important for the protection of Maryland's aquatic biodiversity. Known as Maryland's "Stronghold Watersheds", these locations are the places where rare, threatened, or endangered species of fish, amphibians, reptiles, or mussels have the highest numbers.



Most of these species used to have greater abundance and distribution throughout the State, but now are holding out in these limited areas. Generally, these species are the most sensitive to environmental degradation. A small change in watershed or stream health can permanently eliminate one or more of these sensitive species. As a result, maintaining the health of these watersheds is of critical importance if we are to sustain these species and the vital ecosystem services they provide.

http://www.streamhealth.maryland.gov/stronghold.asp

July 2, 2013

Maryland's GreenPrint: A Model for Targeting and Protecting the State's Most Ecologically Valuable Lands and Watersheds

Christine Conn and Scott Stranko

Maryland Dept. of Natural Resources, Annapolis, Md., USA

Maryland's GreenPrint program for strategic and targeted land conservation is based on the premise that the protection of the State's most ecologically valuable lands and waters must be of the highest priority. Based on this principle, an interdisciplinary team of natural resource biologists and land conservation managers at the Maryland Department of Natural Resources (MDNR) developed a modeling approach to identify Targeted Ecological Areas (TEAs). TEAs are the lands and watersheds ranked as the most ecologically valuable in the State. They are the "best of the best". These lands include large blocks of forests and wetlands, wildlife and rare species habitats, aquatic biodiversity hotspots, forests important for protecting water quality, high value coastal ecosystems, lands important for climate change adaptation, and areas supporting important fisheries. DNR mapped where these high priority lands and watersheds occur based on the analysis of over 30-years of collected data and the expertise of agency ecologists. TEAs are preferred for conservation funding through Maryland's Stateside Program Open Space.

Another key principle underlying Maryland's GreenPrint program is the development of land conservation strategies that are based on transparent, scientifically defensible criteria, designated geographic targets, clearly defined objectives and measures of success. When projects are considered for acquisition or easement, a conservation scorecard is produced to quantify ecological benefits. Funding decisions are based on how high projects score relative to other projects. GreenPrint also uses interactive mapping technology to geographically present the Targeted Ecological Area designations to the State's partners in land conservation: the public, private landowners, government agencies and land trusts. Ecological information at the parcel scale is available and is actively used to identify specific parcels for landowner outreach. The GreenPrint tool also shows where projects have been conserved, how much funding was required and tracks progress towards the Targeted Ecological Area goal at both the State and county scale.

West Virginia Department of Environmental Protection

Antidegradation Rules
West Virginia Antidegradation Rules and Procedures
Antidegradation refers to federal regulations designed to maintain and protect high quality waters and existing water quality in other waters from unnecessary pollution. This policy will ensure that West Virginia's waters are protected from activities which have the potential to lower water quality. West Virginia is required to establish a tiered antidegradation policy and implementation procedure.

Specific steps to be followed depend upon which tier of antidegradation applies. Procedures are outlined in the legislative rule *Series 5 Antidegradation Implementation Procedures - Title 60CSR5* (effective July 1, 2008), and found by clicking on the link below:

Effective July 1, 2008 - 60CSR5 - Antidegradation Implementation Procedures

Why do we have different "Tier" types of waters? What is the difference between the types?
All waters are assigned to specific tiers depending upon the level of protection necessary to maintain high quality and/or existing uses. The higher the tier, the more stringent the requirements are for protection. West Virginia categorizes waters into the following tiers:

Tier 1 - Maintains and protects existing uses of a water body and the water quality conditions necessary to support such uses.
A water body that is listed as impaired on the states 303(d) list is considered a Tier 1 water as it pertains to the specific pollutant listed.

Tier 2 - Maintains and protects "high quality" waters - water bodies where the level of water quality exceeds levels necessary to support recreation and wildlife and the propagation and maintenance of fish and other aquatic life.
Tier 2 is the default assignment for a waterbody not listed as impaired on the states 303(d) list.

Tier 3 - Maintains and protects water quality in outstanding national resource waters.

