RULES AND REGULATIONS

Title 25—ENVIRONMENTAL PROTECTION

ENVIRONMENTAL QUALITY BOARD

[25 PA. CODE CH. 102]

Erosion and Sediment Control and Stormwater Management

The Environmental Quality Board (Board) amends Chapter 102 (relating to erosion and sediment control and stormwater management). The final-form rulemaking incorporates the Federal Clean Water Act "Phase II" National Pollutant Discharge Elimination System (NPDES) permit requirements for stormwater discharges associated with construction activities, codifies post construction stormwater management (PCSM) requirements, including long-term operation and maintenance requirements of PCSM best management practices (BMPs), include specific antidegradation implementation provisions, updates agricultural planning and implementation requirements, update erosion and sediment (E&S) control requirements, and establishes riparian buffer and riparian forest buffer provisions.

The significant revisions to the final-form rulemaking in response to comments include the following: the removal of the proposed permit-by-rule, which was opposed as drafted by most commentators, including the United States Environmental Protection Agency (EPA); the addition of exemptions and waivers from the mandatory riparian buffer requirements, as requested by various sectors of the regulated community; and the addition of grandfathering provision for NPDES permit renewals regarding PCSM as requested by the builders.

This order was adopted by the Board at its meeting of May 17, 2010.

A. *Effective Date*

This final-form rulemaking will go into effect November 19, 2010.

B. *Contact Persons*

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C. *Statutory Authority*

The final-form rulemaking is being made under the authority of sections 5 and 402 of The Clean Streams Law (act) (35 P. S. §§ 691.5 and 691.402), which authorize the Department and the Board to formulate, adopt and promulgate rules and regulations that are necessary to implement the provisions of the act; section 1917-A of The Administrative Code of 1929 (71 P. S. § 510-17), which authorizes the Department to prevent the occurrence of a nuisance and requires the Department to protect the people of this Commonwealth from unsanitary conditions and other nuisances, including any condition declared to be a nuisance by any law administered by the Department; section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20), which authorizes the Board to promulgate rules and regulations that may be determined by the Board to be for the proper performance of the work of the Department; and section 11(2) of the Conservation District Law (3 P. S. § 859(2)). Specifically, under these authorities, the Department and the Board are authorized to adopt regulations that will protect, maintain, reclaim and restore waters of this Commonwealth. Under these authorities, Chapter 102 regulates accelerated erosion, sedimentation and stormwater runoff regarding earth disturbance activities. Specifically, accelerated erosion and sedimentation must be minimized during earth disturbance activities and the associated change in the volume, rate and quality of post construction stormwater runoff must be controlled to prevent pollution and protect, maintain, reclaim and restore waters of this Commonwealth.

D. *Background and Purpose of the Final-Form Rulemaking*

The purpose of this final-form rulemaking is to amend the existing E&S control regulations in Chapter 102. Since 1972, earth disturbance activities regarding agricultural plowing and tilling, as well as nonagricultural earth disturbance activities have been regulated under Chapter 102 by requiring persons to develop, implement and maintain BMPs. These regulations were last amended in 2000. The major amendments incorporate the Federal Clean Water Act "Phase II" NPDES permit requirements for stormwater discharges associated with construction activities, codify PCSM requirements, including long-term operation and maintenance requirements of PCSM BMPs, include specific antidegradation implementation provisions, update agricultural planning and implementation requirements, update E&S control requirements and establish riparian buffer and riparian forest buffer provisions. Additional revisions were made to clarify requirements and address identified gaps in regulatory authority important to protecting the waters of this Commonwealth.

Public and advisory committee participation played a substantial role in shaping the final form of this final-form rulemaking. During the 90-day public comment period, the Board heard from over 1,300 commentators. This includes citizens (86%), environmental groups, nongovernmental groups and academia (3%), industry (8%), government (Federal, State agencies, municipalities and conservation districts (CD)) (3%), State legislators (31 legislators from the House and Senate) and the Independent Regulatory Review Commission (IRRC).

After review of the comments, the Department met with the legislative committees, numerous stakeholder representatives, the Department of Transportation (DOT), the Department of Conservation and Natural Resources and various technical experts. The Department met with the Agricultural Advisory Board on February 17, 2010, to summarize the revisions being considered for final-form rulemaking. The Department also met with the Water Resources Advisory Committee (WRAC) on February 19, 2010, and again on March 17, 2010, to present the draft final-form rulemaking. After extensive discussion, WRAC

voted to approve the final-form rulemaking subject to the Department clarifying several provisions of the final-form rulemaking.

In response to comments, the input from advisories committees and IRRC, the changes to the final-form rulemaking include revisions to the following area: 1) definitions; 2) agriculture; 3) permit fees; 4) PCSM operation and maintenance; 5) antidegradation implementation; 6) riparian buffer requirements; and 7) permit-by-rule. Specifically, in § 102.1 (relating to definitions), several definitions were revised or deleted; the agricultural provisions in § 102.4(a) (relating to erosion and sediment control requirements) were revised and clarified; the permit fee was restructured to include a administrative fee and a fee based on acreage was added to § 102.6 (relating to permit applications and fees); PCSM provisions in § 102.8 (relating to PCSM requirements) regarding long-term operation and maintenance were consolidated into subsection (m) and clarified; § 102.14 (relating to riparian buffer requirements) was reorganized and refined, subsection (d) was added to address exemptions, subsection (e) was added to address antidegradation presumption and offset and trading; and proposed § 102.15 regarding permit-by-rule was withdrawn.

E. *Summary of Comments and Responses on the Proposed Rulemaking and Changes to the Proposed Rulemaking*

In response to recommendations from commentators, several changes were made in the final-form rulemaking. A summary of the comments received and the changes made are listed by section and described as follows.

§ 102.1. Definitions.

The following definitions were added to § 102.1 in the proposed rulemaking and retained in the final-form rulemaking: "Act 167," "Agricultural operation," "Along," "Intermittent stream," "Normal pool elevation," "Oil and gas activities," "Perennial stream," "Pollutant," "Post construction stormwater," "PCSM," "Stormwater," "Surface waters" and "Top of streambank." The definition of "Riparian buffer," not included in the proposed rulemaking, was added to the final-form rulemaking.

The following existing definitions in § 102.1 were amended in the proposed rulemaking and retained in the final-form rulemaking: "Agricultural plowing or tilling activity," "BMPs—Best management practices," "County conservation district" was changed to "Conservation district," "Conservation Plan," "Earth disturbance activity," "Erosion and Sediment Control Permit" was changed to "E&S Permit—Erosion and Sediment Control Permit," "Erosion and Sediment Control Plan" was changed to "E&S Plan—Erosion and Sediment Control Plan," "Municipality," "NOI—Notice of Intent," "NPDES—National Pollutant Discharge Elimination System," "NPDES Permit for Stormwater Discharges Associated With Construction Activities," "Operator," "Person," "Project site," "Road maintenance activities," "Sediment" and "Stabilization."

The following existing definitions were added or modified in proposed rulemaking and were further amended in the final-form rulemaking: "ABACT—Antidegradation best available combination of technologies," "Animal heavy use area," "Nondischarge alternative," "Notice of termination," "PCSM Plan," "PPC Plan—Preparedness, Prevention and Contingency Plan," "Riparian forest buffer," and "Soil loss tolerance (T)."

The following existing definitions in § 102.1 were deleted in the proposed rulemaking and in the final-form rulemaking: "Collector," "Dewatering zone" and "Diversion."

IRRC questioned the need, reasonableness and clarity of the following definitions: "Agricultural plowing or tilling activity," "Animal heavy use area," BMPs—Best management practices," "Diversion," "E&S Plan—Erosion and Sediment Control Plan," "Intermittent stream," "Licensed professional," "Nondischarge alternative," "Perennial stream," "Point source," "PPC Plan—Preparedness, Prevention and Contingency Plan," "Riparian forest buffer," "Road maintenance activities" and "Surface waters."

The rationale for changes to definitions, as included in the final form rulemaking, is as follows.

The definition of "ABACT—Antidegradation best available combination of technologies" was modified as follows: 1) to include the terms "environmentally sound and cost effective" as used in Chapter 93 (relating to water quality standards); and 2) to more clearly state the comparison of pre- to post earth disturbance activities regarding differences in the stormwater runoff rate, volume and quality. The changes were made based on comments received during the public comment period. The effect of the changes provides more clarity to the antidegradation requirements that apply under this chapter.

The definition of "Agricultural plowing or tilling activity" was modified to clarify that the term "no-till cropping methods" is the practice of planting crops with minimal mechanical tillage. The changes were made based on comments received during the public comment period. The effect of the change is to provide clarity on no-till cropping methods.

The definition of "Animal heavy use area" was modified to clarify that the term does not include entrances, pathways and walkways where animals are housed. The changes were made based on comments received during the public comment period. The effect of the change is to provide clarity on animal heavy use areas.

The definition of "Forest stewardship plan" was deleted in this final-form rulemaking due to public comments.

The definition of "Intermittent stream" was added to the proposed rulemaking and is consistent with the definition currently used in Chapter 92 (relating to National Pollutant Discharge Elimination System permitting, monitoring and compliance). The PA Homebuilders were concerned that drainage ditches or swales that transport water during storm events may be interpreted as intermittent streams. It is not the intent of the Department to treat these storm conveyances as intermittent streams. The definition as written applies to those channels with substrate associated with flowing water. The word "substrate" used in the definition means the area of the stream base on which an aquatic organism lives and is a commonly used term. The language in the proposed rulemaking was retained in the final-form rulemaking.

The definition of "K factor" is not used in the final-form rulemaking and has been deleted from Annex A.

A definition of "Long-term operation and maintenance" has been added in response to comments. The inclusion of this term and definition is necessary because it clarifies that long-term operation is the routine inspection, maintenance, repair or replacement of a BMP to ensure proper function for the duration of time that the BMP is needed.

The definition of "NPDES Permit for Stormwater Discharges Associated With Construction Activities" been modified based on public comments. The amount of disturbed acreage has been changed to 1 acre or more of earth disturbance activities to be consistent with Federal requirements and the permit requirement section of this chapter.

The definition of "Nondischarge alternative" has been modified to more clearly state the comparison of pre- to post earth disturbance activities regarding differences in the stormwater runoff rate, volume and quality, and to be consistent with the "ABACT" definition. The changes were made in response to public comments. The effect of the changes provides more clarity to the antidegradation requirements that apply under this chapter.

The definition of "Road maintenance activities" has been modified in response to comments to include references to railroad right of way maintenance activities and in response to comments requesting clarity regarding what actions and procedures constitute road maintenance activities.

The definition of "Riparian buffer" has been added and the term is defined as a BMP that includes an area of permanent vegetation along surface waters. The Board added the definition of "Riparian buffer" as it relates to amendments made to § 102.14, which provides an alternative to riparian forest buffer implementation in response to public comments.

The definition of "Riparian forest buffer" has been modified to state that it is a type of riparian buffer. This change is in response to amendments made to § 102.14, which now provides an additional alternative to riparian forest buffer implementation in response to public comments.

§ 102.2. Scope and purpose.

The proposed rulemaking expanded this section to reflect the inclusion of PCSM requirements. The language in the proposed rulemaking was retained in the final-form rulemaking. IRRC suggested revisions to this section to clarify the scope of PCSM when the project is restored to preconstruction conditions. Section 102.2 (relating to scope and purpose) in the final-form rulemaking was not revised; however, § 102.8 regarding PCSM was revised in the final-form rulemaking to provide the clarity that IRRC and other commentators suggested.

§ 102.4. Erosion and sediment control requirements.

Subsection (a)—Earth disturbance activities regarding agricultural activities

In the proposed rulemaking, this section was modified to require written E&S Plans for animal heavy use areas that disturb 5,000 square feet (464.5 meters) or more of land, in addition to agricultural plowing or tilling activities of that same size. The final-form rulemaking was modified to clarify that agricultural plowing or tilling activities and animal heavy use areas should be examined as two separate activities in calculating the threshold for the E&S Plan requirement under § 102.4, rather than combining them to determine whether they disturb 5,000 square feet (464.5 meters) or more of land. The Board received comments requesting clarification. IRRC asked the Board to explain the need to regulate animal heavy use areas and the reasonableness of this requirement. The final-form rulemaking was modified to clarify that written E&S Plans are required for both agricultural plowing and tilling activities and animal heavy use areas.

The Board included these provisions to address sediment discharges from animal heavy use areas which are not currently regulated by other existing Department regulations. It is important to retain the animal heavy use area provisions to protect waters of this Commonwealth from continued sediment pollution from these activities. These provisions will also assist the Commonwealth in achieving Chesapeake Bay goals regarding sediment reductions through the requirements imposed in § 102.4.

The Department's 2010 Pennsylvania Integrated Water Quality Monitoring and Assessment Report lists agriculture as the second leading cause of impairment of streams in this Commonwealth. Agricultural animal heavy use areas are a significant source of this sediment and can negatively affect downstream uses. The agricultural E&S Plan is the most appropriate mechanism to address the control of accelerated erosion from these areas.

Comments were received from the Pennsylvania Farm Bureau concerning possible duplicative provisions in Chapter 102 regarding animal heavy use areas and Chapter 83 (relating to State Conservation Commission), regarding animal concentration areas. The Board believes that this final-form rulemaking is complimentary rather than duplicative to the current Chapter 83 nutrient management regulations in that reducing accelerated erosion (sediment) from animal heavy use areas under this chapter will also help to reduce nutrients attached to that sediment which is the focus of the Chapter 83 regulations. Also, the Chapter 83 and Chapter 102 regulations are implemented by the same local agency CDs.

In § 102.4(a)(4), language was added to the proposed rulemaking to include cost-effective and reasonable BMPs in the E&S Plan to minimize accelerated erosion and sedimentation from agricultural plowing or tilling or animal heavy use areas. Also, language was added to the proposed rulemaking to state that the E&S Plan must limit soil loss from accelerated erosion to the soil loss tolerance (T) over the planned crop rotation. The Board received comments that supported implementing BMPs that minimize accelerated erosion and sedimentation for agricultural plowing or tilling activities or animal heavy use areas. The language in the proposed rulemaking was retained in the final-form rulemaking.

The proposed rulemaking also stated in § 102.4(a)(4)(i) that additional BMPs are required when located within 100 feet of a river or perennial or intermittent stream on fields with less than 25% cover. Several commentators requested clarification on the type of cover. Therefore, in response to comments, the type of crop cover for fields with less than 25% cover was clarified in the final-form rulemaking as "plant cover or crop residue" cover.

The proposed rulemaking stated in § 102.4(a)(5) that the E&S Plan must show the location of surface waters, field and property boundaries, structures, animal heavy use areas, roads and crossroads, BMPs and soil maps. The final-form rulemaking was revised to clarify that the E&S Plan must address "surface waters of this Commonwealth." "Waters of this Commonwealth" had been proposed to be deleted; however, the Board received comments that supported using this wording. The existing reference to "waters of this Commonwealth" was retained in the final-form rulemaking as modified by the addition of the word "surface" so that it is clear that the E&S Plan must identify all surface waters of this Commonwealth rather than the more narrow list provided in the definition of "Surface waters." Also, in § 102.4(a)(6) and (7) in

the proposed rulemaking, an implementation schedule was added as well as the ability to utilize a conservation plan that identifies BMPs that minimize accelerated erosion and sedimentation in the place of an E&S Plan. This language was retained in the final-form rulemaking.

Subsection (b)—Earth disturbance activities other than agricultural plowing or tilling or animal heavy use areas

Minor revisions to § 102.4(b)(3) were made from the proposed rulemaking to the final-form rulemaking. The Board received comments stating that many E&S Plans are submitted to the Department and CDs that are administratively incomplete and that time and expense are wasted while permit review staff wait for additional information. The final-form rulemaking has been revised to add language regarding the training and experience of the person preparing the E&S Plan to the size and scope of the project being designed.

Section 102.4(b)(4) in the proposed rulemaking included general guidelines for the planning and implementation of E&S control measures. IRRC and several commentators expressed concern about the "protect, maintain, reclaim and restore" language and recommended amending § 102.4(b)(4)(v). In response to comments, the Board removed this subparagraph from the final-form rulemaking. Amending this section does not relieve a person's responsibility to utilize BMPs that will "protect, maintain, reclaim and restore," as this provision is also in the existing definition of "BMPs—Best management practices" in §§ 102.1 and 102.2(b) and § 102.11(a)(1) (relating to general requirements).

In § 102.4(b)(5)(x), the Board revised the requirement from the current regulation to the proposed in response to industry concerns of the term "measurable rainfall." The revision was made to replace "measurable rainfall event" with "stormwater event." IRRC and other commentators stated that "measurable rainfall" is more easily understood and requested an explanation for the amendment. The Board utilized the term "stormwater event" because it provides clarity for situations where there is minimal precipitation or rainfall that does not result in runoff. The key word in the definition of "Stormwater" is runoff. The intent of the Board is to capture any event that generates runoff. The term "measurable rainfall" failed to include situations when there was no immediate or recent precipitation, but warmer temperatures caused melting of snow which results in a runoff condition.

Identification of potential thermal impacts that may be created or result from earth disturbance activity was added to § 102.4(b)(5)(xiii) in the proposed rulemaking. IRRC recommended that the regulation clearly state what type of evaluation of thermal impacts would be acceptable. Commentators requested additional guidance regarding this evaluation. In response to comments, this subparagraph has been revised and clarified in the final-form rulemaking. The Department will also provide additional guidance through outreach, trainings and the Erosion and Sediment Control Manual Document Number 363-2134-008. Because each site is different, the design professional needs to have some flexibility to develop an appropriate response to thermal impact concerns. In addition to identifying the potential for thermal impacts, appropriate BMPs should be designed to avoid, minimize or mitigate those impacts.

A requirement for the E&S Plan to be consistent with a PCSM Plan was added to § 102.4(b)(5)(xiv) in the proposed rulemaking. The language in the proposed rulemaking was retained in the final-form rulemaking. The intent of this requirement is for the BMPs implemented as part of the E&S Plan during the temporary construction phase to easily transition with minimal disturbance into the BMPs that will be part of the PCSM Plan. Likewise, the E&S Plan should reflect consideration of the PCSM Plan. For example, areas to be utilized for infiltration should be protected from compaction during construction, which should be noted in the E&S Plan.

A provision for identifying existing and proposed riparian forest buffers in the E&S Plan was added to § 102.4(b)(5)(xv) in the proposed rulemaking. The Board has made minor modifications in response to comments.

Section 102.4(b)(6) of the proposed rulemaking included antidegradation implementation provisions. This final-form rulemaking specifically incorporates antidegradation implementation requirements as a result of several Environmental Hearing Board (EHB) cases. The antidegradation provisions primarily in revised §§ 102.4(b)(6) and 102.8(h) and in the definitions of "ABACT" and "Nondischarge alternative" in § 102.1.

By way of background regarding inclusion of antidegradation implementation requirements, the Clean Water Act (33 U.S.C.A. §§ 1251—1376) requires states to develop and implement "antidegradation" requirements, which are found in Chapter 93. In the EHB decisions in *Zlomsowitch v. DEP*, 2004 EHB 756, *Blue Mountain Preservation Association v. DEP and Alpine Rose Resorts*, 2006 EHB 589, and *Crum Creek Neighbors v. DEP and Pulte Homes of PA, LP*, EHB Docket No. 2007-287-L, October 22, 2009 Adjudication, the EHB overturned the Department's current implementation of antidegradation requirements in the NPDES permits issued under this chapter. The cases confirm that Chapter 102 did not currently provide an adequate regulatory framework for the compliance with Chapter 93.

Under the current regulations, the Department and regulated community have unsuccessfully tried to reconcile the Chapter 102 regulatory program with antidegradation implementation requirements and specifically the alternatives analysis process in § 93.4c(b) (relating to implementation of antidegradation requirements). Section 93.4c(b) utilizes language and approaches based upon NPDES programs that regulate continuous flow such as traditional industrial discharges flowing out of pipes, whereas the discharges regulated under Chapter 102 involve wet weather driven, primarily overland diffuse runoff that is controlled with BMPs rather than numeric effluent limitations. Further, the § 93.4c(b) stated preference for "nondischarge" alternatives is confusing and when applied literally in the stormwater context is problematic. A literal read of this section could require no discharge from a site which would in fact be inimical to the health of waters of this Commonwealth. Simply put, there are existing stormwater discharges that occur at sites before any earth disturbance activity occurs that are the basis of the hydrologic cycle on which stream baseflow and quality is dependent. To protect and maintain waters of this Commonwealth, this preexisting stormwater discharge will be maintained. The cornerstone of antidegradation then in this program is the preservation of that existing stormwater regime. The Department has therefore included specific antidegradation implementation provisions in the proposed rulemaking to provide the missing regulatory framework that is needed for appropriate evaluation of compliance with the antidegradation requirements for this program.

A number of members of the regulated community specifically requested that the Board clarify the antidegradation implementation provisions in the final-form rulemaking to more definitively link the antidegradation implementation requirements included in this final-form rulemaking with Chapter 93 and to provide a framework that can be relied upon to demonstrate compliance with antidegradation requirements therein. The revisions in the final-form rulemaking to these sections have provided this additional clarification.

An important aspect of the antidegradation provisions included in this final-form rulemaking and regarding § 102.4(b)(6) are the definitions of "ABACT" and "Nondischarge alternative." These terms were defined in response to suggestions of the members of WRAC during the development of the regulation prior to the proposed rulemaking. These terms are defined specifically for the purposes of this chapter and articulate the performance standards to be used for purposes of the comparison of preconstruction stormwater discharges to post construction stormwater discharges. Importantly, the nondischarge alternative in this program does not equal to discharge, but rather equals no net change from preconstruction discharge volume, rate and water quality, and recognizes the need to preserve the preexisting stormwater discharges to protect and maintain waters of this Commonwealth. The 2-year/24-hour storm event is the storm event to be utilized to demonstrate antidegradation compliance. See the discussion regarding this storm event in response to § 102.8.

