

SPECIAL PROTECTION WATERSHEDS



Source Unknown

Policy

The Department is legally required to protect the existing uses of all surface waters, and the existing quality of HQ and EV Waters. Existing uses are water uses attained in the water body on or after November 28, 1975. Existing use protection includes protection of threatened and endangered species and their habitat in or on a surface water. For an earth disturbance activity that requires a permit under 25 Pa. Code Chapter 102, where a receiving surface water of this Commonwealth is classified as HQ or EV under 25 Pa. Code Chapter 93, the person proposing the earth disturbance activity is required to use a nondischarge alternative for both the E&S and PCSM BMPs that are cost-effective and environmentally sound when compared with the cost of the proposed discharge. If a nondischarge alternative is not cost-effective and environmentally sound, the person should use ABACT BMPs and assure that any discharge maintains and protects the existing quality of receiving surface waters and protects existing baseflow. In HQ waters only, DEP may allow a reduction in water quality if DEP finds, after satisfaction of intergovernmental coordination and public participation requirements, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In addition, DEP will assure that cost-effective and reasonable best management practices for nonpoint source control in HQ and EV waters are achieved.

Antidegradation

Maintaining and protecting existing water quality for HQ waters, EV waters, and EV wetlands and protecting designated and existing uses for all surface waters is critical. The performance standards in 25 Pa. Code § 93.4c(a) and (b) (relating to implementation of antidegradation requirements), should be met by following the processes set forth in 25 Pa. Code §§ 102.4(b)(6) and 102.8(h). The Antidegradation Analysis outlines that process.

NONDISCHARGE ALTERNATIVES

Earth disturbance activities within special protection watersheds are required to implement cost-effective and environmentally sound nondischarge alternatives unless nondischarge alternatives do not exist for the project. These alternatives shall be designed to:

- Minimize or eliminate accelerated erosion and sedimentation during the earth disturbance activity
- Achieve no net change from pre-development to post-development volume, rate and concentration of pollutants in stormwater runoff up to and including the 2-year/24-hour storm when compared to the stormwater rate, volume and quality prior to the earth disturbance activities
- Protect and maintain existing water quality of the receiving surface waters of this Commonwealth
- Preserve existing baseflow

Nondischarge alternatives for E&S Plans include, but are not necessarily limited to:

1. Alternative Siting
 - a. Alternative location of project - alternate location for the proposed project, including locating the project in other non-Special Protection watersheds.
 - b. Alternative configuration - designing the project, including the use of Low Impact Development (LID) and other measures in the layout of the project, to maximize the use of measures and techniques to protect and maintain existing quality of the receiving surface waters and preserve existing baseflow.
 - c. Alternative location of discharge - conveying any discharge from the project to another non-Special Protection watershed while assuring the maintenance and protection of the existing quality of receiving surface waters and the preservation of existing baseflow.
2. Limiting Disturbed Area - keeping all earth disturbance activities to the minimum required for safe and efficient completion of the project
3. Limiting Extent and Duration of the Disturbance
 - a. Staging the earth disturbance so that not all areas of a project site are disturbed at once
 - b. Keeping current with interim and final stabilization requirements, such as seeding and mulching, blanketing, or otherwise stabilizing sub-areas as they achieve final grade
4. A riparian forest buffer meeting the requirements of 25 Pa. Code §102.14, when included in the E&S Plan or PCSM Plan meeting the other requirements of Chapter 102, will satisfy 25 Pa. Code §§ 102.4(b)(6) and 102.8(h), unless data or information provided or available to the Department during the permit application or authorization review process shows that the proposed earth disturbance activity will degrade water quality.
5. Any combination of cost-effective and environmentally sound Best Management Practices in a "treatment train" that collectively eliminate the net change in stormwater volume, rate and quality for storm events up to and including the 2-year/24-hour storm when compared to the stormwater rate, volume and quality prior to the earth disturbance activities to maintain and protect the existing quality of the receiving surface waters of this Commonwealth.