Tier 3 Waters
Waters placed in the Tier 3 category are known as "outstanding national resource waters." These include waters in Federal Wilderness Areas, specifically designated federal waters, and high quality waters or naturally reproducing trout streams in state parks, national parks, and national forests. Guidance pertaining to Tier 3 waters can be found in *Series 2A Designation of Tier 3 Waters - Title 47CSR2A* (effective December 1, 2008) and found by clicking on the link below:

Effective December 1, 2008 - 47CSR2A - Designation of Tier 3 waters

A map of Tier 3 streams and justification for inclusion may be found by clicking the link below:
Tier 3 - Interactive Maps for Tier 3 Streams in PDF (size is **13 mb** - you may want to download prior to opening)
Tier 3 - Listing for Tier 3 streams and reasons for inclusion in Excel

WEST VIRGINIA, Continued

Nominating Tier 3 Waters

In addition to DEP efforts to identify and list Tier 3 waters, candidate waters may be nominated for inclusion in the Tier 3 category by an interested party. Nomination procedures are outlined in *Series 5 Antidegradation Implementation Procedures - Title 60CRS5, Section 7.1.* (effective July 1, 2008). Section 7.1 outlines all necessary information and documentation that must be included in the nomination packet, and general procedures DEP staff utilizes during the nomination review.

http://www.dep.wv.gov/WWE/Programs/wqs/Pages/default.aspx

WEST VIRGINIA TIER 3 STREAMS IN THE CHESAPEAKE BAY WATERSHED	
POTOMAC	
ROCK GAP RUN	P-9-F
NORTH FORK/INDIAN RUN	P-9-G-1
SOUTH FORK / INDIAN RUN	P-9-G-2
CACAPON	
CONNER HOLLOW	PC-0.9
STONEY CREEK	PC-2
HAWK RUN	PC-17
WAITES RUN	PC-22
TROUT RUN	PC-23
LOWER COVE RUN	PC-24-Hand slide 34
HOWARDS LICK RUN	PC-24-J.8
SOUTH BRANCH POTOMAC	
SOUTH BR. POTOMAC RIVER	PSBand slide 28
LITTLE FORK	PSB-21-GG
KETTLE CREEK	PSB-21-I
LICK RUN	PSB-21-I-3-A
ROUGH RUN	PSB-21-K

UNT/ROUGH RUN RM 5.63	PSB-21-K-8
STONY RUN	PSB-21-R
ROAD RUN	PSB-21-S
HAWES RUN	PSB-21-X
BIG STAR RUN	PSB-26-D-2
NORTH FORK SOUTH BRANCH	PSB-28
UNT/NORTH FORK	PSB-28-0.6A
BIG RUN / JORDAN RUN	PSB-28-A-1
LAUREL RUN / JORDAN RUN	PSB-28-A-2
SAMUEL RUN	PSB-28-B

Stream Name	ANCode
BROAD RUN	PSB-28-C
MOYER RUN	PSB-28-Dand slide 48
HIGH RIDGE RUN	PSB-28-E
BIG RUN / NORTH FORK	PSB-28-EEand slide 31
COLD SPRING RUN	PSB-28-EE-1
SAWMILL RUN	PSB-28-EE-2and slide 31
BACK RUN	PSB-28-EE-2-A
TEETER CAMP RUN	PSB-28-EE-3
LEONARD SPRING HOLLOW	PSB-28-EE-3-B
MIDDLE RIDGE HOLLOW	PSB-28-EE-3-C
BUD HOLLOW	PSB-28-EE-3-D
ELK RUN	PSB-28-EE-4
MILL RUN	PSB-28-F
ZEKE RUN	PSB-28-G
VANCE RUN	PSB-28-GG-1
SAMS RUN	PSB-28-GG-1-A

LITTLE LOW PLACE HOLLOW	PSB-28-GG-1-B
POWDERMILL RUN	PSB-28-I
SAWMILL RUN	PSB-28-J
SHUCKLEFORD RUN	PSB-28-J.2
SENECA CREEK	PSB-28-Kand slide 29
BRUSHY RUN	PSB-28-K-1
ROARING CREEK	PSB-28-K-2
ELKLICK RUN	PSB-28-K-2-A
LONG RUN	PSB-28-K-2-B
NORTH FORK LONG RUN	PSB-28-K-2-B-2
HORSECAMP RUN	PSB-28-K-3
WAMSLEY RUN	PSB-28-K-3-B
Stream Name	**ANCode**
STRADER RUN	PSB-28-K-4
GULF RUN	PSB-28-K-5
WHITES RUN	PSB-28-K-6
LOWER GULF RUN	PSB-28-K-6-A
UPPER GULF RUN	PSB-28-K-6-B
HARPER GAP	PSB-28-L
BLIZZARD RUN	PSB-28-R
BRIERY GAP RUN	PSB-28-S
LAUREL RUN / NORTH FORK	PSB-28-Tand slide 30
REDMAN RUN	PSB-29
LONG RUN	PSB-30
BRIGGS RUN	PSB-32
REEDS CREEK	PSB-33
SHENANDOAH	
CAPON RUN	SNF-1

http://www.dep.wv.gov/WWE/Programs/wqs/Documents/Tier%203%20Info/WV_Tier_3_Maps_20101006.pdf. July 2, 2013