The new Federal effluent limitation guidelines (ELG) also references the 2-year/24-hour event as the design storm. In addition, the key components of the EPA's ELG are non-numeric effluent limitations in the form of BMPs that require persons engaged in construction activities to minimize discharges of pollutants in stormwater discharges using appropriate E&S controls and stormwater control measures that reflect best engineering practices.

A requirement was added in § 102.4(b)(8) in the proposed rulemaking that stated that the E&S Plan, inspection reports and monitoring reports should be available for review at the project site. IRRC asked for an explanation of why records are needed onsite and to consider allowing electronic records offsite. The language in the proposed rulemaking was retained in the final-form rulemaking. Further clarification has been provided in the comment and response document that inspection reports and monitoring records may be maintained electronically as long as a copy can be produced when requested by the Department or the CD. Records are needed onsite to implement Federal requirements of routine monitoring and reporting. Also, the Department must be able to determine that the permittee is in compliance.

§ 102.5. Permit requirements.

In the proposed rulemaking, § 102.5(a)(1) (relating to permit requirements) included language requiring an NPDES Permit for Stormwater Discharges Associated With Construction Activities for certain earth disturbance activities between 1 acre and 5 acres with a point source discharge to a surface water of this Commonwealth. Section 102.5(a)(2) of the proposed rulemaking included language that retained the requirement for an NPDES Permit for Stormwater Discharges Associated With Construction Activities for certain earth disturbance activities 5 acres or greater. EPA Region 3 required, and several commentators requested, that this subsection be revised to require an NPDES permit for any earth disturbance activity that disturbs 1 acre or greater, regardless of whether the activity resulted in a point source discharge to a surface water.

In § 102.5(a)(3) of the proposed rulemaking, the Board added language regarding compliance with the antidegradation requirements in Chapter 93 for projects that require NPDES permit coverage when the earth disturbance activity is proposed to be located in a special protection watershed. In response to public comments and comments from IRRC regarding confusion by the building industry over whether a permit is required and if so what type of permit is required, the Board revised the final-form rulemaking by identifying that the specified earth disturbance activities disturbing 1 acre or more require an NPDES Permit for Stormwater Discharges Associated With Construction Activities, and clarifying that the antidegradation requirements regarding NPDES Permits for Stormwater Discharges Associated With Construction Activities are established in §§ 102.4(b)(6) and 102.8(h). IRRC also questioned why the exemptions at the beginning of subsections (a)(l) and (2) and (d) in the proposed rulemaking do not include the oil and gas related earth disturbance activities. In the comment and response document, the Department noted that oil and gas activities are exempt from NPDES permitting requirements but still must meet State water quality requirements. Section 102.5(c) states that "A person proposing oil and gas activities that involve 5 acres (2 hectares) or more of earth disturbance over the life of the project shall obtain an E&S Permit under this chapter prior to beginning the earth disturbance activity."

In § 102.5(b) of the proposed rulemaking, the Board maintained existing language except for a minor editorial revision. The Board received comments recommending that the permit acreage threshold be reduced to 5 acres for timber harvesting and road maintenance activities and other comments requesting that the Board retain the existing threshold of 25 acres for the same activities. The Board evaluated the comments and determined that the proposed language including the acreage threshold for requiring a permit would be retained.

Section 102.5(c) of the proposed rulemaking maintained existing language but restructured the location of this requirement to § 102.5(g). The proposed language for subsection (c) established the E&S Permit requirement for persons proposing an earth disturbance activity regarding oil and gas development that involves 5 acres or greater of earth disturbance activity. This regulatory requirement is a codification of existing practices and permit requirements in response to the Energy Policy Act of 2005 (42 U.S.C.A. §§ 15801—16524) and the subsequent Federal rule promulgated by the EPA exempting oil and gas activities from NPDES Permits for Stormwater Discharges Associated With Construction Activities. The Board retained the proposed language in the final-form rulemaking.

Section 102.5(d) of the proposed rulemaking clarified that earth disturbance activities, other than earth disturbances regarding agricultural plowing and tilling, animal heavy use areas, timber harvesting or road maintenance activities, and activities requiring permit coverage under previous § 102.5(a)—(c), would require an E&S Permit when there is an earth disturbances of 5 acres or more. The Board retained the proposed language in the final-form rulemaking.

New § 102.5(e) required a preconstruction meeting for activities authorized by a permit under this chapter, unless it is determined by the Department or CD that a

preconstruction meeting is not necessary and the permittee is notified in writing. The proposed subsection also identified specific entities that are required to attend the meeting. Comments from IRRC and other commentators on this subsection recommended clarifications regarding the entities required, time period for the notice, whether Department or CD staff attendance is mandatory and whether this requirement may overload Department staff and delay projects. The Board clarified the final-form rulemaking by adding language that attendance at the preconstruction meeting is required by specific entities that have a role in the design or implementation of the E&S or PCSM Plans. Additional clarification was provided by requiring the permittee to invite the Department or CD to attend the preconstruction meeting and requiring at least 7 days notice of the preconstruction meeting to invited attendees. The proposed language was retained requiring the Department or CD to provide written notice to the permittee that a preconstruction meeting will not be required.

New § 102.5(f) provided that a person conducting earth disturbance activities that requires a permit under this chapter shall ensure implementation and long-term operation and maintenance of a PCSM Plan. The majority of comments received regarding this subsection requested clarification on the responsibility of the permittee for long-term operation and maintenance. IRRC also questioned who specifically is "a person proposing earth disturbance activity." The Board believes that § 102.1 clearly states the definitions of "person" and "earth disturbance activity." In addition, the permittee designates who is responsible for the PCSM BMPs, under § 102.7 (relating to permit termination) and § 102.8(f)(11), "Identification of the persons responsible for long-term operation and maintenance of the PCSM BMPs." IRRC also commented that this provision is vague and potentially unreasonable and cost prohibitive. The Board revised the final-form rulemaking by deleting the reference to the long-term operation and maintenance requirement in this subsection. Additional clarifying language regarding these issues has been consolidated in § 102.8(m) of the revised final-form rulemaking.

Section 102.5(g) of the proposed rulemaking maintained existing language formerly in § 102.5(c), which was moved to § 102.5(g). The majority of comments received regarding this subsection requested clarification on the applicability in relationship with other permits under Chapter 92 and the authorizations needed. The Board has not revised this subsection in the final-form rulemaking. A comprehensive list of Department permits can be provided in guidance. The requirements in this final-form rulemaking are intended to reference both Chapters 92 and 102 when these requirements are included in other Department regulations and permit requirements that are reviewed during the other Department permit application process. As a result, these other Department permits provide sufficient authorization, so a separate authorization under permits identified in this chapter would be duplicative.

New § 102.5(h) specifies that when a person other than the permittee is an operator, the other operator is required to become a copermittee under this chapter. A few commentators made some minor requests for clarification regarding application of this requirement. Revisions were not made in the final-form rulemaking as a result of the comments, but clarification has been provided in the comment and response document.

New § 102.5(i) provides that a separate NPDES Permit for Stormwater Discharges Associated With Construction Activities is not required for activities covered by a Clean Water Act Section 404 dredge and fill permit. IRRC and other commentators supported this provision but requested further clarification on the applicability in context of various scenarios that may occur. EPA Region 3 also requested clarification. As a result, the Department provided clarifying responses to the comments in the comment and response document included as part of this final-form rulemaking. When an activity is authorized under Chapter 404 of the Clean Water Act for example, that activity does not require a separate E&S or NPDES permit for the activity covered by the 404 Permit so long as the project is a single and complete project, includes an E&S Plan meeting the requirements of this chapter and the earth disturbance work does not exceed the footprint of the activities authorized by the 404 Permit. In addition, the E&S Plan would also be approved as part of the 401 Water Quality Certification. Other activities would need E&S or NPDES permit coverage. Revisions to this subsection in the final-form rulemaking were not necessary.

Section 102.5(j) of the proposed rulemaking maintained existing language formerly located in § 102.5(d). The Board received a few comments questioning the permit exemption for agricultural plowing and tilling activities or animal heavy use areas. The Board retained this language in the final-form rulemaking.

Section 102.5(k) of the proposed rulemaking maintained existing language formerly in § 102.5(e). Revisions were not made to the final-form rulemaking.

Section 102.5(l) was added in the final-form rulemaking to identify requirements for a Preparedness, Prevention and Contingency (PPC) Plan, moved from § 102.6(a)(3) of the proposed rulemaking. The Board received comments from IRRC and the public that the PPC Plan requirement was more appropriate to have in this section (as a requirement of the permit) rather than § 102.6, regarding permit applications and fees.

Section 102.5(m) was added in this final-form rulemaking in response to recommendations of commentators. This subsection authorizes the Department to issue general permits (GP) for activities not subject to NPDES requirements and sets forth the process for issuance under this chapter.

§ 102.6. Permit applications and fees.

Section 102.6(a) of the proposed rulemaking added language for this subsection identifying the appropriate permit references, PCSM references, changing in subsection (a)(2) to the program name from the Pennsylvania Natural Diversity Inventory (PNDI) to Pennsylvania Natural Heritage Program (PNHP), and adding subsection (a)(3) referencing requirements to PPC Plans. IRRC and members of the public commented that the Board should explain why this amendment included the reference to PNHP, why PNHP is the best resource for this information and questioning whether the inclusion of the PPC Plan requirement is not appropriate as an application requirement. The inclusion of PNDI, now PNHP, is an existing requirement to which the Board only proposed minor modifications including updating the program name. The Department utilizes PNHP because it is a comprehensive database of resource information that both the public and resource agencies can access for threatened and endangered species and critical habitat for those species. It is the only known database of this type for use in this Commonwealth and is the one recognized by the resource agencies. This is particularly useful for the

regulated community in that they can identify potential species or habitat conflicts that shall be minimized or avoided prior to final plan development and permit application. There were not revisions to § 102.6(a) in the final-form rulemaking and minor revisions were made to the remainder of the subsection in response to comments. Section 102.6(a)(1) in the final-form rulemaking was revised to remove the reference to the permit-by-rule registration of coverage to reflect removal of that section of the regulations in the final-form rulemaking. A minor grammatical revision was made to § 102.6(a)(2). In response to comments regarding § 102.6(a)(3), the proposed rulemaking was revised in the final-form rulemaking by moving the location of this requirement to permit requirements in § 102.5(l).

In § 102.6(b) of the proposed rulemaking, new language was added that identified specific permit fees for the various GPs and individual permits (IP) required under this chapter. Also, language was added that would require the Department to review the adequacy of the fees established at least once every 3 years and report their findings to the Board. Additionally, a reference to the authority of CDs under the Conservation District Law (3 P. S. §§ 849—864) to charge additional fees was added in this subsection. Some of the public comments received by the Board supported the fee increases while other commentators and IRRC indicated that the fees were excessive and recommended that an explanation should be provided on how the fees were calculated and that a tiered approach based on the size of the earth disturbance be established.

In response to the comments received, the Board revised the proposed permit fees in the final-form rulemaking to establish an administrative filing or "base" fee dependent on the type of permit needed ($500 for a GP and $1,500 for an IP) and a tiered fee approach based on acreage ($100 for each disturbed acre). The acreage fee is to be added to the base fee for projects of 1 acre or greater of earth disturbance activity that requires permit coverage. This approach would allow smaller projects to pay a lower fee than larger projects, which can also correspond to the complexity and time investment needed to review the permit application. This fee structure is based upon a cost analysis using estimated program costs for the Department and CDs to implement the program, based upon a review of past permits issued between 2006 and 2008. Amendments to Chapter 92 in 1999 and Chapter 102 in 2000 included modifications to permit fees, but these were administrative filing fees and did not cover cost of program operations. The proposed and final-form rulemakings were the first effort by the Department to cover the Chapter 102 program costs through permit fees. The Department completed an evaluation of program costs and estimated revenue as part of this final-form rulemaking package.

In § 102.6(b)(2) of the proposed rulemaking, language was added that would require the Department to review the adequacy of the fees established at least once every 3 years and report the findings to the Board. Comments received on draft § 102.6(b)(2) questioned what criteria would be used for the evaluation of the fees and requested clarification how the Department will use the criteria to determine the adequacy of the fees. Revisions were not made to the final-form rulemaking. However, clarification is provided in the comment and response document developed for this final-form rulemaking.

Section 102.6(b)(2) was also revised in response to comments from CDs to clarify that the fees in this section are all "administrative" fees. How the fees will be dispersed between the Department and CDs will be outlined in guidance or through the delegation agreements.

In § 102.6(b)(3) of the proposed rulemaking, new language was added that identified that CDs may charge additional fees in accordance with the Conservation District Law. A few public comments were received that requested clarification from the Board on whether the fees are in addition to the fees established in § 102.6(b)(1). The Board confirms that the fees are additional to the fees of the referenced section. The amount of these CD fees may vary between CDs and is based upon the additional costs to the district to implement the previous program requirements and beyond the fee established by the Board. CD authority to charge additional fees under the Conservation District Law is referenced to support this requirement. Revisions were not made to the final-form rulemaking. However, the Board provided clarification in the comment and response document.

Section 102.6(b)(4) was added to the final-form rulemaking in response to recommendations of commentators. This paragraph provides a fee exemption for Federal or State agencies or independent State commissions that shall enter into agreements with the Department and when the agreement identifies that the agency will provide funding to the Department for program support.

Section 102.6(c)(2) of the proposed rulemaking added new language identifying the expectations for a complete application or notice of intent, and what actions the Department or CD would take regarding incomplete submissions. IRRC recommended that a time frame be included for the Department to determine that an application is complete. IRRC also recommend that the regulation should specify what happens if the Department does not meet that time frame. Additionally, in the proposed rulemaking, § 102.6(c)(2) only authorized the Department to make the completeness determination. In their comments, IRRC asked whether this function may also be performed by a CD. The Board amended this section to clarify that CDs do perform this function as well. The Board does not agree that specific time frames for completeness determinations by the Department or CD need to be added to this subsection. In the comment and response document, the Department refers to the money-back guarantee policy and the policy with CDs as part of a delegation agreement. Both of these documents establish time frames for various items during the application review process including administrative completeness, technical and decision reviews. The Board added § 102.6(c) to address an ongoing problem with applicants not responding to requests for additional information and extending the time it takes to make a timely decision on the application. This lack of response has led to applications being open or under review for extensive periods of time. Adding this requirement to the regulation authorizes the Department or CD to close a permit application after 60 days of nonresponse by the applicant. The Board understands that there may be some instances when an applicant may need additional time to provide the requested information.

In response, the final-form rulemaking allows for a request of extension. The Board clarified in the final-form rulemaking that the CDs are also authorized to perform this function.

Section 102.6(c)(3) of the proposed rulemaking included new language identifying that the fees associated with returned or withdrawn applications would not be refunded. In response to public comment, the Board revised

the final-form rulemaking to clarify that this requirement refers to a withdrawn application determination under § 102.6(c)(2).

§ 102.7. Permit termination.

The proposed rulemaking added new language requiring the identification of the person responsible for operation and maintenance of the PCSM BMPs and PCSM Plans and clarified the obligation of the permittee to operate and maintain the PCSM BMPs and PCSM Plan until the Notice of Termination is acknowledged. Commentators requested clarification with regard to the permittees and co-permittees responsibility for long-term operation and maintenance of PCSM BMPs. In addition, IRRC and several commentators recommended that a time limit be added for the Department or CD to respond to the submission of a Notice of Termination. In response to these comments, in the final-form rulemaking, the Board revised this section to clarify that upon permanent site stabilization and installation of BMPs in accordance with E&S and PCSM Plan requirements, the permittee or co-permittee shall submit a Notice of Termination that identifies the person who agreed to be responsible for the long-term operation and maintenance and added a time limit of 30-days for the Department or CD to conduct a final inspection and approve or deny the request for termination of the permit.

§ 102.8. PCSM requirements.

One of the major substantive additions to this chapter in the proposed rulemaking was the inclusion of post construction stormwater discharge requirements that are detailed in § 102.8. The proposed rulemaking established the requirements for PCSM planning utilizing a structure that parallels the E&S planning requirements in § 102.4(b). The provisions in the proposed rulemaking are a codification and refinement of the existing PCSM requirements that the Department has implemented since 2002.

Based upon public comments received, this section has been revised and clarified in the final-form rulemaking. In the final-form rulemaking, the Board added headers for each subsection and clarified requirements for roadways or rail lines, and PCSM implementation for special protection waters. Additionally, in the final-form rulemaking, the Board also consolidated the long-term operation and maintenance requirements into one subsection.

The inclusion of the PCSM requirements in this final-form rulemaking codifies the PCSM requirements the Department has been implementing since 2002 to address EHB decisions discussed as follows and to facilitate implementation of the Federal stormwater construction and Municipal Separate Storm Sewer System (MS4) NPDES requirements regarding PCSM.

Since 2002, the Department has required applicants for NPDES Permits for Discharges Associated With Construction Activities to address post construction stormwater discharges and, in addition to E&S Plans, to develop and implement a PCSM Plan. Since 2002, a PCSM Plan must include information to demonstrate compliance with the antidegradation requirements in Chapter 93, including a comparison of preconstruction stormwater runoff to post construction stormwater runoff of the 2-year/24-hour storm event, and a description of the PCSM BMPs that will be utilized to prevent pollution. See Comprehensive Stormwater Management Policy (DEP No. 392-0300-002). In 2006, the Department finalized the Pennsylvania Stormwater BMP Manual (DEP No. 363-0300-002), which provided technical guidance and standardized methodologies. Section 102.8 codifies the existing specifications and performance standards that have been relied on and proven in the development of PCSM Plans in this Commonwealth since that time. These standards satisfy State law that has evolved through decisions of the EHB and also facilitate compliance with the related Federal NPDES MS4 programs.

This inclusion of PCSM requirements is in part a response to EHB decisions. In 1999, the EHB ruled that "post construction" stormwater was potential pollution which the Department should evaluate along with the stormwater discharges that occur during construction activities. *Valley Creek Coalition v. DEP*, 1999 EHB 935. This holding has been confirmed in subsequent decisions including *Blue Mountain Preservation Association v. DEP and Alpine Rose Resorts*, 2006 EHB 589 and *Crum Creek Neighbors v. DEP and Pulte Homes of PA, LP*, EHB Docket No. 2007-287-L, October 22, 2009 Adjudication. Today, PCSM requirements are an established counterpart to the activities already expressly regulated under this chapter. The amendments regarding PCSM will provide needed regulatory framework and clarity for the administration of, compliance with and the legal evaluation of the PCSM requirements.

Section 102.8(a) in the proposed rulemaking established who is required to develop, implement, operate and maintain a written PCSM Plan. IRRC and other commentators expressed concern that the wording was too broad. The Board did not amend this section in the final-form rulemaking but did amend § 102.8(n). This revision provides that for minor projects when there is little or no change in the runoff characteristics from the site, the PCSM Plan can be brief, only be a sentence or two, and still meet the requirements of § 102.8(a). Also, the term "NPDES" has been removed from the final-form rulemaking to allow inclusion of a PCSM Plan for permits other than NPDES.

A number of commentators, notably the builders and the House legislative committee members, requested that the final-form rulemaking include a grandfathering provision for NPDES permit renewals. The builders are particularly concerned about having to revise PCSM Plans for permitted projects that require renewal. In response to these comments, § 102.8(a) has been amended in the final-form rulemaking to provide that "a person conducting earth disturbance activities under a permit issued before November 19, 2010, and renewed prior to January 1, 2013, shall implement, operate and maintain the PCSM requirements in accordance with the terms and conditions of the existing permit. After January 1, 2013, the renewal of a permit issued before November 19, 2010, shall comply with the requirements of this section."

General requirements for planning and design of PCSM were included in § 102.8(b)(1)—(8) of the proposed rulemaking. Commentators and IRRC expressed concern about the vagueness of terms "minimize" and "maximize" as they relate to planning and design. The final-form rulemaking retained the language from the proposed rulemaking and additional minor edits were made for clarification. These terms have been historically utilized in Chapter 102 to guide the design of projects that vary in size, scope and other details. The Board utilized these words to provide flexibility to the applicant when designing the BMPs for their projects.

IRRC and several commentators expressed concern about the "protect, maintain, reclaim and restore" language and recommended amending § 102.8(b)(9). In response to comments, the Board deleted this subsection

from the final-form rulemaking. Amending this section does not negate a person's responsibility to utilize BMPs that will "protect, maintain, reclaim and restore" as this provision is also in the existing definition of "BMPs—Best management practices" in §§ 102.1, 102.2(b) and 102.11(a)(1).

The proposed rulemaking included § 102.8(c) and (d) to ensure consistency with the E&S Plan and to specify that the PCSM Plan shall be a separate plan unless otherwise approved by the Department. The language in the proposed rulemaking was retained in the final-form rulemaking. The intent of this requirement is for the BMPs implemented as part of the E&S Plan during the temporary construction phase to easily transition with minimal disturbance into the BMPs that will be part of the PCSM Plan. Likewise, the E&S Plan should reflect consideration of the PCSM Plan. For example, areas to be utilized for post construction infiltration should be protected from compaction during construction, which should be noted in the E&S Plan.

In the proposed rulemaking, § 102.8(e) listed the requirements of the individual tasked with preparing the PCSM Plan. IRRC commented that this section did not impose a definable level of expertise and that the Board should delete the subsection or replace it with specific credentials. The language in § 102.8(e) is similar to the E&S portion of § 102.4(b)(3) and has been in use for many years. More specific credentials may exclude designers who are not licensed by the Commonwealth and potentially increase development costs. The language was retained in the final-form rulemaking, but the Board did include additional language to qualify that the level of expertise needed is relative to the size and scope of the project being designed.

Section 102.8(f) listed PCSM Plan requirements in the proposed rulemaking. IRRC and several commentators expressed concern about "other supporting documentation" language, and requested that the Board provide more detail. That language has been removed from the final-form rulemaking and minor edits were made to provide clarity.