ANTIDEGRADATION BEST AVAILABLE COMBINATION OF TECHNOLOGIES (ABACT)

In circumstances where a net change in stormwater runoff rate, volume or quality cannot be avoided an applicant should use environmentally sound and cost-effective ABACT BMPs in the E&S Plan and PCSM Plan to demonstrate that any change in stormwater runoff will maintain and protect the existing quality and water uses of receiving surface waters and preserve existing baseflow. Environmentally sound ABACT BMPs should take into consideration factors such as sensitivity of stream uses, including the timing of the discharge and the temperature of the discharge; transitory effects on aquatic organisms; the critical life stages of aquatic life; sensitivity of groundwater uses in the area; secondary

impacts, including suitability of geology or site conditions; management practice reliability; potential for spills and management practice failures; and operation and maintenance considerations.

A person proposing to conduct earth disturbance activities in a Special Protection Watershed must maintain and protect the existing quality of receiving surface waters and preserve existing baseflow. BMPs not listed below may be considered for use as ABACT, but it is the responsibility of the applicant to demonstrate that the proposed alternative BMPs will protect water quality and baseflow at least as well as those listed. In HQ waters only, a person may demonstrate justification that lowering the water quality in a receiving surface water is necessary to accommodate important economic or social development in the area in which the waters are located in accordance with the regulation at 25 Pa. Code § 93.4c(b)(1)(iii) and Chapter 10 of the Water Quality Antidegradation Implementation Guidance Manual (DEP Document ID No. 391-0300-002). This document may be accessed at <http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-47704/391-0300-002.pdf>. **NOTE: Social and Economic Justification is not acceptable for projects located in EV watersheds including projects which discharge to EV wetlands.**

ABACT BMPs for E&S Plans

The following BMPs may, on a case by case basis, be considered ABACT for E&S Plan purposes where individually or collectively they manage the difference in the net change in stormwater volume, rate, and quality for storm events up to and including the 2-year/24-hour storm when compared to the stormwater rate, volume and quality prior to the earth disturbance activities to maintain and protect the existing quality of the receiving surface waters of this Commonwealth:

Site Layout

1. Preserve Riparian buffers (min. 150 ft) wherever possible.
2. Preserve Vegetative Filter Strips wherever possible
3. Preserve Natural Watercourses wherever possible
4. Minimize cuts and fills

Site Access

1. Use Wash Racks on Rock Construction Entrances
2. Avoid Stream and Wetland Crossings wherever possible

Sediment Barriers

1. Minimize use of rock and filter fabric type BMPs and maximize use of compost BMPs
2. 6" Compost layer securely anchored on top of filter stone on Rock Filters and on Stone Inlet Protection

Channels

1. Temporary Channels designed to convey the peak discharge from a 5-yr/1-hr storm
2. Suitable protective lining provided for all channels
3. Minimize use of Riprap and Maximize use of Vegetative Linings

Sediment Basins

1. Principal Spillways
 - a. Designed to Skim water from the top 6 inches of the Dewatering Zone, or
 - b. Designed to provide Permanent Pools with 18" minimum depth
2. Minimum Flow Length to Width Ratio 4:1
3. Dewatering Zone dewateres in no less than 4 days and no more than 7 days when at full capacity

4. Sediment Forebay designed according to the standards described in Chapter 6 of DEP's Pennsylvania Stormwater Best Practices Manual
5. Silt Curtain installed between inflow(s) and principal spillway
6. Deepened Storage Zone
7. Compost layer around filter stone of dry basin riser and/or sediment storage dewatering facility
8. Use of impounded water for on-site dust control or irrigation
9. Flocculants

Sediment Traps

1. 4:1 Flow Length to Width Ratio
2. Minimum 6" Compost Layer securely anchored on top of filter stone of embankment spillways
3. Skimmer Dewatering
4. Silt Curtain installed between inflow(s) and principal spillway
5. Deepened Storage Zone
6. Compost layer around filter stone of dry basin riser and/or sediment storage dewatering facility
7. Use of impounded water for on-site dust control or irrigation
8. Flocculants

Stabilization

1. Immediately stabilize disturbed areas upon completion or temporary cessation of earth disturbance activity
2. Use of anionic PAM to stabilize exposed soils having high clay content
3. Blanket disturbed areas within 50 feet of a receiving surface water and on slopes 3H:1V or steeper.
4. Plant trees along proposed permanent channels

Flocculants

1. Where it can be shown that the use of flocculants can help to meet effluent standards, and that the use of such flocculants, consistent with the manufacturer's recommendations, does not in itself pose a threat to water quality, their use can be approved on a case-by-case basis.