New York Department of Environmental Conservation

Waterbody Inventory/Priority Waterbodies List

The Waterbody Inventory/Priority Waterbodies List (WI/PWL) is a compilation of water quality information for all individual waterbodies (lakes, rivers, streams, estuaries and coastlines) in the state. The WI/PWL includes the most recent assessment of use support, the identification of water quality problems and sources, and summary of activities to restore and protect each individual waterbody. More information about the WI/PWL and the assessment process is available on this page below the links to the basin assessment reports.

http://www.dec.ny.gov/chemical/36730.html

NY DEC ANTIDEGRADATION POLICY 1

MEMORANDUM FROM
HENRY G. WILLIAMS, *Commissioner*

New York State
Department of Environmental Conservation

September 9, 1985

TO: Executive Staff, Division Directors, Regional Directors

FROM: Hank Williams

RE: ORGANIZATION AND DELEGATION MEMORANDUM NO. 85- 40
Water Quality Antidegradation Policy

Purpose

This document presents the policy by which the Department of Environmental Conservation (DEC) protects water quality against degradation.

Background

The DEC has a responsibility and obligation under federal law through the Clean Water Act (33 USC §§1251 et seq) to establish and implement a policy which protects existing water quality from being degraded.

An antidegradation policy was originally adopted by the State on May 7, 1970 by the then Water Resources Commission, and was approved by the then Federal Water Quality Administration (FWQA), Department of the Interior, in March 1971. This same statement was filed with NYS's water quality standards under the Clean Water Act and, subsequently, the package was approved by the U.S. Environmental Protection Agency (EPA) on March 27, 1974. The powers and responsibilities of the Water Resources Commission were transferred to DEC in 1972.

DEC Antidegradation Policy

It is recognized that certain waters of New York State possess an existing quality which is better than the standards assigned thereto. The quality of these waters will be maintained unless the following provisions have been demonstrated to the satisfaction of the Commissioner of Environmental Conservation:

1. That allowing lower water quality is necessary to accommodate significant economic or social development in the affected areas; and

2. That water quality will be adequate to meet the existing usage of a waterbody when allowing a lowering of water quality.

NY DEC ANTIDEGRADATION POLICY, Continued

Where waters are meeting higher uses or attaining quality higher than the current classification, the Department will use the SEQR process to assure that potential adverse environmental impacts are adequately mitigated and higher attained uses are protected.

In addition, the highest statutory and regulatory requirements for all new point sources and cost effective and reasonable best management practices for non-point source control shall be achieved; and the intergovernmental coordination and public participation provisions of New York's continuing planning process will be satisfied.

Water which does not meet the standards assigned thereto will be improved to meet such. The water uses and the level of water quality necessary to protect such uses shall be maintained and protected.

Implementation

The antidegradation policy is implemented through a series of general and special laws such as Article XIV of the State Constitution, enacted in 1894 for maintaining the Forest Preserve as forever wild; the Wild, Scenic, and Recreational Rivers System added to the Environmental Conservation Law in 1972 (Article 15, Title 27); Article 17, Title 17 of the Environmental Conservation Law which specifically prohibits discharges into certain named rivers, streams, and lakes; stream classifications AA Special and N where no discharges are allowed (6 NYCRR Parts 701-702); and the formation of Agricultural Districts to preserve land for agricultural use (Agriculture and Markets Law; Article 25-AA). The State Pollutant Discharge Elimination System (SPDES)permit process serves the intended function of preventing degradation. SPDES permits include technology based and water quality based effluent limits derived from the water quality standards embodied in 6 NYCRR Parts 701-702. Each stream classification (AA, A, B, C, D, SA, SB, SC, SD, I)described in 6 NYCRR Parts 701-702 has specific standards and numerical criteria assigned thereto. The achievement of those criteria and standards assures that the best usage of each waterbody is protected.\Those waters protected for trout spawning purposes require compliance with extremely high water quality standards which prohibit degradation.