IRRC and commentators requested additional clarity and guidance on the requirements in § 102.8(f)(1)—(10). Many of the requirements found in these paragraphs are currently required including the listing of soil types/limitations and plan calculations. The PCSM Plan must identify the BMPs used and the appropriate calculations that demonstrate that the BMPs will perform under those conditions. The language from the proposed rulemaking was retained in the final-form rulemaking with minor edits made for clarification.

In the proposed rulemaking, § 102.8(g)(1) and (2) listed the stormwater analysis required in the PCSM Plan. IRRC, PennDOT and several commentators expressed concern with the costs for this analysis and asked the Board to consider amendments to decrease costs and assist in compliance. The Board revised these sections in the final-form rulemaking in response to comments. Allowance for an alternative approach to PCSM methodologies was added in the final-form rulemaking for use when there are public health and safety limitations or existing site conditions. Specifically, in the final-form rulemaking, additional language has been added in § 102.8(g)(2)(iii) and (iv) and (3)(iii) to allow other approaches that may be more protective or that will maintain and protect existing water quality. Also, references to pipelines or other utilities that restore or reclaim a site back to natural conditions have been added to the final-form rulemaking. Section 102.8(g)(2)(ii) and (iii) have been revised in the final-form rulemaking to provide more clarity and to provide more flexibility. The intent in these subparagraphs is to require stormwater controls on property that was previously developed with little or no stormwater management. Also in response to comments, § 102.8(g)(2)(i), (ii) and (iii) were modified in the final-form rulemaking to exclude repair or reconstruction of roadways or rail lines, and to consider public health, safety and environmental limitations.

Regardless of the type of earth disturbance activity that occur, the impervious surfaces, the changes in vegetation and the soil compaction associated with that activity will result in increases in runoff volume and rate. When the site is cleared of existing vegetation, graded and recompacted, it produces an increase in stormwater volume and rate. If the original vegetation were replaced with natural vegetation, the stormwater runoff characteristics would be considered to be equivalent to the original natural vegetation. The volume control, water quality and rate requirements focus on providing stream channel protection and protection from the frequent rainfalls that comprise a major portion of stormwater runoff events in any part of this Commonwealth. On the basis of these factors, the 2-year/24-hour storm event has been chosen as the stormwater management design storm for volume control.

A volume control requirement is essential to mitigate the consequences of increased stormwater runoff. To accomplish this, the volume reduction BMP must do the following: protect stream channel morphology; maintain groundwater recharge; prevent downstream increases in flooding; and replicate the natural hydrology onsite before development to the greatest extent possible.

The volume control and water quality requirements included in the proposed rulemaking and retained in the final-form rulemaking are necessary to maintain and protect natural hydrology including velocity, current, cross-section, runoff volume, infiltration volume and aquifer recharge volume. These requirements will sustain stream base flow and prevent increased frequency of damaging bank full flows. The requirements will also help prevent increases in peak runoff rates for larger events (2-year—100-year) on both a site-by-site and watershed basis. A volume control requirement is protective of water quality and also provides the benefits listed as follows.

Protect stream channel morphology. Increased volume of stormwater runoff results in an increase in the frequency of bank full or near bank full flow conditions in stream channels. The increased presence of high flow conditions in riparian sections has a detrimental effect on stream shaping, including stream channel and overall stream morphology. Stream bank erosion is greatly accelerated. As banks are eroded and undercut and as stream channels are gouged and straightened; meanders, pools, riffles and other essential elements of habitat are lost or greatly diminished. Increases in impervious surfaces can cause the natural bankfull stream flows to occur more often. The final-form rulemaking includes a combination of volume reduction, water quality and peak rate controls to reduce the bankfull flow occurrences.

Maintain groundwater recharge. Over 80% of the annual precipitation infiltrates into the soil mantle in watersheds in this Commonwealth under natural conditions. More than half of this is taken up by vegetation and transpired. Part of this infiltrated water moves down gradient to emerge as springs and seeps, feeding local

wetlands and surface streams. The rest enters deep groundwater aquifers that supply drinking water wells. Without groundwater recharge, surface stream flows and supplies of groundwater for wells will diminish or disappear during drought periods. Certain land areas recharge more groundwater than others; therefore, protecting the critical recharge areas is important in maintaining the water cycle's balance.

Prevent downstream increases in runoff volume and flooding. Although site-based rate control measures may help protect the area immediately downstream from a development site, the increased volume of stormwater runoff and the prolonged duration of runoff from multiple development sites can increase peak flow rates and duration of flooding from stormwater runoff caused by relatively small rain events. Replicating predevelopment stormwater runoff volumes for small storms, up to and including the 2-year/24-hour storm event, will substantially reduce the problem of frequent flooding that plague many communities. Although control of runoff volumes from small storms almost always helps to reduce flooding during large storms, additional measures are necessary to provide adequate relief from the serious flooding that occurs during these events.

Replicate the surface water hydrology on-site before development. The objective for stormwater management is to develop a program that replicates the natural hydrologic conditions of watersheds to the maximum extent practicable. However, the very process of clearing the existing vegetation from the site removes the single largest component of the natural hydrologic regime, evapotranspiration (ET). Unless the ET component is replaced, the runoff increase will be substantial. Several BMPs, such as riparian buffers, riparian forest buffers, tree planting, infiltration, vegetated roof systems and rain gardens, are critical to adequate stormwater management because they serve to replace a portion of the ET and other functions.

The scientific basis for using a 2-year/24-hour storm event is as follows:

• The 2-year/24-hour event provides stream channel protection and water quality protection for the relatively frequent runoff events across this Commonwealth.

• Volume reduction BMPs based on this standard will provide a storage capacity to help reduce the increase in peak flow rates for larger runoff events.

• In a natural stream system in mid-Atlantic states, the bank full stream flow occurs with a period of approximately 1 1/2 years. If the stormwater runoff volume from storms less than the 2-year/24-hour event are not increased, the fluvial impacts on streams will be reduced.

• The 2-year/24-hour storm is well defined and data are readily accessible for use in stormwater management calculations.

Research has demonstrated that bank-full stream flow typically occurs between the 1-year and the 2-year storm event (approximately the 1 1/2-year storm). Use of the 2-year/24-hour storm for purposes of comparing the pre-to poststormwater runoff provides a margin of safety with flows in an out of bank condition. The 2-year/24-hour storm can also be determined from data that is readily available. The final-form rulemaking retained the 2-year/24-hour storm as the storm event to be used for the pre-to postcomparison. The 2-year/24-hour storm is the event that should be utilized to meet antidegradation requirements (see definitions for "nondischarge alternative" and "ABACT"). In addition, the new Federal ELG also supports the 2-year/24-hour event as the design storm. Additional discussion is provided in the comment and response document.

On the other hand, it is considered unreasonable to design a PCSM BMP for volume or water quality for storm events greater than a 2-year/24-hour event. The stormwater runoff volume from the 100-year rainfall naturally is so large and insignificantly different when compared to developed areas that it is impractical to require management for volume or water quality. During extreme events, the runoff simply overwhelms the natural systems as well as human-made conveyance elements of pipes and stream channels. This, however, does not mean that these large storm events do not need to be managed. These large events need to be evaluated for peak rate control and implementation of flood control and retention BMPs.

Peak rate control for large storms, up to the 100-year event, is essential to protect against immediate downstream erosion and flooding. Most designs achieve peak rate control through the use of detention structures. Peak rate control can also be integrated into volume control BMPs in ways that eliminate the need for additional peak rate control detention systems.

Section 102.8(h) of the proposed rulemaking, which provided for the antidegradation implementation process for permit applications for projects in Special Protection Waters, is related to provisions in § 102.4(b)(6) and also relies on the definitions of "ABACT" and "nondischarge alternative" in § 102.1.

The proposed rulemaking in § 102.8(i) listed requirements for a complaint or site inspection and § 102.8(j) listed requirements for PCSM reporting and recordkeeping. IRRC commented that § 102.8(i) was redundant with § 102.8(j) and recommended deleting the subsection. Subsections (i) and (j) cover two different situations. Subsection (i) requires that upon inspection the PCSM Plan may need to be submitted for review and approval. This is to ensure the activity is not causing stream degradation. Subsection (j) requires that the PCSM Plan and reports or records be available for review and inspection by the Department or CDs regardless of the existence of a complaint. The language from the proposed rulemaking was retained in the final-form rulemaking and headers for each subsection were added.

Requirements for a licensed professional or designee to be present onsite during critical stages of construction were included in § 102.8(k) and (l) of the proposed rulemaking. IRRC and several commentators expressed concern about the cost of this requirement. The Board revised this subsection in the final-form rulemaking to provide clarity regarding what constitutes a critical stage of implementation. Subsection (k) lists several items considered critical stages and the licensed professional may determine whether additional activities are also critical so that the licensed professional should be onsite. The Board also amended this subsection to clarify that a CD as well as the Department can identify a critical stage of construction. This duty may only be performed by a CD with delegated authority for the PCSM portion of the program.

The Board made clarifying revisions to these subsections in the final-form rulemaking to reflect the intent of the provision to ensure that the plan is implemented properly and the Department will be able to confirm proper implementation. IRRC requested clarification regarding when certification of the PCSM Plan and record

drawings are required. Certification and record drawings are required for all permitted projects, depicting what was actually constructed onsite.

Section 102.8(m) of the proposed rulemaking included a brief paragraph regarding the responsibility for long-term operation and maintenance. Several commentators requested better organization and clarification to the operation and maintenance requirements. In response to comments, § 102.8(m) has been revised in the final-form rulemaking to consolidate the requirements for operation and maintenance.

IRRC commented that the Board should explain the need to regulate PCSM activity to such a degree as to require deed amendments and covenants and how this is a viable way to protect the environment given the inherent presumption that all landowners can afford to maintain and rectify any failure of a BMP for perpetuity. Subsection (m) requires the applicant to designate a responsible party for operation and maintenance. Under existing provisions in the act, absent a designation, the landowner could have sole responsibility if the permittee disappears or ceases to exist. The operation and maintenance requirement is for the PCSM BMPs that are installed as part of the PCSM management plan. For these BMPs to function efficiently, they must be maintained in perpetuity or until the land use changes. This maintenance responsibility would remain if the property transfers, therefore justifying the need for a covenant that runs with the land.

In response to comments, the Board clarified the requirements in § 102.8(n) regarding regulated activities that require a site restoration or reclamation plan. When a site is fully restored or reclaimed, or the permitted activity involves earth disturbance of less than 1 acre, the obligation of long-term PCSM operation and management may not be necessary. The revisions to the final-form rulemaking were included for this reason. The obligation for long-term operation and maintenance has been met if the site is restored and there are no permanent structures or impervious surfaces.

§ 102.11. General requirements.

This section was revised in the proposed rulemaking to include several new provisions regarding the PCSM and riparian forest buffer BMP and design standards.

Section 102.11(a)(2) was added to the proposed rulemaking to provide reference to the Pennsylvania Stormwater Best Management Practices Manual (Doc. No. 363-0300-002) for assistance in complying with § 102.8 PCSM requirements and other references to PCSM.

Section 102.11(a)(3) was added to the proposed rulemaking to provide reference to the Riparian Forest Buffer Guidance (Doc. No. 394-5600-001) for assistance in complying with § 102.14 riparian buffer requirements.

Section 102.11(a)(4) was added in the final-form rulemaking to provide reference to the Guidelines for the Development and Implementation of Environmental Emergency Response Plans (Doc. No. 400-2200-001) in response to public comments requesting clarification and a reference to guidelines and requirements related to PPC Plans.

Section 102.11(c) was added to the final-form rulemaking to incorporate by reference the Federal ELG and standards regarding NPDES permits for construction activities recently passed by the EPA. IRRC requested that specific language be used to cite this incorporation and the language in the final-form rulemaking reflect their comments.

Section 102.11(d) was added to the final-form rulemaking to provide that the effective date of this final-form rulemaking is 90 days after the publication *Pennsylvania Bulletin*.

§ 102.14. Riparian buffer requirements.

As a threshold matter, IRRC questioned why riparian forest buffers were included in this regulation. Staff of the Department has evaluated extensive research and investigations regarding riparian buffers. This information is included in this section, as well as Section F of this preamble.

Land development activities change natural features and alter stormwater runoff characteristics. The resulting alterations of stormwater runoff volume, rate and water quality can cause stream bank scour, stream destabilization, sedimentation, reductions in groundwater recharge and base flow, localized flooding, habitat modification and water quality and quantity impairment, which constitute pollution as that term is defined in section 1 of the act (35 P. S. § 691.1). Riparian buffers play a vital role in mitigating the effects of stormwater runoff from land development activities.

Riparian buffers are useful in mitigating or controlling point and nonpoint source pollution by both keeping the pollutants out of the waterbody and increasing the level of instream pollution processing. Used as a component of an integrated management system including nutrient management along with E&S control practices, riparian buffers can produce a number of beneficial effects on the quality of water resources. Riparian buffers can be effective in removing excess nutrients and sediment from surface runoff and shallow groundwater, stabilizing streambanks and shading streams and rivers to optimize light and temperature conditions for aquatic plants and animals. Riparian buffers provide significant flood attenuation and storage functions within the watershed. They prevent pollution both during and after earth disturbance activities and provide natural, long-term sustainability for aquatic resource protection and water quality enhancement.

A riparian forest buffer is a specialized type of riparian buffer. Scientific literature supports the riparian forest buffer (with stormwater entering the buffer as sheet flow or shallow concentrated flow) as the only BMP that can do all of the following: capture and hold stormwater runoff from the majority of storms in this Commonwealth in a given year; infiltrate most of that water or transport it, or both, as shallow flow through the forest buffer soils where contaminate uptake and processing occurs; release excess storm flow evenly further processing dissolved and particulate substances associated with it; sequester carbon at significant levels; and improve the health of the stream and increase its capacity to process organic matter and nutrients generated on the site or upstream of the site.

The PCSM provisions, to a large extent, are a codification of the existing program in this Commonwealth mandated by Federal requirements as well as adverse case law. In administering this program, the Department has observed that the riparian forest buffers are one of the most cost effective stormwater management BMPs. Therefore, under the Department's authority under section 402 of the act, the Department has determined that riparian forest buffers are necessary to protect Excep-

tional Value (EV) and High Quality (HQ) waters of this Commonwealth from land development activities.

In addition to Department observation, numerous studies demonstrate that riparian forest buffers are particularly effective in mitigating adverse impacts, due to their proximity immediately adjacent to the surface water and their function as a physical buffer to that surface water. Specifically, riparian forest buffers protect surface waters from the effects of runoff by providing filtration of pollutants, bank stability, groundwater recharge, rate attenuation and volume reduction. Riparian forest buffers reduce soil loss and sedimentation/nutrient and other pollution from adjacent upslope flow. (Dosskey et al., 2002). Riparian forest buffers also remove, transform and store nutrients, sediments and other pollutants from sheet flow and shallow subsurface flow and have the potential to remove substantial quantities of excess nutrients through root-zone uptake. (Desbonnet et al., 1994; Lowrance et al., 1997; Mayer et al., 2007; and Newbold et al., 2010). Nitrates can be significantly elevated when adjacent land uses are urban/suburban. Further, the buffer's tree canopy shades and cools water temperature, which is especially critical to support high quality species/cold water species—a function not as effectively provided by any other BMP. (Jones, 2006.)

Other neighboring states have also recognized the value of riparian buffers. For example, New Jersey requires buffers along all streams with increased widths along trout streams and special protection waters. Virginia requires riparian buffers to implement the Chesapeake Bay Preservation Act. Maryland has buffer regulations to protect tidal waters, tidal wetlands and streams tributary to the Chesapeake Bay. Riparian forest buffers provide other economic benefits and intrinsic value to land.

There are many existing provisions in the regulations in 25 Pa. Code (relating to environmental protection) that limit the extent of activities that can occur along streams and wetlands as a means of protecting water quality. A number of these types of controls are in the form of "setbacks." Although riparian forest buffers also have additional BMP functions, riparian forest buffers are like other regulatory setbacks in that they are a project or facility siting limitation that is included in the regulations as an environmental control. This type of environmental control mechanism is found in numerous other environmental regulations, including: surface and underground coal mining: general, § 86.102(12) (relating to areas where mining is prohibited or limited), "mining prohibited within 100 feet of a perennial or intermittent stream;" noncoal mining, § 77.504 (relating to distance limitations and areas designated as unsuitable for mining), "mining prohibited within 100 feet of a perennial or intermittent stream;" water resources: general provisions, §§ 91.36 and 92.5a(e)(l)(i) (relating to wastewater impoundments; and CAFOs), "stream setbacks and or buffers required for land application of animal manure;" nutrient management, § 83.351(a)(l)(v) (relating to minimum standards for the design, construction, location, operation, maintenance and removal from service of manure storage facilities), "surface water and wetland setbacks for manure storage facilities;" municipal waste landfills, § 273.202 (relating to areas where municipal waste landfills are prohibited), "100 foot surface water and 300 foot exceptional value wetland setbacks for municipal waste landfills;" municipal waste: land application of sewage sludge, § 275.202 (relating to areas where the land application of sewage sludge is prohibited), "land application of sewage sludge prohibited within 100 feet of a perennial or intermittent stream or exceptional value wetland;" municipal waste: construction/demolition waste landfills, § 277.202 (relating to areas where construction/demolition waste landfills are prohibited), "flood plain and wetland setbacks;" municipal waste: resource recovery facilities, 25 Pa. Code § 283.202 "flood plain and wetland setbacks;" oil and gas wells, § 78.63 (relating to disposal of residual waste—land application), "100 foot setbacks for land application of residual waste from oil and gas well development;" and hazardous waste management: siting, § 269a.29 (relating to exceptional value waters), "hazardous waste treatment and disposal facilities may not be sited in watersheds of exceptional value waters."

This is a new section that was added in the proposed rulemaking with the intent of establishing criteria for riparian buffers and establishing mandatory provisions for the use of riparian buffers as a stormwater BMP. Extensive public comments were received on this proposed section. The Board made a number of substantive revisions to this section in response to comments in the final-form rulemaking, including the addition of subsections regarding exceptions, a presumption of antidegradation compliance and provisions regarding trading or offsetting credits. In addition, the final-form rulemaking also clarifies the requirements for composition and width of mandatory riparian forest buffers and management plans, and guidance on voluntarily establishing riparian forest buffers.

Section 102.14(a) in the proposed rulemaking listed requirements for incorporating riparian forest buffers. The proposed rulemaking included requirements for mandatory 150-foot wide riparian forest buffers on EV waters and a minimum of 100-foot wide riparian forest buffer on all other waterbodies in § 102.14(a). IRRC and several commentators commented that the wording was vague. Members of the public commented that the requirement for mandatory buffers should be expanded to all waters of this Commonwealth with riparian forest buffers of at least 100 feet on both sides of every stream in this Commonwealth, with 150 feet on small headwater streams and 300 feet on EV and HQ streams. In contrast, the Board also received comments from IRRC and other commentators that the requirement for mandatory buffers is burdensome and that the section on buffers is confusing. In response to comments from IRRC and other commentators, the Board amended § 102.14 to require that a project requiring a permit and located in an EV or HQ watershed which is attaining its designated use, shall not conduct earth disturbance activities within 150 feet of a perennial or intermittent river, stream, creek, lake, pond or reservoir, and must protect existing riparian buffer. Additionally, if the project site requires a permit and is located in an EV or HQ watershed failing to attain one or more of its designated uses the person proposing the project must not conduct earth disturbance activities within 150 feet of a perennial or intermittent river, stream, creek, lake, pond or reservoir, and protect an existing riparian forest buffer, convert an existing riparian buffer to a forest riparian buffer, or establish a new riparian forest buffer.

The Department notes that only 26,215 miles (roughly 30%) of Commonwealth stream miles are classified as special protection (EV or HQ). Further, only 714 miles (0.8%) of all stream miles are presently classified as special protection and designated as "impaired." Under the final-form rulemaking revisions, for the vast majority of projects—because they will not be located adjacent to impaired special protection waters—riparian forest buffers will not be mandatory, but rather will be an optional BMP that the applicant may choose to manage their post

construction stormwater. In addition, the Board recognizes that there may be circumstances under which a riparian buffer may not be feasible. The final-form rulemaking allows for the consideration of alternative BMPs to be considered in accordance with § 102.14(d)(2)(vi) in these circumstances.

Section 102.14(b) of the proposed rulemaking listed the composition requirements of a riparian forest buffer and a "zoned" approach to composition was included. Scientific literature supports a "zoned" approach to the composition of newly established riparian forest buffers. Zone 1, being directly adjacent to the waterbody and consisting primarily of native trees, is most critical to the ecological health of the waterbody by providing bank stability, thermal moderation, aquatic and terrestrial habitat, and an energy source to maintain a stable ecological community. Zone 2, consisting of native trees and shrubs, provides opportunity for significant sequestration and trapping of overland and subsurface pollutants as well as maximizing habitat potential for a variety of aquatic and terrestrial species. The Board received comments that requested timber management be allowed within the zones. The language from the proposed rulemaking allowing for timber management has been retained in the final-form rulemaking.

The proposed rulemaking included requirements for mandatory 150-foot wide riparian forest buffers on EV waters and a minimum of 100-foot wide riparian forest buffers on all other waters in § 102.14(d) regarding average minimum widths. The minimum width of 100 feet and the type of vegetation, primarily native trees and shrubs, has been firmly established by scientific studies as providing substantial ecological benefit. Additional riparian forest buffer width in special protection and impaired waters provides added protection and maximizes the benefits to existing water quality. This subsection in the final-form rulemaking has been revised and moved to § 102.14(b)(2). Also, in the final-form rulemaking, the width of Zone 1 or, at a minimum, the first 50 feet of a riparian forest buffer, directly adjacent to the waterbody should remain essentially "untouched." The width of Zone 2 has been enlarged to 100 feet in the final-form rulemaking. Therefore, the area where timber harvesting is permitted (with a riparian forest buffer management plan and 60% of the canopy cover is maintained) has been expanded. Some limited management of forest resources is allowed in Zone 2. Activities within the riparian forest buffer are limited so as to maintain its integrity and functions.

The proposed rulemaking contained requirements for enhancing existing buffers to establish a riparian forest buffer that included additional plantings and removal or control of noxious and invasive species in § 102.14(a). The Board received comments from IRRC and members of the public requesting clarification on the requirements for enhancement. The final-form rulemaking has been revised and clarified. Section 102.14(a) lists the requirements for when a mandatory buffer is required. Specific requirements regarding converting a buffer are clarified in § 102.14(b) of the final-form rulemaking regarding criteria, composition, zones and management requirements.

In the proposed rulemaking, noxious weeds and invasive species were required to be removed or controlled to the extent possible in existing and established riparian forest buffers in § 102.14(a)(4). IRRC and members of the public commented that the section should be amended to clarify these provisions. Minor edits were made and this section was moved to § 102.14(b)(1)(i) in the final-form rulemaking to provide clarity. Invasive plants have characteristics that make them extremely threatening to the survival of a new riparian forest buffer. Noxious weeds are not necessarily invasive plants; they are plants that have proved to be a significant threat to agriculture, human health or the environment, thereby earning the designation of noxious weed from the Department of Agriculture.

Invasive plants and noxious weeds need to be controlled because they pose a threat due to their ability to spread aggressively, reproduce prolifically and are very difficult to control once established. Invasive plants can overrun native vegetation and prevent the long-term sustainability of native riparian vegetation. Nonnative species can degrade the habitat for wildlife and diminish the pollution prevention capacity of a vegetated riparian forest buffer significantly. Controlling noxious weeds and invasive plants as soon as the plants are noticed (preferably before they bloom and the seeds are released) can be more cost effective than waiting 1 year or more when the invasive plants and noxious weeds are already established. The Department anticipates issuing further guidance on the control of noxious weeds and invasive species concurrently with the final-form rulemaking.

There was a requirement in the proposed rulemaking for riparian forest buffers to be established along both sides of the stream in § 102.14(d)(l)—(3). IRRC and members of the public commented that this would require permittees to purchase adjacent property. The term "both sides" has been removed from the final-form rulemaking. Section 102.14(b)(2)(iii) of the final-form rulemaking clarifies that a riparian buffer would be required on both sides of the stream if the stream transects a project site controlled by the applicant and would not be required on adjacent property.

Section 102.14(e)(2) of the proposed rulemaking included a requirement for newly established and existing riparian forest buffers to be managed for at least 5 years. IRRC and members of the public commented that specific standards should be set for management of riparian forest buffers. In the final-form rulemaking, the management of a riparian forest buffer is described in § 102.14(b)(3). The language states that riparian forest buffers shall be managed for 5 years, during which time the following are used: a planting plan that identifies the number, density and species of native trees and shrubs that are appropriate to the geographic location and will achieve 60% uniform canopy cover; measures to ensure protection from competing plants and animals including noxious weeds and invasive species; and an inspection schedule with measures identified and implemented to ensure proper functioning of the riparian forest buffer. The 5-year period begins when planting is complete and ends when 60% uniform canopy cover is achieved which should be within 5 years of establishment. The riparian forest management plan should continue to be implemented until 60% uniform canopy cover is achieved. Sixty percent uniform canopy cover is achieved when an area of ground shaded by a vertical projection of the leafy crown of predominantly native shrubs and trees reaches 60% throughout the riparian forest buffer. A sample riparian forest buffer management plan, agreement and techniques to determine the 60% canopy cover can be found in the Department's Riparian Forest Buffer Guidance (Doc. No. 394-5600-001). After 5 years, the riparian forest buffer will be managed as needed according to the riparian forest buffer management plan. Active management is absolutely critical during the first 5 years of

establishing a new riparian forest buffer or enhancing an existing buffer to meet riparian forest buffer standards. Management would be focused on ensuring survivability of the young trees and shrubs. Once the new trees and shrubs are established by the end of the 5-year period, management activities become less active and focus more on long-term operation and maintenance needs as described in the riparian forest buffer management plan. Active management of an existing riparian forest buffer is not required; however, § 102.14(f)(3)(i) allows activities or practices to maintain the riparian buffer.

In § 102.14(a)(8) of the proposed rulemaking, applicants were required to submit a plan for riparian forest buffer management that would describe how management requirements would be met. IRRC commented that the regulation should set forth what an acceptable plan must include. In the final-form rulemaking, the requirements for a riparian forest buffer management plan have been added in § 102.14(b)(4).

Section 102.14(a) of the proposed rulemaking listed mandatory requirements for riparian buffers. IRRC commented that while riparian forest buffers may present a very good solution from an environmental perspective, these buffers clearly raise many issues of cost, reasonableness and practicality as proposed. The Board received comments that requested flexibility and asked to delete the mandatory obligation. In addition, the Board received comments that supported a mandatory riparian buffer program, as well as comments that supported mandatory 100 feet stream buffers program on all streams. In response to comments, the final-form rulemaking has been revised. Requirements for management of stormwater into riparian buffers, protection of wetlands located in the riparian buffer and standards for measurement of riparian buffers have been placed into § 102.14(c) for clarity. Stormwater must discharge into the buffer with a sheet or shallow concentrated flow. This type of discharge will protect the integrity of the buffer and will maximize the opportunity for the discharge to eventually enter into the groundwater.

Wetlands within the buffer should be protected and maintained consistent with Chapter 105 (relating to dam safety and waterway management). It is not the intention of the Department to replace any existing functioning wetlands with riparian forest buffers.

IRRC and members of the public commented that there may be circumstances under which a riparian buffer may not be feasible. In the final-form rulemaking, the Board includes exemptions and waivers in § 102.14(d).

The proposed rulemaking did not include a presumption for antidegradation in the riparian forest buffer section. The Board received comments that requested flexibility in the final-form rulemaking by relying on riparian forest buffers as a preferred BMP option for meeting the nondischarge or ABACT requirements in a Special Protection watershed. In response to comments, the final-form rulemaking includes an antidegradation presumption in § 102.14(e)(1). This paragraph provides a presumption of compliance with antidegradation requirements when a permittee includes a riparian forest buffer meeting the requirements of § 102.14.

The Board received comments that requested an offsetting option. The final-form rulemaking has been revised in § 102.14(e)(2) to allow a permittee who includes a riparian forest buffer meeting the requirements of § 102.14 to be eligible for trading or offsetting credits.

The proposed rulemaking did not list specific requirements for crossings through riparian forest buffers. Comments were received that requested clarity regarding crossings through riparian buffers. The final-form rulemaking has been revised to clarify that, in accordance with § 102.14(f)(2)(ii), crossings over riparian buffers are activities that are allowed when authorized by the Department.

The proposed rulemaking included requirements for the permanent protection of riparian forest buffers. IRRC and members of the public expressed concern about this requirement. In the final-form rulemaking, the requirement is maintained and applies to all riparian buffers. Riparian buffers utilized to manage stormwater provide physical, chemical and biological protection to the receiving water as well as benefits to the aquatic ecosystem and should be protected in perpetuity. Similar to § 102.8(m), riparian buffers are BMPs that require long-term protection and maintenance to ensure their continued functioning as part of PCSM. The Board has added clarification to this section to provide examples of a variety of mechanisms (deed restriction, conservation easement, local ordinance or permit conditions) to ensure the long-term functioning and integrity of the riparian buffer.

Section 102.14(g) of the proposed rulemaking listed a requirement for the permittee to complete a data form provided by the Department as part of the PCSM Plan. Members of the public expressed doubt that these forms would be utilized. This section has been moved to § 102.14(h) in the final-form rulemaking and minor edits for clarifications were made. This reporting has been required by the Department for more than 10 years when buffers are established through a Growing Greener grant from the Department. Reporting can be completed online through the Department's web site at www.depweb.state.pa.us (DEP Keyword "Stream Releaf").

§ 102.15. Permit-by-rule for low impact projects with riparian forest buffers.

The final-form rulemaking does not include the permit-by-rule that was included in the proposed rulemaking. In response to recommendations from commentators, this section in its entirety has been removed from the final-form rulemaking.

§ 102.22. Site stabilization.

In the proposed rulemaking, § 102.22 (relating to site stabilization) was retitled "site stabilization" to reflect the addition of temporary stabilization standards in § 102.22(b) that if earth disturbance will cease for a period of 3 days or more that the site shall be seeded, mulched or otherwise protected. During the public comment period, several commentators and IRRC commented that the requirement of 3 days for temporary stabilization could be impractical and costly and could be problematic because of holiday weekends. In response to these comments, the Board revised the final-form rulemaking so that the amount of days of cessation of earth disturbance activities that would require temporary site stabilization was changed from 3 to 4 days. This change will address the concerns regarding 3-day holiday weekends.

§ 102.31. Applicability.

There were not revisions to proposed in § 102.31 from the current regulations.

§ 102.32. Compliance and enforcement provisions.

In the proposed rulemaking, the Board revised this section to add subsection (c), which states that a person aggrieved by an action of a CD may request an informal hearing with the Department, and subsection (d), which

allows the Department or a CD to collect and recover from the responsible party the costs and expenses involved in taking an enforcement action. Several commentators requested additional details regarding the informal hearing process and how it would work. The Department revised the regulations between the proposed and final-form rulemaking to replace the word "may" with "shall" and added language that "the Department will schedule the informal hearing and make a final determination within 30 days of the request."

§ 102.41. Administration by conservation districts.

The only revision made from the existing regulation was to delete the word "county" from "county conservation districts" to be consistent with the rest of the regulations. There were no other changes between the proposed and final-form rulemaking for this section.

§ 102.42. Notification of application for permits.

The only revision made to the proposed rulemaking was to delete "5 acres" and insert "1 acre." This revision was proposed to be consistent with the change in § 102.5. There were no other changes proposed between the proposed and final-form rulemaking for this section.

§ 102.43. Withholding permits.

In the proposed rulemaking, the Board inserted the phrase at the start of the first sentence "With the exception of local stormwater approvals or authorizations a." This was added to clarify that a municipality or county may approve and issue stormwater approvals or authorizations but may not issue building permits or final approvals until the appropriate Department permit coverage is obtained. A commentator submitted comments that the use of the word "final" in this section may be problematic as municipalities may issue preliminary approvals. The Board agreed that removing the word "final" would clarify that municipalities must not issue any authorization that would allow for earth disturbance activity to occur prior to the necessary Chapter 102 permit approval. Therefore, the word "final" was removed between the proposed and final-form rulemaking for this section.

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F. *Benefits, Costs and Compliance*

The final-form rulemaking provides benefits to the health and safety of the citizens of this Commonwealth. The provisions will improve water quality and mitigate flooding potential by controlling increases in sediment and other pollutant discharges during and after earth disturbance activities. Controlling discharges through this final-form rulemaking will limit the risk for increased pollutant levels to waters of this Commonwealth and protect against adverse impacts on aquatic ecosystems. To ensure protection against adverse impacts from stormwater runoff, the final-form rulemaking includes provisions for long-term operation and maintenance of PCSM facilities. In support of the Federal NPDES stormwater construction rulemakings, the EPA cited benefits including the benefits to navigational operations regarding the reduced sediment loads requiring dredging, the benefits of water storage in reservoirs with regained water capacity from reduced sediment build-up and the

benefits to drinking water treatment with reduced costs for treatment of sediment in turbidity.

The revisions will also provide benefits through the restructuring and clarification of planning and permit application requirements, as well as the codification of the existing PCSM requirements. This final-form rulemaking reflects a continuing commitment to integrate regulatory obligations for stormwater management including requirements under the Storm Water Management Act (Act 167) (32 P. S. §§ 680.1—680.17), the NPDES MS4 program and permitting of earth disturbance activities. Local governments with Act 167 or NPDES MS4 regulatory obligations may rely on the regulatory structure provided by this final-form rulemaking. This reliance on existing State stormwater programs represents a significant cost savings to local governments.

§ 102.6—Benefits of permit fee structure

The citizens of this Commonwealth, the regulated community and State and local governments will benefit from this final-form rulemaking because surface waters will be protected, maintained and improved through requirements that minimize accelerated erosion and sedimentation and strengthen PCSM.

The Commonwealth will benefit from increased permit fees that are based on the estimated cost of administering the program. Amendments to Chapter 92 in 1999 and Chapter 102 in 2000 included modifications to permit fees, but these were administrative filing fees and did not cover cost of program operations. This final-form rulemaking is the first effort by the Department to cover the Chapter 102 program costs through permit fees.

Benefactor	*Benefit*	*Annual Approx. Value*	*Source*
Department	Revenue to operate the 102 program	$7,573,200	Permits and other associated review fees

Finally, this final-form rulemaking is beneficial because it continues to support the delegation of the E&S control and stormwater management programs to local county CDs. CDs and the Department have had a successful and effective partnership that allows the Commonwealth to meet the Federal requirements of the NPDES program. Additionally, the delegation to the local government provides more accessibility to the community and regulated parties and ensures local involvement in oversight of the program.

§ 102.8—Benefits of post construction stormwater management

Economic impacts of PCSM design and implementation

The costs associated with contemporary stormwater strategies cannot be judged without the context of benefits, particularly the benefits of low impact development, better site design and environmental site design approaches, collectively referred to as LID. It is more cost-effective to prevent the pollutants from entering the stormwater or into waters of this Commonwealth than it is to remove the pollutants once they are in the system or in the waters.

A partial list of the additional benefits for developers, communities and municipalities includes the following: downstream economic benefits (reduced flooding damages, reduced treatment costs, increased property values, and the like); reduced needs for infrastructure; higher property values (increased sales, higher sale/resale prices and shorter on-market time); increased tax revenue; increased tourism and recreation; and reduced performance bonding for infrastructure (local/municipal requirements).

A comparative cost-benefit study of different technologies used in the management of urban stormwater consistently raised examples of how LID methods save money in both construction and long-term operation and maintenance, from the broad metropolitan scale down to the site level and further down to a comparison of specific stormwater technologies (Urban Stormwater Economics, Appendix D).

The summary of conclusions include the following:

- At the site level, significant cost savings can be achieved from cluster development, including costs for clearing and grading, stormwater and transportation infrastructure, and utilities.
- Installation costs can be between $4,400 and $8,850 cheaper per acre for natural, native landscaping than for turf grass approaches.
- Better site design can reduce paving costs.
- While conventional paving materials are less expensive then conservation alternatives, porous materials can help total development costs go down, sometimes as much as 30%, by reducing stormwater conveyance and detention needs.
- Swale conveyance and naturalized BMPs are less costly than pipe systems, as much as 80%.
- Costs of stormwater retention or detention cannot be examined in isolation, but must instead be analyzed in combination with conveyance costs (pipe, inlets and curb), at which point low impact methods have a cost advantage, by eliminating these facilities. The cost saving is two-fold. One from the cost of design and implementation and second from the reduction of impervious surface that these conveyances cause.
- Infiltration strategies and water conservation measures, in combination with landscape planning methods, usually require less space, when fully accounted for, than traditional end-of-pipe infrastructure.
- Public infrastructure costs are higher when a development is built within the context of urban sprawl, as compared to compact growth patterns that conserve land.

In addition to preserving agricultural land, open space is now expected to serve important ecological roles by providing natural habitat, reducing runoff volumes, limiting landscaping and lawn maintenance, and providing natural cooling. These ecological benefits in turn translate into higher levels of residential satisfaction (Urban Stormwater Economics, Appendix D).

A study by the EPA of 17 case studies of developments across the country that used LID practices (infiltration, ET and reuse of rainwater) found that these practices could save money for developers, property owners and communities. Most of the cost reductions were in the 25% to 35% range. In addition, there are many amenities and associated economic benefits that go beyond actual cost saving, such as enhanced property values, improved habitat, aesthetic amenities and improved quality of life. In all cases, LID provided other benefits that were not monetized and factored into the project bottom line. These benefits include improved aesthetics, expanded recreational opportunities, increased property values due to the desirability of the lots and their proximity to open space, increased total number of units developed, in-

creased marketing potential and faster sales. The case studies also provided environmental benefits such as reduced runoff volumes and pollutant loadings to downstream water, and reduced incidences of combined sewer overflows.

Failure to enact these changes to the proposed rulemaking will allow increases in stormwater runoff to occur. Increases in stormwater causes degradation of lakes, streams and wetlands and reduces property values, raises our public water utility bills and reduces tourism and related business income. These negative impacts will cause an increase in costs for local municipalities and this Commonwealth. Comments from the Philadelphia Water Department indicated that the proposed changes will improve water quality and reduce illnesses from drinking water and reduce their treatment costs.

Preventing contamination of raw drinking water supplies is more efficient than trying to identify and remove that contamination from the water stream at the treatment plant. By dedicating funds to restore and protect source water areas, communities are saving tremendous amounts of money over the long-term. The survey in Table 1 regarding water treatment and chemical costs based on percent of watershed that is forested indicates that operating treatment costs decreases as forest cover in a source area increases (Urban Stormwater Economics, Appendix D). For every 10% increase in forest cover in the source area (up to 60% forest cover), treatment and chemical costs decreased approximately 20%. Approximately 50% to 55% of the variation in operating treatment costs can be explained by the percent of forest cover in the source area. Not enough data were obtained on suppliers that had more than 65% forest cover in their watersheds to draw conclusions; however, the researchers believe that treatment costs level off when forest cover is between 70% and 100%. The remaining 45% to 50% variation in treatment costs that cannot be explained by the percent forest cover in the watershed is likely due to varying treatment practices, economies of scale, the location and intensity of development or row crops, or both, in the watershed, and the prevalence of agricultural, urban and forestry BMPs.

Table 1. Water treatment and chemical costs based on percent of watershed that is forested

% of Watershed Forested	*Treatment and Chemical Costs per million gallons*	*% Change in Costs*	*Average Treatment Costs (at 22 mgd)*	
			Per Day	*Per Year*
10%	$115	19%	$2,530	$923,450
20%	$93	20%	$2,046	$746,790
30%	$73	21%	$1,606	$586,190
40%	$58	21%	$1,276	$465,740
50%	$46	21%	$1,012	$369,380
60%	$37	19%	$814	$297,110

Economic impacts of PCSM operation and maintenance

• Delaware Natural Resources identified that routine stormwater maintenance range from $100 to $500 per acre of drainage area (low to highly intensive maintenance).

• Maintenance cost savings range between $3,950 and $4,583 per acre per year over 10 years for native landscaping approaches over turf grass approaches (Urban Stormwater Economics, Appendix D).

• A study by North Carolina State University estimated annual maintenance costs for a 10-acre project: ponds, $4,000 +; wetland treatment, $750; bioretention, $600; and other natural systems equated to normal landscaping maintenance costs.

§ 102.14—Benefits of riparian buffers

Economic benefits of riparian forest buffers

Savings to the Commonwealth, its political subdivisions and the private sector will be realized because of the value of the many services that riparian buffers provide such as the following:

• *Stormwater treatment.* Stormwater treatment systems that integrate natural areas, like riparian forest buffers, are less expensive to construct than storm drain systems and provide better environmental results. Costs of engineered stormwater BMPs range from $500 to $10,000 per acre and will cost that much again in 20 to 30 years when the structures need to be replaced. It is much more cost effective to manage storm water by including the preservation and maintenance of riparian forests in the stormwater management plan. The cost of preserving or replanting riparian forest buffers ranges from $0 to $4,723 per acre and can be relatively cost free once established. (Department's Draft Riparian Forest Buffer Guidance (Document 394-5600-001, 2009).)

• *Maintenance of optimal water quality.* This would include protection of water quality for activities such as boating, swimming and wildlife viewing. Riparian forest buffers also protect areas for fishing, hunting and other outdoor recreational activities. Trout require the cold waters enhanced by the shading provided by forest buffers (Jones et al., 2006). Fishing contributes over $2 billion to this Commonwealth's economy with close to 1 million anglers (Southwick, 2007).

• *Flood control.* Riparian buffers moderate floodwaters and are a tool to protect human land use and investments from localized and flashy events and hazards associated with stream dynamics and shore erosion. Riparian buffers protect investments from hazards associated with stream flooding and erosion by providing a critical right-of-way for streams and rivers during large floods and storms. When riparian forest buffers contain the entire 100-year floodplain, they are extremely cost-effective in flood damage prevention for both communities and individual property owners (Burby, 1988).

• *Passive recreational activities.* Riparian buffers provide natural surroundings for relaxation, observation of

wildlife, photography, hunting, fishing and other activities important to the people of this Commonwealth. Pervious paths that are cut through riparian areas and can be used for hiking, bicycling, jogging, bird watching and leisurely walks.

• *Intrinsic and aesthetic values.* Mature riparian forest buffers composed of predominantly native vegetation enhance the preservation of natural functioning ecosystems and biological diversity. The aesthetic values associated with greenways, which include riparian forest buffers, have economic benefits and can increase property values as well as contribute to a sense of pride and well being for communities and property owners. These greenways can also have a positive impact on the value of surrounding property nearby. Pennypack Park, a managed greenway along Pennypack Creek in Philadelphia, has been credited with a 33% increase in the value of adjacent property (Chesapeake Bay Foundation, 1996).

• *Ice damage control.* The trees in Zone 1 of a mature riparian forest buffer insulate and warm the waters on the near shoreline/streambank area. This protects human land use and investments from ice damage on the near shoreline/streambank and from affects of ice jamming and subsequent upstream flooding (Abernathy et al., 1998).

Ecological benefits of riparian buffers

Land development activities change natural features of the land and alter stormwater runoff characteristics. The resulting alterations by stormwater runoff on volume, rate and water quality can cause stream bank scour, stream destabilization, sedimentation, reduction of groundwater recharge and loss of base flow, localized flooding, habitat modification and water quality and quantity impairment, which constitute pollution as that term is defined in section 1 of the act.