For those waters not afforded special legislative or regulatory protection and status, the antidegradation policy is implemented through a number of on-going regulatory activities. These include the State Pollutant Discharge Elimination System (SPDES)permit process, the classification of waters, ECL 17-0301, 6NYCRR 609, and the State Environmental Quality Review Act (SEQR), ECL, Article 8. Where waters are of a higher quality then standards presently assigned thereto, and higher use of those waters is a presently attained use, these activities provide to protect waters against degradation as follows:

NY DEC ANTIDEGRADATION POLICY, Continued

(a) SPDES - Water quality based effluent limitations derived for SPDES permits provide for the protection and maintenance of attained higher uses above those included in standards currently assigned to waters receiving the effluent discharge. Variations in numerical water quality criteria that are not significant and do not interfere with the attained higher use are permitted.

(b) Reclassification - Where waters are determined to have achieved higher uses than those assigned in present classifications, they will be reclassified (upgraded) to incorporate the attained higher uses. The State's ongoing monitoring, surveillance, and reclassification activities identify those waterbodies where water quality exceeds presently assigned criteria and where uses attained are higher than those provided by present classifications. Such waters will be proposed for reclassification in the State's trienniel water quality standards review process. For example, fish propagation waters, class "C", could be upgraded for trout habitat, "C(T)", or trout spawning, "C(TS)".

(c) SEQR - This regulatory process introduces the consideration of environmental factors into the early stages of actions that are directly undertaken, funded, or approved by State agencies. The approval of a SPDES permit is an action subject to SEQR. If, through the SEQR process, it is determined that a proposed action may have a significant effect on the environment, then a draft Environmental Impact Statement (EIS) is prepared to explore ways to minimize adverse environmental effects or identify a potentially less damaging environmental alternative. This could involve the imposition of more stringent or different types of permit conditions.

Delaware Surface Water Quality Standards

Complete Standards Regulation:
http://regulations.delaware.gov/AdminCode/title7/7000/7400/7401.shtml

Antidegradation Policy and Procedures:

http://www.dnrec.delaware.gov/swc/wa/Documents/antidegp.pdf

Excerpt: Waters of Exceptional Recreational or Ecological Significance (ERES Waters)

Note: Several of Delaware's tributaries to the Chesapeake Bay are ERES waterbodies. They include the Marshyhope Creek, Gum Branch, Gravelly Branch, Deep Creek, Broad Creek, Wicomico River, and the Nanticoke River. The Nanticoke River drains Delaware's largest watershed.

5.0 Antidegradation and ERES Waters Policies

5.1 Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected. Degradation of water quality in such a manner that results in reduced number, quality, or river or stream mileage of existing uses shall be prohibited. Degradation shall be defined for the purposes of this section as a statistically significant reduction, accounting for natural variations, in biological, chemical, or habitat quality as measured or predicted using appropriate assessment protocols.

5.2 Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected. In the case of waters of exceptional recreational or ecological significance, existing quality shall be maintained or enhanced. Limited degradation may be allowed if the Department finds, after full satisfaction of public participation provisions of 7 **Del.C.** Sections 6004 and 6006 and the intergovernmental coordination provisions of the State's continuing planning process as required in 40 CFR Part 130, that allowing lower water quality is necessary to accommodate important social or economic development, or would result in a substantial net environmental or public health benefit, in the area in which the waters are located. In allowing such degradation or lower water quality, the Department shall assure maintenance of water quality adequate for full protection of existing uses. Further, the Department shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

5.3 Where high quality waters constitute an outstanding National resource, such as waters of National parks and wildlife refuges, existing quality shall be maintained and protected.

5.4 In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Water Quality Act of 1987.

5.5 The hearing requirement imposed by Subsections 5.2 above shall not be construed to impose a requirement for an additional public hearing where such a hearing is otherwise held pursuant to law, provided the requirements of this section are hereby met.

5.6 Criteria for Waters of Exceptional Recreational or Ecological Significance (ERES Waters)

5.6.1 General Policy

5.6.1.1 Designated ERES waters shall be accorded a level of protection and monitoring in excess of that provided most other waters of the State. These waters are recognized as special natural assets of the State, and must be protected and enhanced for the benefit of present and future generations of Delawareans.

5.6.1.2 ERES waters shall be restored, to the maximum extent practicable, to their natural condition. To this end, the Department shall, through adoption of a pollution control strategy for each ERES stream basin, take appropriate action to cause the systematic control, reduction, or removal of existing pollution sources, and the diversion of new pollution sources, away from ERES waters.

5.6.1.3 Discharges to ERES waters shall be avoided to the maximum extent practicable. In order to be permitted, a discharge must be the least environmentally damaging practicable alternative.