Riparian buffers, which are areas of permanent vegetation along surface waters, play a vital role in mitigating the effects of stormwater runoff from land development activities. They are useful in mitigating or controlling point and nonpoint source pollution by both keeping the pollutants out and increasing the level of instream pollution processing. Used as a component of an integrated management system including nutrient management along with E&S control practices, riparian buffers can produce a number of beneficial effects on the quality of water resources. Riparian buffers can be effective in removing excess nutrients and sediment from surface runoff and shallow groundwater, stabilizing streambanks and shading streams and rivers to optimize light and temperature conditions for aquatic plants and animals. Riparian buffers provide significant flood attenuation and storage functions within the watershed. They prevent pollution both during and after earth disturbance activities, and provide natural, long-term sustainability for aquatic resource protection and water quality enhancement.

A riparian forest buffer is a type of riparian buffer that consists of permanent vegetation that is predominantly native trees and shrubs and along surface waters. The riparian forest buffer, when mature, will provide a minimum of 60% canopy cover and may have forbs in the understory.

The efficacy of riparian forest buffers in reducing the quantities of nonpoint source pollutants found in stormwater entering streams has been well established by hundreds of reports published in the peer-reviewed scientific literature (Mayer et al., 2007; and Wenger et al., 1999). Scientific literature also supports the riparian forest buffer (with stormwater entering the buffer as sheet flow or shallow concentrated flow) as the only BMP that can provide all of the following benefits:

• *Reduced effects of storm events.* Mature riparian forest buffers that are sufficiently wide can slow the speed and reduce the volume of surface runoff from upland areas. The spongy floor of a riparian forest buffer along a pond, lake or reservoir slows the affect of direct precipitation and runoff from areas adjacent to the riparian forest buffers. This protects stream channel beds and banks from powerful flash flooding that can scour and erode the channel. It also protects lake shorelines from erosive forces during large storms events and flooding.

• *Infiltration and maintenance of streamflow.* Riparian forest buffers slow overland runoff allowing for infiltration of surface water that helps to maintain base flow in streams and rivers.

• *Filtration and processing of pollutants in runoff.* Runoff containing pollutants such as sediments, nutrients, pathogens and toxics from rooftops, streets, lawns, farm fields and parking lots can flow into a riparian forest buffer from the area up grade and be considerably cleaner when it enters the perennial or intermittent stream, lake, pond or reservoir (Mayer et al., 2007; Peterjohn and Correll, 1984; Lowrance et al., 1984; Jordan et al., 1993; Clement et al., 2003; and Vidon and Hill, 2004). The floor of the riparian forest buffer soaks up the water and makes pollutants contained in it available for processing into less harmful forms. Trees in a riparian forest buffer, their fallen leaves and the plants and animals that live on, in and under the trees form an ecosystem that is capable of processing pollutants such as sediments, nutrients and toxics in the water that passes through the riparian forest buffer as sheet flow. The tree roots can also remove pollutants from shallow groundwater flowing beneath the forest floor to the waterbody. The leaves of native trees in the riparian forest buffer that wash into the stream serve as a rich food source for benthic macroinvertebrates which are capable of in-stream pollutant processing (Sweeny et al., 2007).

• *Streambank and shoreline stabilization.* The canopy of a mature riparian forest buffer collects water and protects the ground below in storm events. The rain water also tracks along the trunk of the large trees before reaching the ground. This reduces the force of the water as it reaches the forest floor. The root network of the riparian forest buffer is tightly intertwined and binds soil particles together increasing the strength of the soil matrix, securing against the forces of both direct precipitation and stormwater runoff from areas surrounding the riparian forest buffer. This enhances streambank and lake shoreline stability, which are important for reducing soil and property loss from the bank or shore, reducing sediment input to the waterbody and maintaining overall channel stability. Mature trees also protect lakeshores from wave action (Wenger et al., 1999).

• *Light control and water temperature moderation.* A riparian forest buffer lowers light levels in the streambank or shoreline area of a waterbody that inhibits the growth and production of harmful algae and helps maximize stream width by shading out grasses. The shading that a riparian forest buffer provides helps to lower water temperatures in summer and moderates harsh winter temperatures by trapping back-radiation. Both light control and water temperature moderation maximize dissolved oxygen content in lake and stream waters and increase the amount of in-stream pollutant processing (Sweeney et al., 1993).

• *Flood attenuation.* Riparian forest buffers provide space for channel meanders, stream movement and floodwaters to spread out horizontally. This dissipates stream energy and protects channel stability and shoreline integrity in receiving waterbodies. The spongy floor of a riparian forest buffer along a pond, lake or reservoir slows the affect of direct precipitation and runoff from areas adjacent to the riparian forest buffers and protects shorelines during floods.

• *Ice damage control.* Riparian forest buffers along streams and rivers trap ice slabs during spring breakup, reducing the potential of jamming at downstream constrictions. Jamming can result in backwater and flooding upstream, which can lead to channel instability. Mature riparian forest lakeshore buffer zones are able to absorb the pressures of midwinter ice push, protecting upland development from ice damage (Northwest Regional Planning Commission, 2004).

Further, a review of scientific literature on the subject emphasizes that many site specific factors influence the efficiency of a riparian forest buffer in providing the benefits previously outlined, but there is general agreement that wider buffers are more effective. A minimum width of 150 feet and the type of vegetation, primarily native trees and shrubs, has been firmly established by scientific studies as providing substantial ecological benefit (Mayer et al., 2007; and Wenger, 1999).

Scientific literature also supports a "zoned" approach to the composition of newly established riparian forest buffers (Palone et al., 1997; and Welsch, 1991). Zone 1, being directly adjacent to the waterbody and consisting primarily of native trees, is most critical to the ecological health of the waterbody by providing bank stability, thermal moderation, aquatic and terrestrial habitat, and an energy source to maintain a stable ecological community. Zone 2, consisting of native trees and shrubs, provides opportunity for significant sequestration and trapping of overland and subsurface pollutants as well as maximizing habitat potential for a variety of aquatic and terrestrial species.

Zone 1 or, at a minimum, the first 50 feet of a riparian forest buffer, directly adjacent to the stream, river lake, pond, reservoir or impoundment should remain essentially "untouched." Some limited management of forest resources may occur in Zone 2. Activities within the riparian forest buffer must be limited so as to maintain its integrity and functions.

Newly established riparian forest buffers will be managed for a period of at least 5 years, during which time the following are used: a planting plan that identifies the number, density and species of native trees and shrubs that are appropriate to the geographic location and will achieve 60% uniform canopy cover; measures to ensure protection from competing plants and animals including noxious weeds and invasive species; and an inspection schedule with measures identified and implemented to ensure proper functioning of the riparian forest buffer.

Management involves the maintenance and monitoring of a newly established or existing riparian forest buffer. The most critical period after establishing a riparian forest buffer is the time spent maintaining the trees until their growth gives adequate shade to control weed competition. Ongoing maintenance and monitoring practices are necessary for at least 5 years to ensure establishment of a thriving riparian forest buffer, especially if smaller seedling plant material has been used. Even when large plants are involved, deer browse, invasion by exotic plant species and competition by forbs will be a continuing problem. Maintenance and monitoring plans should be written for the specific site.

Invasive plants have characteristics that make them extremely threatening to the survival of a new riparian forest buffer. Noxious weeds are not necessarily invasive plants; they are plants that have proved to be a significant threat to agriculture, human health or the environment, thereby earning the designation of noxious weed from the Department of Agriculture.

Invasive plants and noxious weeds need to be controlled because they pose a threat due to their ability to spread aggressively, reproduce prolifically and are very difficult to control once established. Invasive plants can overrun native vegetation and prevent the long-term sustainability of native riparian vegetation. Non-native species can diminish the pollution prevention capacity of a vegetated riparian forest buffer significantly and also degrade the habitat for wildlife (Sweeney et al., 1993).

Controlling noxious weeds and invasive plants as soon as the plants are noticed (preferably before they bloom and the seeds are released) can be more cost effective than waiting one or more years when the invasive plants and noxious weeds are already established.

The 5-year management period begins when planting of a riparian forest buffer is complete and ends when 60% uniform canopy cover is achieved which should be within 5 years of establishment. The riparian forest management plan should continue to be implemented until 60% uniform canopy cover is achieved. Sixty percent uniform canopy cover is achieved when an area of ground shaded by a vertical projection of the leafy crown of predominantly native shrubs and trees reaches 60% throughout the riparian forest buffer.

A sample riparian forest buffer management plan and methodology for determining percent canopy cover can be found in the Department's Riparian Forest Buffer Guidance (Doc. No. 394-5600-001).

Compliance Costs

Note: When possible, the Department attempted to determine, quantify and calculate the dollar value for the costs, savings and benefits attributable to the final-form rulemaking based on available information on the environmental impacts, social costs, economic impact analysis and benefit analyses. However, not all of the costs, savings and benefits can be readily quantified.

Note: To estimate the potential cost to the regulated community, local and State governments, the total number of permits processed by the Department over the 3 year period of 2006-2008 was examined and broken into each of the three categories. It was determined that over that 3-year sample, the regulated community performed 80%, local governments 12% and State government 8% of the permitted earth disturbance activities in this Commonwealth.

This final-form rulemaking should not result in significant increased compliance costs for persons proposing or conducting earth disturbance activities. Moderate increased costs may be incurred due to the following: increased permit application fees for activities requiring permits; PCSM Plan licensed professional oversight and preparation of record drawings; and long-term operation and maintenance of PCSM facilities.

Generally, there will be cost savings as a result of eliminating outdated and unnecessary requirements, while increasing the protection of valuable water re-

sources in this Commonwealth. Additionally, the emphasis in the final-form rulemaking on nonstructural "low-impact" stormwater management approaches should result in lower construction costs and long-term operation and management costs.

The final-form rulemaking will apply to individuals or entities seeking authorization to perform activities regulated under Chapter 102.

Existing regulations

It is difficult to assess the ultimate cost of compliance because projects vary greatly in size, scope and purpose. Additionally, land developers have discretion when choosing BMPs to control stormwater both during and after construction. The choices include fairly high cost traditional BMPs as well as lower cost "low-impact" BMPs, which are encouraged in this final-form rulemaking. The choice remains with the land developer.

Cost-bearer	*Expenditures*		*Annual Approx Value*	*Source*
Municipalities	Administrative		$24,720	NPDES IP
			$79,110	GPs
		Total	$103,830	
Private	Administrative		$164,800	NPDES IP
			$527,400	GPs
		Total	$692,200	
Commonwealth	Administrative		$16,480	NPDES IP
			$52,740	GPs
		Total	$69,220	
		Total	$219,375	

The annual approximate value for NPDES stormwater construction permits noted in the previous chart is based on a 3-year (2006-2008) average of permit fees collected and reported in eFACTS and by CDs.

Proposed rulemaking

Cost-bearer	*Expenditures*		*Annual Approx Value*	*Source*
Municipalities	Administrative		$74,160	NPDES IP
	Administrative		$158,220	GPs
	Administrative		$676,400	Disturbance Fee
		Total	$908,784	
Private	Administrative		$494,400	NPDES IP
	Administrative		$1,054,800	GPs
	Administrative		$4,509,400	Disturbance Fee
		Total	$6,058,560	
Commonwealth	Administrative		$49,440	NPDES IP
	Administrative		$105,480	GPs
	Administrative		$450,900	Disturbance Fee
		Total	$605,856	
		Total	$7,573,200	

The additional costs in the final-form rulemaking are for increased permitting fees and the addition of a disturbance fee. The annual approximate value noted in the previous chart is based on an average of 3 years (2006-2008) of activities performed by the Department and the new fee applied to each activity.

Commonwealth

The final-form rulemaking may add approximately $605,856 in additional costs but will provide revenue of $7,573,200 for State government annually associated with the Chapter 102 E&S Control Program. These estimates were calculated utilizing a 3-year average of activities conducted by the Chapter 102 E&S Control Program and projecting these averages with an associated activity cost due to the final-form rulemaking.

The final-form rulemaking ensures protection and maintenance of environmental quality and should reduce costs to the State and local governments as a result of savings from reduced sediment loadings, reduced in-stream pollutant concentrations and reduced pollution associated with changes to stream flow volume and velocity. The final-form rulemaking will also result in savings from BMPs that reduce flooding potential and associated flood damage.

Municipal

This final-form rulemaking is a codification of existing requirements and therefore only minimal costs associated with increased permit fees are anticipated for local government.

The final-form rulemaking will add approximately $804,954 in additional costs associated with the Chapter 102 E&S Control Program which is the difference between $103,830 ($24,720 NPDES IP plus $79,110 NPDES GP) and the increase of fees to $908,784 ($74,160 base NPDES Stormwater Construction IP fee plus $158,220 NPDES GP plus $676,400 disturbance fee) to local governments annually. The Department does not anticipate that CDs delegated the administration of the program will experience any decrease in revenue based from fees under this final-form rulemaking. In addition, CDs could supplement these revenues with their own review fees. The Conservation District Fund Allocation Program also provides revenue to CDs to partially cover the cost of technical positions to implement the program.

Local governments may realize reduced water treatment costs (as a result of reduced sediment and in-stream pollutant loadings), reduced infrastructure maintenance costs (due to reduced stormwater volumes) and reduced costs associated with flooding potential (due to

stormwater management practices that reduce or eliminate flood potential). However, specific cost savings to be realized as a result of this final-form rulemaking are difficult to establish with any certainty and are therefore not identified in this analysis.

This final-form rulemaking reflects a continuing commitment to integrate regulatory requirements with other stormwater management obligations including requirements under Act 167 and the NPDES MS4 program. Local governments with State Act 167 or NPDES MS4 regulatory obligations may rely on the regulatory structure for baseline requirements provided by this final-form rulemaking. This reliance on existing State stormwater programs can represent a significant cost savings to local governments in the form of baseline requirements for E&S control, PCSM and riparian buffer implementation.

Private sector

The cost/benefit to the five largest affected industries with the new Chapter 102 E&S control regulations cannot be addressed since E&S and NPDES are not reoccurring authorizations, nor are they limited to a certain type of industry or project and identifying affected corporations is not possible.

This final-form rulemaking is primarily a codification of existing requirements and therefore costs associated with increased permit fees, as-built drawings and onsite licensed professionals have been considered as potential new costs. Sustainable, natural BMP options that provide lower costs for the regulated community are encouraged. Ultimately, the costs and impacts associated with this final-form rulemaking are decided by the person undertaking the activity and their design professional through the design choices they make. The final-form rulemaking requires that a licensed professional regularly inspect the implementation of critical stages of BMP construction and submit a certification that the BMP is properly constructed. This certification will acknowledge that the BMPs have been properly constructed and are in working order and therefore there will be an improved expectation of optimal performance for the long-term operation. As every project varies in size, scope and design choice, it is difficult for the Department to calculate what a definitive cost will be to the regulated community. The Department is providing the following estimates for time and costs associated with record drawings (2—16 hours) and licensed professional monitoring of critical stages of construction (0—70 hours). The Department calculated the cost for inspection of critical stages and certification of BMP implementation by simply using an average cost for monitoring and certification of $80 per hour for routine monitoring by a designee of a licensed professional and a cost of $115 per hour for the licensed professional services. These services were multiplied by the average of the estimated number of hours for each of the services provided—35 hours for oversight and 8 hours for certification. The resulting value of $2,800 for monitoring and $920 for certification was then multiplied by the average number of permitted activities (2,463 per year) which was derived from program data. The result for average estimated cost for the regulated community is $9,162,360. Again, the costs incurred by a permittee for these new requirements are in direct relation to the type of design chosen for the project. While this is a cost to the regulated community, it also provides benefits of increased assurance that the BMPs will perform as designed thereby providing the desired level of environmental protection or improvement.

The final-form rulemaking will add approximately $5,366,360 in additional costs associated with the Chapter 102 E&S Control and NPDES Stormwater Construction Programs which is the difference between $692,200 ($164,800 NPDES IP plus $527,400 NPDES GP) and the increase of fees to $6,058,560 ($494,400 base NPDES stormwater construction IP fee plus $1,0547,800 NPDES GP plus $4,509,400 disturbance fee) to the private sector annually. The new fees for the Chapter 102 E&S Control Program will close the cost deficit for the administration of the program. Fee schedules have not been updated since 2000 when there was not a per acre of earth disturbance fee for NPDES stormwater construction permits and fees were $250 per permit for GPs and IP fees were $500 per permit. In an effort to reduce the deficit between funds generated and expenditures required to manage the program, this final-form rulemaking sets permit fees as follows: a base administration fee for GPs of $500 per permit or an IP fee of $1,500 per permit, plus a per acre earth disturbance fee of $100 for all permit applications. The fees were developed based on the number of permits issued and number of acres disturbed per permit over the last 3 years. In addition, implementation costs were calculated based upon projected administration, review and implementation time for the program. A more detailed analysis can be found in the fee report form. It should be noted that even though these increases will affect the regulated community, they still will not cover the total Department expenditures required to implement the program.

Potential Riparian Forest Buffer Costs

Land development activities change natural features of the land and alter stormwater runoff characteristics. The resulting alterations of stormwater volume, rate and water quality which can cause stream bank scour, stream destabilization, sedimentation, loss of groundwater recharge, loss of base flow, localized flooding, habitat modification and water quality and quantity impairment, which constitute pollution as that term is defined in section 1 of the act. Riparian buffers, particularly riparian forest buffers, play a vital role in mitigating the effects of stormwater runoff from land development activities. The Department proposes to revise the riparian buffer section to expand riparian buffers in all special protection watersheds and to restore water quality in impaired waters. The final-form rulemaking includes mandatory riparian buffers for activities permitted under Chapter 102 when the project is located along EV or HQ waters. Specifically, protection of existing riparian buffers along EV and HQ waters when the waters are attaining their designated uses and riparian forest buffers where EV or HQ waters are impaired. The mandatory obligation to maintain and protect a 150-foot riparian buffer will be required when the project site contains, is along or within 150 feet of a river, stream, creek, lake, pond or reservoir, and located in either of the following: an EV watershed meeting its designated use at the time of application; or a HQ watershed meeting its designated use at the time of application.

In addition, a mandatory obligation to establish and protect a new riparian forest buffer when the project site contains, is along or within 150 feet of a river, stream, creek, lake, pond or reservoir, when a riparian forest buffer does not currently exist and is located in either of the following: an EV watershed that is listed as impaired at the time of the application; or an HQ watershed that is listed as impaired at the time of application.

EV and HQ waters are afforded the greatest degree of protection under the Department's existing regulations in

Chapter 93. Based on the scientific data, riparian buffers are one of the most effective stormwater management BMPs for protecting aquatic resources.

The potential costs regarding the riparian forest buffer requirements in the final-form rulemaking have been calculated by considering how much it could cost to establish a new riparian buffer when a riparian buffer does not exist as well as enhancing or maintaining an existing riparian buffer. Recognizing that a number of possibilities need to be considered when quantifying total costs that may be experienced when establishing riparian forest buffers throughout this Commonwealth, dollars per acre of riparian forest acre established can range from $385 to $4,723 per acre. The minimum estimate is based on the cost of planting 110 (12-inch to 18-inch) hardwood trees spaced 20 feet apart at $3.50 per tree as a minimum to establish a riparian forest buffer. The maximum potential cost is based on planting 435 (12-inch to 18-inch) hardwood trees ten feet apart at $3.50 per tree as well as removal of invasive species ($200 per acre), reinforcement planting ($175 per acre), seedling protection ($2,175 per acre), competition control such as herbicides and mowing ($650 per acre) altogether could cost as much as $4,723 per acre. However, it is most likely that actual establishment of riparian forest buffers will be less than the maximum estimate due to the variety of conditions in the field. It is also possible that riparian forest buffers already exist when projects may fall within the requirements of this part of the final-form rulemaking. The cost would be $0 per acre when this is the case. The Department estimated potential cost to establish riparian forest buffers on a per acre basis. However, it is nearly impossible to determine the number and size of projects that will occur within impaired HQ and EV watersheds requiring establishment of riparian forest buffers, therefore estimates of total acres are not included.

Potential Riparian Forest Buffer Savings

The potential savings that will result from the development of riparian forest buffers are likely to be experienced through the increase of property values resulting from riparian forest buffers being installed in this Commonwealth along impaired EV and HQ streams as a result of this final-form rulemaking. Establishing a riparian forest buffer is expected to increase property values at least $19,104 per acre (adjusted for inflation). This estimate is based on the 1988 Burby study which examined ten programs throughout the United States that diverted development away from flood-prone areas.

Although the mandatory riparian forest buffer requirement for permitted projects located in EV and HQ watersheds is new, this requirement should not necessarily result in substantial new or increased costs to the regulated community.

Riparian forest buffers may result in a savings when compared to structurally engineered nondischarge BMPs. Additionally, the installation of riparian forest buffers has been shown to increase property values by 5% to 25%, increase and protect water quality and decrease the necessity and cost of restoring impaired waters.

According to EPA estimates, available data regarding post construction stormwater can be found in National studies developed by the EPA and others; however, it would not be accurate to infer potential costs and savings for this Commonwealth based on National studies due to the extreme variability of conditions, size of projects and State requirements. According to EPA estimates published in *Federal Register* on December 8, 1999, estimated post construction costs were $56,122,317 to $227,040,284 (adjusted for inflation) Nationwide annually. This estimate was based on an average costs for PCSM BMPs on project sites of 1, 3, 5 and 7 acres. Annual benefits of the PCSM requirements by the EPA published in *Federal Register* on December 8, 1999, indicate a potential annual benefit of the Phase II Storm Water Rule to be approximately $131 million to $410,200,000 Nationally, after E&S control benefits were removed from the EPA total benefit estimate.

Assumptions

If the average of the estimated activities performed by the Department exceeds the estimated numbers, the Commonwealth could have a significant benefit to the new regulations because the fees collected will be more than the estimated values. If the average of the estimated activities performed by the Department does not exceed the estimated numbers, the Commonwealth could have a significant loss to the new regulations because the fees collected will not be more than the estimated values.

The final-form rulemaking will result in moderate compliance costs for persons proposing or conducting earth disturbance activities. Moderate increased costs may be incurred due to the following: increased permit application fees for activities requiring permits; PCSM Plan licensed professional oversight and preparation of record drawings; and long-term operation and maintenance of PCSM facilities.

Generally, there is an anticipated cost savings as a result of the eliminating outdated and unnecessary requirements, while increasing the protection of valuable water resources in this Commonwealth. Additionally, the emphasis in the final-form rulemaking on nonstructural "low-impact" stormwater management approaches should result in lower long-term operation and management costs.

Compliance Assistance Plan

The regulated community will be notified of fee changes by notice in the *Pennsylvania Bulletin*.

The Department assists the regulated community in complying with this final-form rulemaking through technical and educational assistance, largely provided in partnership with county CDs. These efforts have resulted in local community based initiatives that stimulate awareness and achieve regulatory compliance. Department staff has worked with CDs to develop and enhance their professional abilities for effective administration of the program. The development of compliance strategies that focus on negotiation, total quality management, mediation and professional development has greatly enhanced the Department's ability to protect this Commonwealth's water resources. County CD staff provide an efficient and effective local source of assistance as well as an efficient mechanism for the protection of valuable resources. Evaluations of district performance have shown that district staff can provide a quick response to process, review and acknowledge permit applications.

By involving advisory committees in the development of this final-form rulemaking, and pursuing initiatives with the regulated community and various other stakeholders, the Department's outreach efforts have allowed stakeholders to work together with regulators to work towards the goal of protecting water quality and the aquatic environment through E&S and stormwater management efforts. Involvement of the public and the regulated community in the development of this final-form rulemaking fosters subsequent compliance with standards

and practices developed as a result of these efforts, and are an important form of compliance assistance.

The Department assists the regulated community with compliance by its development of technical guidance documents, standard checklists, worksheets and permit review letters to aid persons responsible for earth disturbance activities and their plan designers in developing sound pollution prevention plans. The Department also assists compliance by assuring that Department and CD reviews are timely, effective and consistent. Finally, the final-form rulemaking incorporates a performance-based approach, which allows persons conducting earth disturbance broad latitude and flexibility in designing BMPs to achieve compliance.

Finally, the effective date of this final-form rulemaking is November 19, 2010 so that the Department may provide the necessary training, compliance assistance, guidance and other information necessary to comply with the final-form rulemaking.

Paperwork Requirements

The majority of the final-form rulemaking codifies existing requirements; therefore, only minor changes to forms, fact sheets and technical guidance are anticipated.

G. *Pollution Prevention*

Chapter 102 prevents sediment and stormwater pollution to surface waters of this Commonwealth from earth disturbance activities through a tiered regulatory framework built upon BMP requirements. This chapter covers both agricultural and nonagricultural earth disturbance activities, with distinct regulatory requirements for these two broad categories. Regardless of the category, earth disturbance activities shall utilize BMPs to minimize accelerated erosion and sedimentation for the duration of earth disturbance activities. Additionally, some earth disturbance activities require preparation of a written E&S Plan. Finally, earth disturbance activities exceeding specified acreage thresholds may trigger the requirement to obtain permit coverage, which in turn includes the obligation to prepare and implement a written PCSM Plan.

The final-form rulemaking will improve protection from earth disturbance activities not only through the inclusion of PCSM requirements, but also through the addition of the riparian forest buffer provisions, which are one of the most effective and sustainable BMPs for protecting, maintaining, reclaiming and restoring surface waters of this Commonwealth.

Effective pollution prevention also requires robust inspection, oversight and enforcement authority, which are retained and enhanced in this final-form rulemaking. The final-form rulemaking adds requirements such as mandatory preconstruction meetings, and licensed professional documentation requirements.

H. *Sunset Review*

This final-form rulemaking will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulations effectively fulfills the goals for which they were intended.

I. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on August 19, 2009, the Department submitted a copy of the notice of proposed rulemaking, published at 39 Pa.B. 5131 (August 29, 2009), to IRRC and the Chairpersons of the Senate and House Environmental Resources and Energy Committees (Committee) for review and comment.

Under section 5(c) of the Regulatory Review Act, IRRC and the Committees were provided with copies of the comments received during the public comment period, as well as other documents when requested. In preparing the final-form rulemaking, the Department has considered all comments from IRRC, the Committees and the public.

Under section 5.1(j.2) of the Regulatory Review Act (71 P. S. § 745.5a(j.2)), on June 8, 2010, the Senate Environmental Resources and Energy Committee and on June 15, 2010, the House Environmental Resources and Energy Committee notified IRRC of their intent to review the final-form rulemaking.

Under section 5.1(j.2) of the Regulatory Review Act (71 P. S. § 745.5a(j.2)), on July 2, 2010, after the conclusion of the additional review period requested by the Committees, the final-form rulemaking was deemed approved by the Committees. Under section 5.1(e) of the Regulatory Review Act, IRRC met on June 17, 2010, and approved the final-form rulemaking.

J. *Findings*

The Board finds that:

(1) Notice of proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P. L. 769, No. 240) and regulations promulgated thereunder, 1 Pa. Code §§ 7.1 and 7.2.

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

(3) This final-form rulemaking does not enlarge the purpose of the proposed rulemaking published at 39 Pa.B. 5131.

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

K. *Order*

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

(a) The regulations of the Department, 25 Pa. Code, Chapter 102, are amended by amending §§ 102.1, 102.2, 102.4—102.7, 102.11, 102.22, 102.31, 102.32 and 102.41—102.43 and adding §§ 102.8 and 102.14 to read as set forth in Annex A.

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

(c) The Chairperson of the Board shall submit this order and Annex A to IRRC and the Committees as required by the Regulatory Review Act.

(d) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.

(e) This order shall take effect on November 19, 2010.

JOHN HANGER,
Chairperson

(*Editor's Note*: The proposal to add § 102.15, included in the proposed rulemaking published at 39 Pa.B. 5131, has been withdrawn by the Board.)

(*Editor's Note*: For the text of the order of the Independent Regulatory Review Commission relating to this document, see 40 Pa.B. 3753 (July 3, 2010).)

Fiscal Note: Fiscal Note 7-440 remains valid for the final adoption of the subject regulations.

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION

PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

Subpart C. PROTECTION OF NATURAL RESOURCES

ARTICLE II. WATER RESOURCES

CHAPTER 102. EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT

GENERAL PROVISIONS

§ 102.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

ABACT—Antidegradation best available combination of technologies—Environmentally sound and cost effective treatment, land disposal, pollution prevention and stormwater reuse BMPs that individually or collectively 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.

Accelerated erosion—The removal of the surface of the land through the combined action of human activities and the natural processes, at a rate greater than would occur because of the natural process alone.

Act 167—The Storm Water Management Act (32 P. S. §§ 680.1—680.17)

Agricultural operation—The management and use of farming resources for production of crops, livestock, or poultry, or for equine activity.

Agricultural plowing or *tilling activity*—

(i) Earth disturbance activity involving the preparation and maintenance of soil for the production of agricultural crops.

(ii) The term includes no-till cropping methods, the practice of planting crops with minimal mechanical tillage.

Along—Touching or contiguous; to be in contact with; to abut upon.

Animal heavy use area—

(i) Barnyard, feedlot, loafing area, exercise lot, or other similar area on an agricultural operation where due to the concentration of animals it is not possible to establish and maintain vegetative cover of a density capable of minimizing accelerated erosion and sedimentation by usual planting methods.

(ii) The term does not include entrances, pathways and walkways between areas where animals are housed or kept in concentration.

BMPs—Best management practices—Activities, facilities, measures, planning or procedures used to minimize accelerated erosion and sedimentation and manage stormwater to protect, maintain, reclaim, and restore the quality of waters and the existing and designated uses of waters within this Commonwealth before, during, and after earth disturbance activities.

Channel—A natural or manmade water conveyance.

Conservation district—A conservation district, as defined in section 3(c) of the Conservation District Law (3 P. S. § 851(c)), which has the authority under a delegation agreement executed with the Department to administer and enforce all or a portion of the erosion, sediment, and stormwater management program in this Commonwealth.

Conservation plan—A plan that identifies conservation practices and includes site specific BMPs for agricultural plowing or tilling activities and animal heavy use areas.

Disturbed area—Unstabilized land area where an earth disturbance activity is occurring or has occurred.

Earth disturbance activity—A construction or other human activity which disturbs the surface of the land, including land clearing and grubbing, grading, excavations, embankments, land development, agricultural plowing or tilling, operation of animal heavy use areas, timber harvesting activities, road maintenance activities, oil and gas activities, well drilling, mineral extraction, and the moving, depositing, stockpiling, or storing of soil, rock or earth materials.

Erosion—The natural process by which the surface of the land is worn away by water, wind or chemical action.

E&S Permit—Erosion and Sediment Control Permit—A permit required for earth disturbance activities where the earth disturbance is associated with timber harvesting, road maintenance activities, or oil and gas activities.

E&S Plan—Erosion and Sediment Control Plan—A site-specific plan consisting of both drawings and a narrative that identifies BMPs to minimize accelerated erosion and sedimentation before, during and after earth disturbance activities.

Intermittent stream—A body of water flowing in a channel or bed composed primarily of substrates associated with flowing water, which, during periods of the year, is below the local water table and obtains its flow from both surface runoff and groundwater discharges.

Licensed professional—Professional engineers, landscape architects, geologists and land surveyors licensed to practice in this Commonwealth.

Long-term operation and maintenance—The routine inspection, maintenance, repair or replacement of a BMP to ensure proper function for the duration of time that the BMP is needed.

Municipality—A county, city, borough, town, township, school district, institution or authority or another public body created by or pursuant to State law. For purposes of this definition, town includes an incorporated town.

NOI—Notice of Intent—A request, on a form provided by the Department, for coverage under a General NPDES Permit for Stormwater Discharges Associated With Construction Activities or an E&S Permit.

NPDES—National Pollutant Discharge Elimination System—The National system for the issuance of permits under section 402 of the Federal Clean Water Act (33 U.S.C.A. § 1342) including a state or interstate program

which has been approved in whole or in part by the EPA, including the regulations codified in Chapter 92 (relating to National Pollutant Discharge Elimination System permitting, monitoring and compliance), and as specified in this chapter.

NPDES Permit for Stormwater Discharges Associated With Construction Activities—A permit required for the discharge or potential discharge of stormwater into waters of this Commonwealth from construction activities, including clearing and grubbing, grading and excavation activities involving 1 acre (0.4 hectare) or more of earth disturbance activity or an earth disturbance activity on any portion, part, or during any stage of, a larger common plan of development or sale that involves 1 acre (0.4 hectare) or more of earth disturbance activity over the life of the project.

Nondischarge alternative—Environmentally sound and cost-effective BMPs that individually or 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.

Normal pool elevation—

(i) For bodies of water which have no structural measures to regulate height of water, the height of water at ordinary stages of low water unaffected by drought.

(ii) For structurally regulated bodies of water, the elevation of the spillway, outlet control, or dam crest which maintains the body of water at a specified height.

(iii) The term does not apply to wetlands.

Notice of termination—A request, on a form provided by the Department, to terminate coverage under a General or Individual NPDES Permit for Stormwater Discharges Associated With Construction Activities or other permits under this chapter.

Oil and gas activities—Earth disturbance associated with oil and gas exploration, production, processing, or treatment operations or transmission facilities.

Operator—A person who has one or more of the following:

(i) Oversight responsibility of earth disturbance activity on a project site or a portion thereof who has the ability to make modifications to the E&S Plan, PCSM Plan or site specifications.

(ii) Day-to-day operational control over earth disturbance activity on a project site or a portion thereof to ensure compliance with the E&S Plan or PCSM Plan.

PCSM—Post construction stormwater management.

PCSM plan—A site-specific plan consisting of both drawings and a narrative that identifies BMPs to manage changes in stormwater runoff volume, rate and water quality after earth disturbance activities have ended and the project site is permanently stabilized.

PPC plan—Preparedness, Prevention and Contingency Plan—A written plan that identifies an emergency response program, material and waste inventory, spill and leak prevention and response, inspection program, housekeeping program, security and external factors, and that is developed and implemented at the construction site to control potential discharges of pollutants other than sediment into waters of this Commonwealth.

Perennial stream—A body of water flowing in a channel or bed composed primarily of substrates associated with flowing waters and capable, in the absence of pollution or other manmade stream disturbances, of supporting a benthic macro-invertebrate community which is composed of two or more recognizable taxonomic groups of organisms which are large enough to be seen by the unaided eye and can be retained by a United States Standard No. 30 sieve (28 meshes per inch, 0.595 mm openings) and live at least part of their life cycles within or upon available substrates in a body of water or water transport system.

Perimeter BMPs—BMPs placed or constructed along the perimeter of an earth disturbance area to prevent runoff from entering the disturbed area, or to capture and treat sediment runoff prior to leaving a disturbed area.

Permanent stabilization—Long-term protection of soil and water resources from accelerated erosion.

Person—Any operator, individual, public or private corporation, partnership, association, municipality or political subdivision of this Commonwealth, institution, authority, firm, trust, estate, receiver, guardian, personal representative, successor, joint venture, joint stock company, fiduciary; Department, agency or instrumentality of State, Federal or local government, or an agent or employee thereof; or any other legal entity.

Pollutant—Any contaminant or other alteration of the physical, chemical, biological or radiological integrity of surface water which causes or has the potential to cause pollution as defined in section 1 of The Clean Streams Law (35 P. S. § 691.1).

Post construction stormwater—Stormwater associated with a project site after the earth disturbance activity has been completed and the project site is permanently stabilized.

Project site—The entire area of activity, development, lease or sale including:

(i) The area of an earth disturbance activity.

(ii) The area planned for an earth disturbance activity.

(iii) Other areas which are not subject to an earth disturbance activity.

Riparian buffer—A BMP that is an area of permanent vegetation along surface waters.

Riparian forest buffer—A type of riparian buffer that consists of permanent vegetation that is predominantly native trees, shrubs and forbs along surface waters that is maintained in a natural state or sustainably managed to protect and enhance water quality, stabilize stream channels and banks, and separate land use activities from surface waters.

Road maintenance activities—

(i) Earth disturbance activities within the existing road cross-section or railroad right-of-way including the following:

(A) Shaping or restabilizing unpaved roads.

(B) Shoulder grading.

(C) Slope stabilization.

(D) Cutting of existing cut slopes.

(E) Inlet and endwall cleaning.

(F) Reshaping and cleaning drainage ditches and swales.

(G) Pipe cleaning.

(H) Pipe replacement.

(I) Support activities incidental to resurfacing activities such as minor vertical adjustment to meet grade of resurfaced area.

(J) Ballast cleaning.

(K) Laying additional ballast.

(L) Replacing ballast, ties and rails.

(M) Other similar activities.

(ii) The existing road cross-section consists of the original graded area between the existing toes of fill slopes and tops of cut slopes on either side of the road and any associated drainage features.

Sediment—Soils or other erodible materials transported by stormwater as a product of erosion.

Sedimentation—The action or process of forming or depositing sediment in waters of this Commonwealth.

Soil loss tolerance (T)—The maximum amount of soil loss, in tons/acre/year, that a given soil type can tolerate and still permit a high level of crop production to be sustained economically and indefinitely. T values for various soil types may be obtained from the *Pennsylvania Soil and Water Conservation Technical Guide*, USDA NRCS, 1991 (as amended and updated).

Stabilization—The proper placing, grading, constructing, reinforcing, lining, and covering of soil, rock or earth to ensure their resistance to erosion, sliding or other movement.

Stormwater—Runoff from precipitation, snowmelt, surface runoff and drainage.

Surface waters—Perennial and intermittent streams, rivers, lakes, reservoirs, ponds, wetlands, springs, natural seeps, and estuaries, excluding water at facilities approved for wastewater treatment such as wastewater treatment impoundments, cooling water ponds, and constructed wetlands used as part of a wastewater treatment process.

Timber harvesting activities—Earth disturbance activities including the construction of skid trails, logging roads, landing areas and other similar logging or silvicultural practices.

Top of streambank—First substantial break in slope between the edge of the bed of the stream and the surrounding terrain. The top of streambank can either be a natural or constructed (that is, road or railroad grade) feature, lying generally parallel to the watercourse.

Waters of this Commonwealth—Rivers, streams, creeks, rivulets, impoundments, ditches, watercourses, storm sewers, lakes, dammed water, wetlands, ponds, springs and other bodies or channels of conveyance of surface and underground water, or parts thereof, whether natural or artificial, within or on the boundaries of this Commonwealth.

§ 102.2. Scope and purpose.

(a) This chapter requires persons proposing or conducting earth disturbance activities to develop, implement and maintain BMPs to minimize the potential for accelerated erosion and sedimentation and to manage post construction stormwater.

(b) The BMPs shall be undertaken to protect, maintain, reclaim and restore water quality and the existing and designated uses of waters of this Commonwealth.

§ 102.4. Erosion and sediment control requirements.

(a) For agricultural plowing or tilling activities or for animal heavy use areas, the following erosion and sediment control requirements apply:

(1) The implementation and maintenance of erosion and sediment control BMPs are required to minimize the potential for accelerated erosion and sedimentation, including for those activities which disturb less than 5,000 square feet (464.5 square meters).

(2) Written E&S Plans are required for the following activities that disturb 5,000 square feet (464.5 square meters) or more of land:

(i) Agricultural plowing or tilling activities.

(ii) Animal heavy use areas.

(3) The landowner, and any lessee, renter, tenant or other land occupier, conducting or planning to conduct agricultural plowing or tilling activities, or operating an animal heavy use area, are jointly and individually responsible for developing a written E&S Plan and implementing and maintaining BMPs, including those identified in the E&S Plan.

(4) The E&S Plan must include cost-effective and reasonable BMPs designed to minimize the potential for accelerated erosion and sedimentation from agricultural plowing or tilling activities and animal heavy use areas.

(i) For agricultural plowing or tilling activities, the E&S Plan must, at a minimum, limit soil loss from accelerated erosion to the soil loss tolerance (T) over the planned crop rotation.

(ii) For agricultural plowing and tilling activities that will occur on fields with less than 25% plant cover or crop residue cover and within 100 feet of a river, or perennial or intermittent stream, additional BMPs shall be implemented to minimize accelerated erosion and sedimentation.

(iii) For animal heavy use areas, the E&S Plan must identify BMPs to minimize accelerated erosion and sedimentation. BMPs and their design standards are listed in the current amended and updated version of the appropriate National Resources Conservation Service conservation practice standards such as Heavy Use Area Protection, Critical Area Planting, Fencing, Wastewater Treatment Strip, Constructed Wetland, Use Exclusion, Animal Trails and Walkways, Diversions and Roof Runoff Structure.

(5) The E&S Plan must contain plan maps that show the location of features including surface waters of this Commonwealth, and drainage patterns, field and property boundaries, buildings and farm structures, animal heavy use areas, roads and crossroads, and BMPs; soils maps; and a description of BMPs including animal heavy use area practices and procedures, tillage systems, schedules, and crop rotations. The plan must be consistent with the current conditions and activities on the agricultural operation.

(6) The E&S Plan must contain an implementation schedule. The plan shall be implemented according to the schedule, and the BMPs shall be operated and maintained as long as there are agricultural plowing or tilling activities or animal heavy use areas, on the agricultural operation.

(7) The portion of a conservation plan that identifies BMPs utilized to minimize accelerated erosion and sedi-

mentation from agricultural plowing or tilling activities, or from operation of animal heavy use areas, may be used to satisfy the E&S Plan requirements of this subsection if it meets the requirements of paragraphs (4)—(6).

(8) The E&S Plan shall be available for review and inspection at the agricultural operation.

(9) Nothing in this section negates the requirements under other provisions of this chapter, such as those applicable to construction activities.

(b) For earth disturbance activities other than agricultural plowing or tilling or animal heavy use areas, the following erosion and sediment control requirements apply:

(1) The implementation and maintenance of E&S BMPs are required to minimize the potential for accelerated erosion and sedimentation, including those activities which disturb less than 5,000 square feet (464.5 square meters).

(2) A person proposing earth disturbance activities shall develop and implement a written E&S Plan under this chapter if one or more of the following criteria apply:

(i) The earth disturbance activity will result in a total earth disturbance of 5,000 square feet (464.5 square meters) or more.

(ii) The person proposing the earth disturbance activities is required to develop an E&S Plan under this chapter or under other Department regulations.

(iii) The earth disturbance activity, because of its proximity to existing drainage features or patterns, has the potential to discharge to a water classified as a High Quality or Exceptional Value water under Chapter 93 (relating to water quality standards).

(3) The E&S Plan shall be prepared by a person trained and experienced in E&S control methods and techniques applicable to the size and scope of the project being designed.

(4) Unless otherwise authorized by the Department or conservation district after consultation with the Department, earth disturbance activities shall be planned and implemented to the extent practicable in accordance with the following:

(i) Minimize the extent and duration of the earth disturbance.

(ii) Maximize protection of existing drainage features and vegetation.

(iii) Minimize soil compaction.

(iv) Utilize other measures or controls that prevent or minimize the generation of increased stormwater runoff.

(5) The E&S Plan must contain drawings and narrative which describe the following:

(i) The existing topographic features of the project site and the immediate surrounding area.

(ii) The types, depth, slope, locations and limitations of the soils.

(iii) The characteristics of the earth disturbance activity, including the past, present and proposed land uses and the proposed alteration to the project site.

(iv) The volume and rate of runoff from the project site and its upstream watershed area.

(v) The location of all surface waters of this Commonwealth which may receive runoff within or from the project site and their classification under Chapter 93.

(vi) A narrative description of the location and type of perimeter and onsite BMPs used before, during and after the earth disturbance activity.