5.6.1.4 Prior to any public notice for a discharge permit required pursuant to 7 **Del.C.** Ch. 60, the Department shall make a determination that potential impacts have been avoided to the maximum extent practicable, and that remaining unavoidable impacts will be minimized to the extent appropriate and practicable. Findings shall be based upon appropriate factual determinations, evaluations, and tests with special emphasis on the persistence and permanence of the impacts. Under this provision impacts considered individually or collectively include:

5.6.1.4.1 Impacts of pollutants on human health and welfare;

5.6.1.4.2 Impacts of pollutants on life stages of aquatic life and other wildlife dependent on aquatic ecosystems including, but not limited to, the transfer, concentration, and spread of pollutants or their by-products through biological, physical, and chemical processes;

5.6.1.4.3 Impacts of pollutants on aquatic ecosystem diversity, productivity, and stability. Such impacts may include, but are not limited to, loss of fish and wildlife habitat or loss of the capacity of a wetland to assimilate nutrients, purify water, or reduce wave energy; or

5.6.1.4.4 Impacts on recreational, aesthetic, and economic values.

5.6.1.5 Any applicant for a discharge permit required pursuant to 7 **Del.C.** Ch. 60 shall provide to the Department, as part of a complete application, a resource assessment tailored to the site performed by qualified professionals. Such assessments shall fully consider ecological functions and values in light of the policies set forth in these standards. Consideration shall be given to:

5.6.1.5.1 Potential impacts on physical and chemical characteristics of the aquatic ecosystems which shall include, but not be limited to, substrates, substrate particulates/turbidity, water, current patterns, water circulation, normal water fluctuations, and salinity gradients;

5.6.1.5.2 Potential impacts on biological characteristics of the aquatic ecosystem which shall include, but not be limited to, fish, crustaceans, mollusks and other organisms in the food web, other wildlife, and threatened or endangered species; and

5.6.1.5.3 Potential effects on human use characteristics which shall include, but not be limited to, water supplies, recreational and commercial fisheries, water related recreation, aesthetics, parks, research sites, wildlife areas or public access areas.

5.6.2 General Provisions

5.6.2.1 In cases where natural conditions prevent attainment of applicable fresh or marine dissolved oxygen criteria, reduction in dissolved oxygen levels as a result of human activities shall be prohibited.

5.6.2.2 All point, and human induced nonpoint sources subject to control through use of best management practices or otherwise, shall be required to remove nutrients to the extent necessary to prevent excessive growth of photosynthetic organisms.

5.6.2.3 All point, and human induced nonpoint sources subject to control through use of best management practices or otherwise, shall be required to remove particulate matter to the extent necessary to minimize turbidity.

5.6.2.4 ERES waters shall not exhibit toxicity within aquatic habitats commonly used by native or migratory aquatic, terrestrial, and avian species. Such habitats include, but may not be limited to, spawning sites, nursery areas, forage areas, and migratory pathways.

5.6.2.5 ERES standards shall not apply in excavated waters. All other appropriate criteria shall remain in force for these waters.

5.6.2.6 The ERES criteria set forth in Section 5.6 supplement all other applicable requirements of these standards for ERES waters. Nothing in Section 5.6 relieves or reduces the obligation of any person to comply with other requirements of these Standards, federal or state laws and regulations.

5.6.3 Pollution Prevention

5.6.3.1 Existing Sources: For the purposes of this Section, an existing source shall be defined as a discharge for which a permit has been issued by the Department pursuant to 7 Del. Code Chapter 60 prior to January 1, 1991. In the case of a waterbody designated as ERES waters pursuant to Section 3 of the Standards, the Department shall not issue or reissue a permit for an existing source unless the applicant demonstrates a utilization of all economically feasible and reasonably available waste minimization practices and technologies, and the lack of feasible alternative production processes and disposal options.

5.6.3.2 The provisions of Subsections 5.6.1.4, 5.6.1.5, and 5.6.3.1 shall apply to existing sources on January 1, 1996, or upon adoption of a Pollution Control Strategy as provided in Section 5.6.3.5, whichever occurs first. In either event, the provisions of Section 5.6, including all requirements of the Pollution Control Strategy shall apply to existing sources.