(vii) A sequence of BMP installation and removal in relation to the scheduling of earth disturbance activities, prior to, during and after earth disturbance activities that ensure the proper functioning of all BMPs.

(viii) Supporting calculations and measurements.

(ix) Plan drawings.

(x) A maintenance program which provides for the operation and maintenance of BMPs and the inspection of BMPs on a weekly basis and after each stormwater event, including the repair or replacement of BMPs to ensure effective and efficient operation. The program must provide for completion of a written report documenting each inspection and all BMP repair, or replacement and maintenance activities.

(xi) Procedures which ensure that the proper measures for the recycling or disposal of materials associated with or from the project site will be undertaken in accordance with this title.

(xii) Identification of the naturally occurring geologic formations or soil conditions that may have the potential to cause pollution during earth disturbance activities and include BMPs to avoid or minimize potential pollution and its impacts from the formations.

(xiii) Identification of potential thermal impacts to surface waters of this Commonwealth from the earth disturbance activity including BMPs to avoid, minimize or mitigate potential pollution from thermal impacts.

(xiv) The E&S Plan shall be planned, designed and implemented to be consistent with the PCSM Plan under § 102.8 (relating to PCSM requirements). Unless otherwise approved by the Department, the E&S Plan must be separate from the PCSM Plan and labeled "E&S" or "Erosion and Sediment Control Plan" and be the final plan for construction.

(xv) Identification of existing and proposed riparian forest buffers.

(6) To satisfy the antidegradation implementation requirements in § 93.4c(b) (relating to implementation of antidegredation requirements), for an earth disturbance activity that requires a permit under this chapter and for which any receiving surface waters of this Commonwealth is classified as High Quality or Exceptional Value under Chapter 93, the person proposing the activity shall, in the permit application, do the following:

(i) Evaluate and include nondischarge alternatives in the E&S Plan, unless a person demonstrates that nondischarge alternatives do not exist for the project.

(ii) If the person makes the demonstration in subparagraph (i) that nondischarge alternatives do not exist for the project, the E&S Plan must include ABACT, except as provided in § 93.4c(b)(1)(iii).

(iii) For purposes of this chapter, nondischarge alternatives and ABACT and their design standards are listed in the *Erosion and Sediment Pollution Control Program Manual*, Commonwealth of Pennsylvania, Department of Environmental Protection, No. 363-2134-008 (April 2000), as amended and updated.

(7) The Department may approve alternative BMPs which will maintain and protect existing water quality and existing and designated uses.

(8) The E&S Plan, inspection reports and monitoring records shall be available for review and inspection by the Department or the conservation district at the project site during all stages of the earth disturbance activity.

(9) Upon complaint or site inspection, the Department or conservation district may require that the E&S Plan be submitted for review and approval to ensure compliance with this chapter.

(c) The Department may require, or the conservation district after consultation with the Department may require, other information necessary to adequately review a plan, or may require alternative BMPs, on a case-by-case basis, when necessary to ensure the maintenance and protection of water quality and existing and designated uses.

(d) A person proposing or conducting an earth disturbance activity shall obtain the other necessary permits and authorizations from the Department or conservation district, related to the earth disturbance activity, before commencing the earth disturbance activity.

(e) Persons proposing an earth disturbance activity that requires permit coverage under § 102.5 (relating to permit requirements) shall have permit coverage prior to commencing the earth disturbance activity.

§ 102.5. Permit requirements.

(a) Other than agricultural plowing or tilling activities, animal heavy use areas, timber harvesting activities or road maintenance activities, a person proposing an earth disturbance activity that involves equal to or greater than 1 acre (0.4 hectare) of earth disturbance, or an earth disturbance on any portion, part, or during any stage of, a larger common plan of development or sale that involves equal to or greater than 1 acre (0.4 hectare) of earth disturbance, shall obtain an individual NPDES Permit or coverage under a general NPDES permit for Stormwater Discharges Associated With Construction Activities prior to commencing the earth disturbance activity. In addition to other applicable requirements, persons required to obtain an Individual NPDES Permit for Stormwater Discharges Associated With Construction Activities for projects proposed in special protection watersheds shall evaluate and use BMPs in accordance with antidegradation requirements in §§ 102.4(b)(6) and 102.8(h) (relating to erosion and sediment control requirements; and PCSM requirements) regardless of whether the discharge is new, additional or increased.

(b) A person proposing a timber harvesting or road maintenance activity involving 25 acres (10 hectares) or more of earth disturbance shall obtain an E&S Permit under this chapter prior to commencing the earth disturbance activity.

(c) A person proposing oil and gas activities that involve 5 acres (2 hectares) or more of earth disturbance over the life of the project shall obtain an E&S Permit under this chapter prior to commencing the earth disturbance activity.

(d) Other than agricultural plowing or tilling activities, animal heavy use areas, timber harvesting or road maintenance activities, a person proposing earth disturbance activities that involve 5 acres (2 hectares) or more of earth disturbance over the life of the project that do not require a permit under subsections (a), (b), and (c), shall obtain an E&S Permit under this chapter prior to commencing the earth disturbance activity.

(e) For earth disturbance activities authorized by a permit under this chapter, a preconstruction meeting is required unless the permittee has been notified otherwise in writing by the Department or conservation district. The permittee shall invite the Department or conservation district to attend the preconstruction meeting and provide at least 7 days notice of the preconstruction meeting to all invited attendees. Permittees, co-permittees, operators, and licensed professionals or designees responsible for the earth disturbance activity, including implementation of E&S and PCSM Plans and critical stages of implementation of the approved PCSM Plan, shall attend a preconstruction meeting.

(f) A person proposing earth disturbance activities requiring a permit or permit coverage under this chapter shall be responsible to ensure implementation of the PCSM Plan.

(g) A person proposing or conducting an earth disturbance activity approved under a Department permit issued under a chapter other than Chapter 92 (relating to National Pollutant Discharge Elimination System permitting, monitoring and compliance) or this chapter, which includes requirements to comply with Chapter 92 and this chapter, need not obtain an additional E&S Permit or NPDES Permit for Stormwater Discharges Associated With Construction Activities.

(h) Operators who are not the permittee shall be co-permittees.

(i) A person proposing or conducting an earth disturbance activity associated with discharging dredged or fill material to waters of the United States which is required to obtain a permit or coverage under a permit under section 404 of the Federal Clean Water Act (33 U.S.C.A. § 1344) need not obtain an additional E&S Permit or NPDES Permit for Stormwater Discharges Associated With Construction Activities for the area of disturbance covered by the Clean Water Act section 404 permit.

(j) A person proposing or conducting agricultural plowing or tilling activities or animal heavy use areas is not required to obtain an E&S Permit, or an NPDES Permit for Stormwater Discharges Associated With Construction Activities, for these activities under this chapter.

(k) A person proposing or conducting an earth disturbance activity who is not required to obtain a permit under this chapter shall comply with the other provisions of this chapter.

(l) A person shall prepare and implement a PPC Plan when storing, using or transporting materials including: fuels, chemicals, solvents, pesticides, fertilizers, lime, petrochemicals, wastewater, wash water, core drilling wastewater, cement, sanitary wastes, solid wastes or hazardous materials onto, on or from the project site during earth disturbance activities. The PPC Plan shall be available upon request by the Department or conservation district.

(m) The Department may issue general permits for activities not subject to NPDES requirements.

(1) *Authorization.* The Department may issue a general permit on a regional or Statewide basis or limited to specific watersheds, particular categories of streams or designated geographic regions, for a category of activities not subject to the NPDES requirements, but regulated under this chapter, if the Department determines the following:

(i) The projects in the category are similar in nature.

(ii) The projects in the category can be adequately regulated utilizing standardized specifications and condi-

tions, including reference to specific criteria and requirements adopted by another Federal or State agency which adequately regulate the particular category of activities.

(iii) The projects which are in the category and meet the specifications and conditions will comply with this chapter.

(iv) The projects which are in the category in the opinion of the Department are more appropriately controlled under a general permit than under individual permits.

(v) The projects which are in the category individually and cumulatively do not have the potential to cause significant adverse environmental impact.

(2) *Contents of general permits.* Each general permit issued by the Department will include the following contents:

(i) A concise description of the category of activity covered by the general permit, including exceptions to that category.

(ii) A specification of the watersheds, streams or geographic areas where the general permit is effective.

(iii) A set of standardized specifications for the particular category of activity or a reference to specific criteria and requirements adopted by another Federal or State agency which adequately regulates the particular category of activity.

(iv) A set of conditions governing the activities, operation, maintenance, inspection and monitoring of the projects covered by the general permit as are necessary to assure compliance with this chapter and with other laws administered by the Department.

(v) A specification of the process for obtaining coverage under and authorization to use the general permit.

(3) *Procedure for issuance.*

(i) At least 30 days prior to issuance of a general permit, the Department:

(A) Will publish notice in the *Pennsylvania Bulletin* of intent to issue a general permit, including the text of the proposed general permit.

(B) Will provide an opportunity for interested members of the public, Federal and State agencies to provide written comments on a proposed general permit.

(C) May, at its discretion, hold a public hearing on a proposed general permit for the purposes of gathering information and comments.

(ii) Upon issuance of a general permit, the Department will place a notice in the *Pennsylvania Bulletin* of the availability of the general permit.

(4) *Compliance with permit conditions, regulations and laws.* A person who conducts an activity under a general permit issued under this subsection shall comply with the terms and conditions of the general permit, with this chapter and other applicable laws.

(5) *Adminstration of general permits.* General permits may be issued, amended, suspended, revoked, reissued or terminated under this chapter. Issuance of a general permit does not exempt a person from compliance with this title.

(6) *Denial of coverage.* The Department may deny, revoke, suspend or terminate coverage under a general permit for failure to comply with The Clean Streams Law (35 P. S. §§ 691.1—691.1001), this chapter or the conditions of the general permit and the Department may require the person to apply for an individual permit.

§ 102.6. Permit applications and fees.

(a) *Permit requirements.* A person proposing or conducting an earth disturbance activity which requires a permit under § 102.5 (relating to permit requirements) shall:

(1) Submit to the Department or a conservation district a complete application or NOI, an E&S Plan meeting the requirements of § 102.4 (relating to erosion and sediment control requirements), a PCSM Plan meeting the requirements of § 102.8 (relating to PCSM requirements), and other information the Department may require. Unless otherwise specified in this chapter, for NPDES permits, the application or NOI must also meet the requirements in Chapter 92 (relating to National Pollutant Discharge Elimination System permitting, monitoring and compliance).

(2) Provide proof of consultation with the Pennsylvania Natural Heritage Program (PNHP) regarding the presence of a State or Federal threatened or endangered species on the project site. If the Department or conservation district determines, based upon PNHP data or other sources, that the proposed earth disturbance activity may adversely impact the species or critical habitat, the person proposing the earth disturbance activity shall consult with the Department or conservation district to avoid or prevent the impact. If the impact cannot be avoided or prevented, the person proposing the activity shall demonstrate how the impacts will be minimized in accordance with State and Federal laws pertaining to the protection of threatened or endangered flora and fauna and their habitat.

(b) *Permit fees.*

(1) A person submitting a permit application or NOI shall submit a fee as follows: a $500 administrative filing fee for general permits and a $1,500 administrative filing fee for individual permits. In addition, $100 for each disturbed acre is required to be added to the base administrative filing fee for projects of 1 acre or greater of disturbance. The fees will be calculated based upon the following formula: base fee plus $100 for each disturbed acre. For fractional acreage, the acreage shall be rounded to the closest whole number.

(2) The Department will review the adequacy of the fees established in this section at least once every 3 years and provide a written report to the EQB. The report will identify any disparity between the amount of program income generated by the fees and the costs to administer these programs, and contain recommendations to adjust fees to eliminate the disparity, including recommendations for regulatory amendments.

(3) Conservation districts may charge additional fees in accordance with section 9(13) of the Conservation District Law (3 P. S. § 857(13)).

(4) A Federal or State agency or independent State commission that provides funding for program administration by the Department through terms and conditions of a mutual agreement may be exempt from the fees in this section.

(5) Fees collected by the Department or conservation district under this chapter will be deposited into a restricted revenue account known as the Clean Water Fund and utilized to offset the operating costs to administer the program.

(c) *Complete applications or NOI.*

(1) An application or NOI for a permit is not complete until the necessary information and requirements under The Clean Streams Law (35 P. S. §§ 691.1—691.1001) and this chapter have been satisfied by the applicant.

(2) When the Department or conservation district determines that an application or NOI is incomplete or contains insufficient information to determine compliance with this chapter, it will notify the applicant in writing. The applicant shall have 60 days to provide the information necessary to complete the application or NOI, or the Department or conservation district will consider the application to be withdrawn by the applicant. Requests for a specific extension may be sought by the applicant in writing. The applicant will be notified in writing when an application or NOI is considered withdrawn. When an application or NOI is considered withdrawn, the Department or conservation district will close the application file and take no action to review the file.

(3) If the application has been withdrawn in accordance with subsection (c)(2), the fees associated with filing the application will not be refunded.

§ 102.7. Permit termination.

(a) Upon permanent stabilization of the earth disturbance activity under § 102.22(a)(2) (relating to permanent stabilization), and installation of BMPs in accordance with an approved plan prepared and implemented in accordance with §§ 102.4 and 102.8 (relating to erosion and sediment control requirements; and PCSM requirements), the permittee or co-permittee shall submit a notice of termination to the Department or conservation district.

(b) The notice of termination must include:

(1) The facility name, address and location.

(2) The operator name and address.

(3) The permit number.

(4) The reason for permit termination.

(5) Identification of the persons who have agreed to and will be responsible for long-term operation and maintenance of the PCSM BMPs in accordance with § 102.8(m) and proof of compliance with § 102.8(m)(2).

(c) Until the permittee or co-permittee has received written approval of a notice of termination, the permittee or co-permittee will remain responsible for compliance with the permit terms and conditions including long-term operation and maintenance of all PCSM BMPs on the project site and is responsible for violations occurring on the project site. The Department or conservation district will conduct a final inspection and approve or deny the notice of termination within 30 days.

§ 102.8. PCSM requirements.

(a) *PCSM applicability.* After November 19, 2010, a person proposing a new earth disturbance activity that requires permit coverage under this chapter or other new Department permit that requires compliance with this chapter shall be responsible to ensure that a written PCSM Plan is developed, implemented, operated and maintained in accordance with this section. A person conducting earth disturbance activities under a permit issued before November 19, 2010, and renewed prior to January 1, 2013, shall implement, operate and maintain the PCSM requirements in accordance with the terms and conditions of the existing permit. After January 1, 2013, the renewal of a permit issued before November 19, 2010, shall comply with this section.

(b) *General PCSM planning and design.* The management of post construction stormwater shall be planned and conducted to the extent practicable in accordance with the following:

(1) Preserve the integrity of stream channels and maintain and protect the physical, biological and chemical qualities of the receiving stream.

(2) Prevent an increase in the rate of stormwater runoff.

(3) Minimize any increase in stormwater runoff volume.

(4) Minimize impervious areas.

(5) Maximize the protection of existing drainage features and existing vegetation.

(6) Minimize land clearing and grading.

(7) Minimize soil compaction.

(8) Utilize other structural or nonstructural BMPs that prevent or minimize changes in stormwater runoff.

(c) *Consistency with E&S Plan.* The PCSM Plan shall be planned, designed and implemented to be consistent with the E&S Plan under § 102.4(b) (relating to erosion and sediment control requirements).

(d) *Separate plan.* Unless otherwise approved by the Department, the PCSM Plan must be separate from the E&S Plan and labeled "PCSM" or "Post Construction Stormwater Management Plan" and be the final plan for construction.

(e) *PCSM Plan preparer requirements.* The PCSM Plan shall be prepared by a person trained and experienced in PCSM design methods and techniques applicable to the size and scope of the project being designed.

(f) *PCSM Plan contents.* The PCSM Plan must contain drawings and a narrative consistent with the requirements of this chapter. The PCSM Plan shall be designed to minimize the threat to human health, safety and the environment to the greatest extent practicable. PCSM Plans must contain at a minimum the following:

(1) The existing topographic features of the project site and the immediate surrounding area.

(2) The types, depth, slope, locations and limitations of the soils and geologic formations.

(3) The characteristics of the project site, including the past, present and proposed land uses and the proposed alteration to the project site.

(4) An identification of the net change in volume and rate of stormwater from preconstruction hydrology to post construction hydrology for the entire project site and each drainage area.

(5) An identification of the location of surface waters of this Commonwealth, which may receive runoff within or from the project site and their classification under Chapter 93 (relating to water quality standards).

(6) A written description of the location and type of PCSM BMPs including construction details for permanent stormwater BMPs including permanent stabilization specifications and locations.

(7) A sequence of PCSM BMP implementation or installation in relation to earth disturbance activities of the project site and a schedule of inspections for critical stages of PCSM BMP installation.

(8) Supporting calculations.

(9) Plan drawings.

(10) A long-term operation and maintenance schedule, which provides for inspection of PCSM BMPs, including the repair, replacement, or other routine maintenance of the PCSM BMPs to ensure proper function and operation. The program must provide for completion of a written report documenting each inspection and all BMP repair and maintenance activities and how access to the PCSM BMPs will be provided.

(11) Procedures which ensure that the proper measures for recycling or disposal of materials associated with or from the PCSM BMPs are in accordance with Department laws, regulations and requirements.

(12) An identification of naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities are completed and PCSM BMPs are operational and development of a management plan to avoid or minimize potential pollution and its impacts.

(13) An identification of potential thermal impacts from post construction stormwater to surface waters of this Commonwealth including BMPs to avoid, minimize or mitigate potential pollution from thermal impacts.

(14) A riparian forest buffer management plan when required under § 102.14 (relating to riparian buffer requirements).

(15) Additional information requested by the Department.

(g) *PCSM Plan stormwater analysis.* Except for regulated activities that require site restoration or reclamation, and small earth disturbance activities identified in subsection (n), PCSM Plans for proposed activities requiring a permit under this chapter require the following additional information:

(1) Predevelopment site characterization and assessment of soil and geology including appropriate infiltration and geotechnical studies that identify location and depths of test sites and methods used.

(2) Analysis demonstrating that the PCSM BMPs will meet the volume reduction and water quality requirements specified in an applicable Department approved and current Act 167 stormwater management watershed plan; or manage the net change for storms up to and including the 2-year/24-hour storm event when compared to preconstruction runoff volume and water quality. The analysis for the 2-year/24-hour storm event shall be conducted using the following minimum criteria:

(i) Existing predevelopment nonforested pervious areas must be considered meadow in good condition or its equivalent except for repair, reconstruction or restoration of roadways or rail lines, or construction, repair, reconstruction or restoration of utility infrastructure when the site will be returned to existing condition.

(ii) When the existing project site contains impervious area, 20% of the existing impervious area to be disturbed must be considered meadow in good condition or better, except for repair, reconstruction or restoration of roadways or rail lines, or construction, repair, reconstruction, or restoration of utility infrastructure when the site will be returned to existing condition.

(iii) When the existing site contains impervious area and the existing site conditions have public health, safety or environmental limitations, the applicant may demonstrate to the Department that it is not practicable to satisfy the requirement in subparagraph (ii), but the stormwater volume reduction and water quality treatment will be maximized to the extent practicable to maintain and protect existing water quality and existing and designated uses.

(iv) Approaches other than that required under paragraph (2) may be proposed by the applicant when the applicant demonstrates to the Department that the alternative will either be more protective than required under paragraph (2) or will maintain and protect existing water quality and existing and designated uses by maintaining the site hydrology, water quality, and erosive impacts of the conditions prior to initiation of any earth disturbance activities.

(3) Analysis demonstrating that the PCSM BMPs will meet the rate requirements specified in an applicable Department approved and current Act 167 stormwater management watershed plan; or manage the net change in peak rate for the 2-, 10-, 50-, and 100-year/24-hour storm events in a manner not to exceed preconstruction rates.

(i) Hydrologic computations or a routing analysis are required to demonstrate that this requirement has been met.

(ii) Exempt from this requirement are Department-approved direct discharges to tidal areas or Department-approved no detention areas.

(iii) Approaches other than that required under paragraph (3) may be proposed by the applicant when the applicant demonstrates to the Department that the alternative will either be more protective than required under paragraph (3) or will maintain and protect existing water quality and existing and designated uses by maintaining the preconstruction site hydrologic impact.

(4) Identification of the methodologies for calculating the total runoff volume and peak rate of runoff and provide supporting documentation and calculations.

(5) Identification of construction techniques or special considerations to address soil and geologic limitations.

(6) The Department may require, or after consultation with the Department a conservation district may require additional information necessary to adequately review a PCSM Plan or may require additional BMPs, on a case-by-case basis, when necessary to ensure the restoration, maintenance and protection of water quality and existing and designated uses.

(h) *PCSM implementation for special protection waters.* To satisfy the antidegradation implementation requirements in § 93.4c(b) (relating to implementation of antidegradation requirements), an earth disturbance activity that requires a permit under this chapter and for which any receiving water that is classified as High Quality or Exceptional Value under Chapter 93, the person proposing the activity shall, in the permit application, do the following:

(1) Evaluate and include nondischarge alternatives in the PCSM Plan unless a person demonstrates that nondischarge alternatives do not exist for the project.

(2) If the person makes the demonstration in paragraph (1) that nondischarge alternatives do not exist for the project, the PCSM Plan must include ABACT, except as provided in § 93.4c(b)(1)(iii).

(3) For purposes of this chapter, nondischarge alternatives and ABACT and their design standards are listed in the *Pennsylvania Stormwater Best Management Practices*

Manual Commonwealth of Pennsylvania, Department of Environmental Protection, No. 363-0300-002 (December 2006), as amended and updated.

(i) *Complaint or site inspection.* Upon complaint or site inspection, the Department or conservation district may require that the PCSM Plan be submitted for review and approval to ensure compliance with this chapter.

(j) *PCSM reporting and recordkeeping.* The PCSM Plan, inspection reports and monitoring records shall be available for review and inspection by the Department or the conservation district.

(k) *Licensed professional oversight of critical stages.* A licensed professional or a designee shall be present onsite and be responsible during critical stages of implementation of the approved PCSM Plan. The critical stages may include the installation of underground treatment or storage BMPs, structurally engineered BMPs, or other BMPs as deemed appropriate by the Department or the conservation district.

(l) *Final certification.* The permittee shall include with the notice of termination "Record Drawings" with a final certification statement from a licensed professional, which reads as follows:

> "I (name) do hereby certify pursuant to the penalties of 18 Pa.C.S.A. § 4904 to the best of my knowledge, information and belief, that the accompanying record drawings accurately reflect the as-built conditions, are true and correct, and are in conformance with Chapter 102 of the rules and regulations of the Department of Environmental Protection and that the project site was constructed in accordance with the approved PCSM Plan, all approved plan changes and accepted construction practices."

(1) The permittee shall retain a copy of the record drawings as a part of the approved PCSM Plan.

(2) The permittee shall provide a copy of the record drawings as a part of the approved PCSM Plan to the person identified in this section as being responsible for the long-term operation and maintenance of the PCSM BMPs.

(m) *PCSM long-term operation and maintenance requirements.*

(1) The permittee or co-permittee shall be responsible for long-term operation and maintenance of PCSM BMPs unless a different person is identified in the notice of termination and has agreed to long-term operation and maintenance of PCSM BMPs.

(2) For any property containing a PCSM BMP, the permittee or co-permittee shall record an instrument with the recorder of deeds which will assure disclosure of the PCSM BMP and the related obligations in the ordinary course of a title search of the subject property. The recorded instrument must identify the PCSM BMP, provide for necessary access related to long-term operation and maintenance for PCSM BMPs and provide notice that the responsibility for long-term operation and maintenance of the PCSM BMP is a covenant that runs with the land that is binding upon and enforceable by subsequent grantees, and provide proof of filing with the notice of termination under § 102.7(b)(5) (relating to permit termination).

(3) For Commonwealth owned property, a covenant that runs with the land is not required until the transfer of the land containing a PCSM BMP occurs. Upon transfer of the Commonwealth-owned property containing a PCSM BMP, the deed must comply with this subsection.

(4) The person responsible for performing long-term operation and maintenance may enter into an agreement with another person including a conservation district, nonprofit organization, municipality, authority, private corporation or other person, to transfer the responsibility for PCSM BMPs or to perform long-term operation and maintenance and provide notice thereof to the Department.

(5) A permittee or co-permittee that fails to transfer long-term operation and maintenance of the PCSM BMP or otherwise fails to comply with this requirement shall remain jointly and severally responsible with the landowner for long-term operation and maintenance of the PCSM BMPs located on the property.

(n) *Regulated activities that require site restoration or reclamation, and small earth disturbance activities.* The portion of a site reclamation or restoration plan that identifies PCSM BMPs to manage stormwater from oil and gas activities or mining activities permitted in accordance with Chapters 78 and 86—90; timber harvesting activities; pipelines; other similar utility infrastructure; Department permitted activities involving less than 1 acre of earth disturbance; or abandoned mine land reclamation activities, that require compliance with this chapter, may be used to satisfy the requirements of this section if the PCSM, reclamation or restoration plan meets the requirements of subsections (b), (c), (e), (f), (h), (i) and (l) and, when applicable, subsection (m).

EROSION AND SEDIMENT CONTROL AND POST CONSTRUCTION STORMWATER MANAGEMENT BMPs

§ 102.11. General requirements.

(a) *BMP and design standards.* A person conducting or proposing to conduct an earth disturbance activity shall:

(1) Design, implement and maintain E&S BMPs to minimize the potential for accelerated erosion and sedimentation to protect, maintain, reclaim and restore water quality and existing and designated uses. Various E&S BMPs and their design standards are listed in the *Erosion and Sediment Pollution Control Program Manual (Manual)*, Commonwealth of Pennsylvania, Department of Environmental Protection, No. 363-2134-008 (April 2000), as amended and updated.

(2) If required to develop a PCSM Plan, design, implement and maintain PCSM BMPs to mimic preconstruction stormwater runoff conditions to protect, maintain, reclaim and restore water quality and existing and designated uses. Various PCSM BMPs and their design standards are listed in the *Pennsylvania Stormwater Best Management Practices Manual* (Stormwater BMP Manual), Commonwealth of Pennsylvania, Department of Environmental Protection, No. 363-0300-002 (December 2006), as amended and updated.

(3) If required to develop a riparian forest buffer, design, implement and maintain the buffer in accordance with § 102.14 (relating to riparian buffer requirements). Various design, construction and maintenance standards are listed in the *Riparian Forest Buffer Guidance*, (*Buffer Guidance*), Commonwealth of Pennsylvania, Department of Environmental Protection, No. 395-5600-001 (2009), as amended and updated.

(4) If required to develop a PPC Plan, the person shall design, implement, and maintain the PPC Plan to protect

waters of this Commonwealth from discharges of pollutants from accidental spills, releases or other activities and meet the requirements identified in Chapter 91 (relating to general provisions). Guidance for PPC Plans is included in the *Guidelines for the Development and Implementation of Environmental Emergency Response Plans*, Commonwealth of Pennsylvania, Department of Environmental Protection, No. 400-2200-001, as amended and updated.

(b) *Alternative BMP and design standards.* BMPs and design standards other than those listed in the manuals or *Buffer Guidance* may be used when a person conducting or proposing to conduct an earth disturbance activity demonstrates to the Department that the alternate BMP or design standard minimizes accelerated erosion and sedimentation or manages stormwater during and after the completion of earth disturbance activities to achieve the regulatory standards in subsection (a).

(c) *Incorporation of Federal effluent limitation guidelines and standards for the construction and development point source category, 40 CFR Part 450.* Activities requiring an NPDES permit under this chapter must also comply with 40 CFR Part 450 (relating to construction and development point source category), including all appendices thereto, which are incorporated by reference to the extent that these provisions are applicable and not contrary to Pennsylvania law. In the event of any conflict between Federal and Pennsylvania regulatory provisions, the provision expressly set out in this chapter shall be utilized unless the Federal provision is more stringent.

(d) *Effective date.* The amendments to this chapter adopted by the EQB on May 17, 2010, are effective November 19, 2010.

§ 102.14. Riparian buffer requirements.

(a) *General requirements for mandatory riparian buffers.*

(1) Except as in accordance with subsection (d), persons proposing or conducting earth disturbance activities when the activity requires a permit under this chapter may not conduct earth disturbance activities within 150 feet of a perennial or intermittent river, stream, or creek, or lake, pond or reservoir when the project site is located in an exceptional value or high quality watershed attaining its designated use as listed by the Department at the time of application and shall protect any existing riparian buffer in accordance with this section.

(2) Where the project site is located in an Exceptional Value or High Quality watershed where there are waters failing to attain one or more designated uses as listed in Category 4 or 5 on Pennsylvania's Integrated Water Quality Monitoring and Assessment report, as amended and updated, at the time of the application, and the project site contains, is along or within 150 feet of a perennial or intermittent river, stream, or creek, lake, pond or reservoir shall, in accordance with the requirements of this section do one of the following as applicable:

(i) Protect an existing riparian forest buffer.

(ii) Convert an existing riparian buffer to a riparian forest buffer.

(iii) Establish a new riparian forest buffer.

(b) *Riparian forest buffer criteria.* To qualify as a riparian forest buffer under this chapter, an existing, converted or newly established riparian forest buffer, whether mandatory or voluntary, must meet the following requirements related to composition, width and management:

(1) *Composition.* A riparian forest buffer is a riparian buffer that consists predominantly of native trees, shrubs and forbs that provide at least 60% uniform canopy cover. An existing riparian forest buffer does not have to be altered to establish individual Zones 1 and 2 under subparagraph (iii). At a minimum, it must have a total aggregate width of the combined zones under paragraph (2).

(i) *Existing riparian buffer conversion to a riparian forest buffer.* Riparian buffers that consist predominantly of native woody vegetation that do not satisfy the composition of this paragraph or the width requirements in paragraph (2) shall be enhanced or widened, or both, by additional plantings in open spaces around existing native trees and shrubs that provide at least 60% uniform canopy cover. An existing riparian forest buffer does not have to be altered to establish individual Zones 1 and 2 under subparagraph (iii). At a minimum, it must be a total aggregate width of the combined zones under paragraph (2). Noxious weeds and invasive species shall be removed or controlled to the extent possible.

(ii) *Riparian forest buffer establishment.* On sites without native woody vegetation, a riparian forest buffer shall be established and be composed of zones in accordance with subparagraph (iii), and meet the width requirements in paragraph (2). Noxious weeds and invasive species shall be removed or controlled to the extent possible.

(iii) *Zones.*

(A) *Zone 1.* Undisturbed native trees must begin at the top of the streambank or normal pool elevation of a lake, pond or reservoir and occupy a strip of land measured horizontally on a line perpendicular from the top of streambank or normal pool elevation of a lake, pond or reservoir. Predominant vegetation must be composed of a variety of native riparian tree species.

(B) *Zone 2.* Managed native trees and shrubs must begin at the landward edge of Zone 1 and occupy an additional strip of land measured horizontally on a line perpendicular from the top of streambank or normal pool elevation of a lake, pond or reservoir. Predominant vegetation must be composed of a variety of native riparian tree and shrub species.

(2) *Average minimum widths.*

(i) *Waters other than special protection.* A total of 100 feet (30.5 meters), comprised of 50 feet (15.2 meters) in Zone 1 and 50 feet (15.2 meters) in Zone 2 for newly established riparian forest buffers established under subsection (e)(3) along all rivers, perennial or intermittent streams, lakes, ponds or reservoirs.

(ii) *Special protection waters.* A total of 150 feet (45.7 meters), comprised of 50 feet (15.2 meters) in Zone 1 and 100 feet (30.5 meters) in Zone 2 on newly established riparian forest buffers along all rivers, perennial or intermittent streams, lakes, ponds or reservoirs in special protection waters (high quality and exceptional value designations).

(iii) *Average riparian forest buffer width.* The average riparian forest buffer width shall be calculated based upon the entire length of streambank or shoreline that is located within or along the boundaries of the project site. When calculating the buffer length the natural streambank or shoreline shall be followed.

(3) *Management requirements.* Existing, converted and newly established riparian forest buffers shall be managed in accordance with a riparian forest buffer manage-

ment plan in paragraph (4) and will be protected in accordance with subsection (g).

(4) *Management plan.* The riparian forest buffer management plan shall be a part of the PCSM Plan and include, at a minimum, the following:

(i) A planting plan for converted or newly established riparian forest buffers that identifies the number, density and species of native trees and shrubs appropriate to geographic location that will achieve 60% uniform canopy cover.

(ii) A maintenance schedule and measures for converted or newly established riparian forest buffers to ensure survival and growth of plantings and protection from competing plants and animals including noxious weeds and invasive species over a 5-year establishment period including activities or practices used to maintain the riparian forest buffer including the disturbance of existing vegetation, tree removal, shrub removal, clearing, mowing, burning or spraying in accordance with long-term operation and maintenance.

(iii) An inspection schedule and measures to ensure long-term maintenance and proper functioning of riparian forest buffers meeting the requirements in paragraph (1), including measures to repair damage to the buffer from storm events greater than the 2-year/24-hour storm.

(c) *Mandatory requirements for all riparian buffers.*

(1) *Management of stormwater into the riparian buffer.* Stormwater and accelerated erosion and sedimentation shall be managed in accordance with §§ 102.4(b)—(e) and 102.8 (relating to erosion and sediment control requirements; and PCSM requirements) to ensure that stormwater enters the area upgrade and along the riparian buffer as sheet flow or shallow concentrated flow during storm events up to and including the 2 year/24 hour storm.

(2) *Wetlands.* Wetlands located in the riparian buffer shall be protected and maintained consistent with Chapter 105 (relating to dam safety and waterway management).

(3) *Measurements.* Riparian buffers must be measured horizontally and perpendicularly to the bank with no more than a 10% variation below the minimum width from the normal pool elevation for lake, pond or reservoir and from top of streambank.

(d) *Exceptions.*

(1) Subsection (a) does not apply for earth disturbance activities associated with the following:

(i) A project site located greater than 150 feet (45.7 meters) from a river, stream, creek, lake, pond or reservoir.

(ii) Activities involving less than 1 acre (0.4 hectare) of earth disturbance.

(iii) Activities when permit coverage is not required under this chapter.

(iv) Activities when a permit or authorization for the earth disturbance activity required under this chapter was obtained, or application submitted prior to November 19, 2010.

(v) Road maintenance activities so long as any existing riparian buffer is undisturbed to the extent practicable.

(vi) The repair and maintenance of existing pipelines and utilities so long as any existing riparian buffer is undisturbed to the extent practicable.

(vii) Oil and gas, timber harvesting, or mining activities for which site reclamation or restoration is part of the permit authorization in Chapters 78 and 86—90 and this chapter so long as any existing riparian buffer is undisturbed to the extent practicable.

(viii) A single family home that is not part of a larger common plan of development or sale and the parcel was acquired by the applicant prior to November 19, 2010.

(ix) Activities authorized by a Department permit under another chapter of this title which contains setback requirements, and the activity complies with those setback requirements.

(2) For earth disturbance activities associated with the following, the Department, or the conservation district after consultation with the Department, may grant a waiver from any of the requirements of subsections (a) and (b) upon a demonstration by the applicant that there are reasonable alternatives for compliance with this section, so long as any existing riparian buffer is undisturbed to the extent practicable and that the activity will otherwise meet the requirements of this chapter:

(i) The project is necessary to abate a substantial threat to the public health or safety.

(ii) Linear projects which may include pipelines, public roadways, rail lines or utility lines.

(iii) Abandoned mine reclamation activities that are conducted under Department authorization or permit.

(iv) Projects of a temporary nature where the site will be fully restored to its preexisting condition during the term of the permit under this chapter.

(v) Redevelopment projects which may include brownfields or use of other vacant land and property within a developed area for further construction or development.

(vi) Projects for which compliance with subsection (a) or (b) is not appropriate or feasible due to site characteristics, or existing structures at the project site.

(3) The applicant shall submit a written request for a waiver to the Department or the conservation district as part of the application for a permit under this chapter.

(4) An applicant requesting a waiver may propose and the Department may allow offsite protection, conversion or establishment of riparian forest buffers or provide compensation to fund riparian forest buffer protection, enhancement or establishment.

(5) Projects qualifying for an exception under this subsection are not relieved from compliance with other applicable requirements of this chapter or other laws administered by the Department.

(e) *Utilization of riparian forest buffers.*

(1) *Antidegradation presumption.* Except for riparian buffers protected under subsection (a)(1) or (d), a riparian forest buffer meeting the requirements of this section will prevent thermal impacts and is a nondischarge alternative. When included in an E&S Plan or PCSM Plan meeting the requirements of this chapter, the proposed earth disturbance activity will satisfy §§ 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.

(2) *Trading or offsetting credits.* Except for riparian buffers protected under subsection (a)(1) or (d) when protection of existing, or conversion, or the establishment

of a riparian forest buffer which meets the requirements of this section and is above baseline regulatory requirements, credits may be available for trading or offsets in accordance with any procedures established by the Department or any regulations related to trading or offsetting developed under this title.

(3) *Voluntary riparian forest buffer.* Persons that protect, convert or establish a new riparian forest buffer meeting the requirements of this section, may qualify for benefits under paragraph (1) or (2).

(f) *Activities within a riparian buffer.*

(1) The following practices and activities are prohibited within the riparian buffer:

(i) Soil disturbance by grading, stripping of topsoil, plowing, cultivating or other practices except as allowed in paragraph (3)(i).

(ii) Draining by ditching, underdrains or other drainage systems.

(iii) Housing, grazing or otherwise maintaining animals for agricultural or commercial purposes.

(iv) Storing or stockpiling materials.

(v) Off-road vehicular travel.

(2) The following practices and activities are allowable in the riparian buffer when authorized by the Department:

(i) Construction or placement of roads, bridges, trails, storm drainage, utilities or other structures.

(ii) Water obstructions or encroachments.

(iii) Restoration projects.

(3) The following practices and activities are allowed within the riparian buffer:

(i) Activities or practices used to maintain the riparian buffer including the disturbance of existing vegetation, and tree and shrub removal, as needed to allow for natural succession of native vegetation and protection of public health and safety.

(ii) Timber harvesting activities in accordance with the riparian forest buffer management plan as part of the PCSM Plan.

(iii) Passive or low impact recreational activities so long as the functioning of the riparian buffer is maintained.

(iv) Emergency response and other similar activities.

(v) Research and data collection activities, which may include water quality monitoring and stream gauging.

(g) *Permanent protection of riparian buffers.*

(1) Existing, converted and newly established riparian buffers including access easements must be protected in perpetuity through deed restriction, conservation easement, local ordinance, permit conditions or any other mechanisms that ensure the long-term functioning and integrity of the riparian buffer.

(2) For any existing or newly established riparian buffer, the boundary limits of the riparian buffer must be identified and clearly marked.

(h) *Reporting.* Persons who protect an existing riparian buffer or convert or establish a riparian buffer in accordance with this section shall complete data forms provided by the Department and submit the forms to the Department or conservation district within 1 year of establishment or protection.

§ 102.22. Site stabilization.

(a) *Permanent stabilization.* Upon final completion of an earth disturbance activity or any stage or phase of an activity, the site shall immediately have topsoil restored, replaced, or amended, seeded, mulched or otherwise permanently stabilized and protected from accelerated erosion and sedimentation.

(1) E&S BMPs shall be implemented and maintained until the permanent stabilization is completed. Once permanent stabilization has been established, the temporary E&S BMPs shall be removed. Any areas disturbed in the act of removing temporary E&S BMPs shall be permanently stabilized upon completion of the temporary E&S BMP removal activity.

(2) For an earth disturbance activity or any stage or phase of an activity to be considered permanently stabilized, the disturbed areas shall be covered with one of the following:

(i) A minimum uniform 70% perennial vegetative cover, with a density capable of resisting accelerated erosion and sedimentation.

(ii) An acceptable BMP which permanently minimizes accelerated erosion and sedimentation.

(b) *Temporary stabilization.*

(1) Upon temporary cessation of an earth disturbance activity or any stage or phase of an activity where a cessation of earth disturbance activities will exceed 4 days, the site shall be immediately seeded, mulched, or otherwise protected from accelerated erosion and sedimentation pending future earth disturbance activities.

(2) For an earth disturbance activity or any stage or phase of an activity to be considered temporarily stabilized, the disturbed areas shall be covered with one of the following:

(i) A minimum uniform coverage of mulch and seed, with a density capable of resisting accelerated erosion and sedimentation.

(ii) An acceptable BMP which temporarily minimizes accelerated erosion and sedimentation.

ENFORCEMENT

§ 102.31. Applicability.

The Department or a conservation district may enforce this chapter under The Clean Streams Law (35 P. S. §§ 691.1—691.1001).

§ 102.32. Compliance and enforcement provisions.

(a) Compliance and enforcement actions under this chapter which may be pursued include the following. The actions listed are cumulative and the exercise of one action does not preclude the exercise of another. The failure to exercise an action will not be deemed to be a waiver of that action:

(1) Investigations and inspections.

(2) Response to complaints.

(3) Orders (including orders to remediate or restore).

(4) Civil penalty proceedings, except as provided in subsection (b).

(5) Summary proceedings.

(6) The suspension, revocation, withholding or denial of permits or approvals.

(7) Notices of violation.

(8) Actions in a court of competent jurisdiction, including requests for injunctive relief.

(9) Other administrative, civil, criminal or equitable action authorized by law.

(b) If the Department finds that pollution or a danger of pollution results from an act of God in the form of sediment from land for which a complete Conservation Plan has been developed by the conservation district and the Natural Resource Conservation Service, and the plan has been fully implemented and maintained, the landowner shall be excluded from the penalties of The Clean Streams Law (35 P. S. §§ 691.1—691.1001).

(c) A person aggrieved by an action of a conservation district under this chapter shall request an informal hearing with the Department within 30 days following the notice of the action. The Department will schedule the informal hearing and make a final determination within 30 days of the request. Any final determination by the Department under the informal hearing may be appealed to the EHB in accordance with established administrative and judicial procedures.

(d) For enforcement action taken under this subchapter, the Department or conservation district may collect or recover, from the responsible party, costs and expenses involved in taking enforcement action in accordance with this subchapter and initiating cost recovery actions under this subchapter. The Department or conservation district may collect the amount in the same manner as civil penalties are collected under section 605 of The Clean Streams Law (35 P. S. § 691.605).

RESPONSIBILITIES OF LOCAL GOVERNING BODIES

§ 102.41. Administration by conservation districts.

(a) The Department may delegate by written agreement the administration and enforcement of this chapter to conservation districts if they have adequate and qualified staff, and are, or will be, implementing the program identified in the delegation agreement.

(b) An acceptable program shall have the concurrence and approval of the governing body of the county in which the conservation district operates.

(c) The Department will retain program administration and enforcement over projects which cross the political boundaries of conservation districts unless otherwise authorized by the Department.

§ 102.42. Notification of application for permits.

A municipality or county which issues building or other permits shall notify the Department or conservation district within 5 days of receipt of an application for a permit involving an earth disturbance activity consisting of 1 acre (0.4 hectare) or more.

§ 102.43. Withholding permits.

With the exception of local stormwater approvals or authorizations, a municipality or county may not issue a building or other permit or approval to those proposing or conducting earth disturbance activities requiring a Department permit until the Department or a conservation district has issued the E&S or individual NPDES Permit, or approved coverage under the general NPDES Permit for Stormwater Discharges Associated With Construction Activities under § 102.5 (relating to permit requirements).

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