5.6.3.3 Increased or New Sources: For the purposes of Section 5.6, new sources are those discharges for which a permit has not been issued pursuant to 7 Del. Code Chapter 60 prior to January 1, 1991, and increased sources are those discharges for which there is an increase in the

mass loading of any pollutant of concern from any existing source. For the purposes of Section 5.6, pollutants of concern are the following: oxygen demanding substances (as may be measured by BOD and COD), nitrogen, phosphorous, bacteria, heat, and total suspended solids. In the case of any waterbody designated as ERES waters pursuant to Section 3 of the Standards, the Department shall not issue or reissue a permit pursuant to 7 Del. Code Chapter 60 that allows an increase in or new source of pollutant loadings of pollutants of concern unless the applicant demonstrates:

5.6.3.3.1 A need to discharge based upon a showing of the full utilization of measures, processes, methods, systems or techniques to eliminate the discharge altogether or minimize waste loadings through process changes, substitution of materials, enclosure of systems or other modifications. This can be demonstrated through the full utilization of available waste minimization practices and technologies and the lack of feasible alternative production processes and disposal options; and

5.6.3.3.2 That a proposed new discharge or any increase in loading of pollutants of concern of an existing discharge is consistent with the Pollution Control Strategy for the basin. Prior to adoption of a Pollution Control Strategy for a stream basin no increase in loadings of pollutants of concern shall be allowed to the stream basin from a surface water discharger unless the Secretary determines that:

5.6.3.3.2.1 Such discharger offsets the increased surface water discharge of pollutants of concern within the stream basin to the maximum extent practicable in an acceptable manner;

5.6.3.3.2.2 The increased loadings of pollutants of concern are necessary to prevent a substantial adverse economic or social impact at the community or regional level, and

5.6.3.2.2.3 Water quality will be maintained to fully protect existing uses.

5.6.3.4 Pollution Control Strategy

5.6.3.4.1 For each stream basin designated as ERES waters pursuant to Section 3 of these standards, the Department shall develop a pollution control strategy. The strategy shall provide for the implementation of best management practices established pursuant to Subsection 5.6.3.5 of this section and shall include such additional requirements, measures, and practices as are necessary to:

5.6.3.4.1.1 Prevent the violation of water quality standards;

5.6.3.4.1.2 Protect all resources in the stream basin in a manner that allows for natural conditions to be maintained or restored; and

5.6.3.4.1.3 Assure the protection and propagation of a balanced, indigenous population of fish, shellfish, aquatic vegetation, and wildlife, and provide for recreational activities in and on the water.

5.6.3.4.2 The strategy pursuant to this subsection shall, at a minimum:

5.6.3.4.2.1 Provide an assessment of the nature, degree, and extent of pollution to waters within such stream basin, in terms of point source and non-point source contribution;

5.6.3.4.2.2 Identify the aspects of the stream basin which are important, unique, or sensitive from a recreational or ecological perspective;

5.6.3.4.2.3 Establish such additional indicators and criteria that satisfy the general policy and provisions established for such stream basins;

5.6.3.4.2.4 Identify the means by which ERES standards will be achieved;

5.6.3.4.2.5 Delineate, where appropriate, the specific point source effluent limits, best management practices, and other controls that will be used to achieve water quality standards; and

5.6.3.4.2.6 Indicate changes to be made to state plans for control of water pollution or resource management to assure implementation of the strategy.

5.6.3.4.3 The Department shall assure the opportunity for public participation in the development of the strategy required pursuant to this subsection and shall provide for public review and comment on the strategy in accordance with 7 **Del.C.** 6010.

5.6.3.4.4 The Department may, to the extent it deems appropriate, provide technical assistance to local governments in developing and implementing the strategy required pursuant to this subsection.

5.6.3.4.5 The Department shall, to the extent it deems appropriate, pursue and coordinate implementation of any strategy developed pursuant to this subsection through priority application of its resources to ERES waters through its regulatory and non-regulatory programs.

5.6.3.4.6 The Department may, in accordance with 7 **Del.C.** 6010, adopt and require the use of specific combinations of methods, practices, and technologies which it deems to be most effective for controlling, reducing, or removing waste loadings to ERES waters. Such requirements shall be based upon the application of good engineering and environmental science practices and principles, achieve a high degree of reliability, and be appropriate for the categories of activity.

5.6.3.5 Best Management Practices

The Department may adopt, pursuant to 7 **Del.C.** 6010, best management practices for selected sources of pollution to ERES waters. Best management practices identified by the Department pursuant to this subsection shall provide a standard for the control of the addition of pollutants which reflects the greatest degree of pollutant reduction achievable including, where practicable, a standard requiring no discharge of pollutants.

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