

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF WATER PROGRAMS OFFICE OF OIL AND GAS MANAGEMENT

INSTRUCTIONS FOR A NOTICE OF INTENT (NOI) AUTHORIZATION FOR COVERAGE UNDER THE EROSION AND SEDIMENT CONTROL GENERAL PERMIT (ESCGP-3) FOR EARTH DISTURBANCE ASSOCIATED WITH OIL AND GAS EXPLORATION, PRODUCTION, PROCESSING, OR TREATMENT OPERATIONS OR TRANSMISSION FACILITIES

GENERAL INFORMATION

These instructions are designed to assist the applicant in completing the Notice of Intent (NOI) for Coverage Under the Erosion and Sediment Control General Permit (ESCGP-3) For Earth Disturbance Associated with Oil and Gas Exploration, Production, Processing or Treatment Operations or Transmission Facilities and in determining if any other environmental permits or approvals are needed for the project.

In accordance with the ESCGP-3 Transition Plan (Document No.8000-PM-OOGM0006), applicants for NOIs for ESCGP-3 submitted to the DEP Bureau of District Oil and Gas Operations may submit the NOI for ESCGP-3 and associated documents and attachments as paper hard copies or through the electronic ePermit system from September 15, 2018 to December 29, 2018. After December 29, 2018, NOIs for ESCGP-3s submitted to the DEP Bureau of District Oil and Gas Operations must be submitted through the electronic ePermit system. NOIs for ESCGP-3 submitted to a delegated Conservation District or DEP Bureau of Waterways, Engineering and Wetlands must be submitted as paper hard copies using the most up-to-date NOI authorization package available for transmission facilities.

Note: Applicants are to use the most up-to-date NOI authorization package and type or print clearly when completing the form. If information requested is more than the space allows, copy the appropriate page of the form and complete as required. If a question is not applicable to the project, check N/A in the appropriate box.

Pursuant to 25 Pa. Code § 102.5(c) a person proposing oil and gas activities that involve five (5) acres or more of earth disturbance over the life of the project must obtain an Erosion and Sediment Control Permit (E&S Permit) prior to commencing the earth disturbance activity. ESCGP-3 is an E&S Permit under Chapter 102 issued pursuant to 25 Pa. Code § 102.5(m) for earth disturbances associated with oil and gas exploration, production, processing or treatment operations or transmission facilities.

Note: DEP interprets "project" to be substantially connected well sites, access roads, pipelines, other service lines, support facilities, and/or other oil and gas activities. Well pads, impoundments and pipelines etc. may be permitted separately but are considered together solely to determine whether the total project acreage limit of 25 Pa. Code § 102.5(c) has been met and a permit is required. For more information on how to define the project, please see *Policy for Erosion and Sediment Control and Stormwater Management for Earth Disturbance Associated with Oil and Gas Exploration, Production, Processing, or Treatment Operations or Transmission Facilities, Document No. 800-2100-008 (ESCGP Policy).*

Note: Pursuant to § 3211(a) and (g) of the 2012 Oil and Gas Act, 58 Pa.C.S. § 3211(a), (g), and 25 Pa Code § 102.4(d) a well permit is required prior to construction of the well site including the access road.

DEP offers a voluntary expedited permit review process. NOIs submitted through the expedited permit review which qualify for permit coverage will be provided with an acknowledgement of coverage within 14 business days from the submission of a complete and accurate NOI. With respect to review of NOIs for ESCGP-3 for oil and gas activities that are not under the expedited process, the Department's objective is to complete its review of complete submissions within 60 calendar days. A person proposing oil and gas activities under ESCGP-3 must obtain written authorization from the Department prior to commencing the earth disturbance activity.

Note: The expedited permit review is not available for all projects. Refer to Section D. Expedited Review Process of the NOI Instructions for further details regarding expedited review eligibility.

Operator Requirement

When the operator/contractor and owner/developer of the facility or activity is not the same individual, corporation, partnership, or other entity, DEP requires in 25 Pa. Code § 102.5(h) that both the operator and owner apply for coverage under a permit as co-permittees. If no operator/contractor has been selected at the time of permit NOI submission, then once selected, the operator/contractor must either be made a co-permittee or the permit must be transferred to the contractor.

Permit Authorization

The DEP Bureau of District Oil and Gas Operations, DEP Bureau of Waterways, Engineering and Wetlands or delegated Conservation District will give the applicant written acknowledgement of permit coverage approval or denial.

If the authorization is provided for an initial phase of a phased permitted project, each subsequent phase identified in the permit NOI will require submission for review and determination of adequacy based on information included in future submissions. If approved, a separate authorization will be made on each subsequent phase. For more information on phased permitted activities, please see the <u>DEP Permit Guidelines for Phased NPDES Stormwater Discharges Associated with Construction Activity Permits, Chapter 102 Erosion and Sediment Control Permits, and Chapter 105 Waterway Restoration Project Permits, Technical Guidance Document No. 363-2134-013.</u>

Also refer to the ESCGP Policy.

ESCGP-3 only authorizes earth disturbance activities under 25 Pa. Code Chapter 102 and does not include or provide any necessary 25 Pa. Code Chapter 105 authorizations of water obstruction, encroachments or dams in wetlands or waters of the Commonwealth. As per Section 102.4(d), a person proposing or conducting an earth disturbance activity shall obtain the other necessary permits and authorizations from the DEP or delegated Conservation District, related to the earth disturbance activity, before commencing the earth disturbance activity.

Note: As a condition of the permit, persons subject to and operating under ESCGP-3 may not commence earth disturbance activities until receipt of written acknowledgement of coverage under ESCGP-3 from DEP or the delegated Conservation District. The applicant must invite DEP or the delegated Conservation District to the preconstruction meeting and provide at least 7 days notice of the preconstruction meeting to all invited attendees. ESCGP-3 requires the permittee to provide 7 days notice to the DEP or delegated Conservation District of the intent to commence earth disturbance activities.

NOI Checklist

Applicants must enclose the Notice of Intent (NOI) Administrative Completeness Checklist Erosion and Sediment Control General Permit (ESCGP-3) for Earth Disturbance Associated with Oil and Gas Exploration, Production, Processing, or Treatment Operations or Transmission Facilities, Document No. 800-PM-OOGM0006, with the NOI. If the applicant is proposing a phased project the checklist must be included with each subsequent phase submission.

The NOI Checklist is provided to ensure that the applicant has included all the required information for an administrative review. This checklist will also be utilized by the DEP or delegated Conservation District to determine administrative completeness. The NOI Checklist also serves as an outline for these instructions. Failure to provide all the requested information will delay processing of the NOI, and may result in the NOI being placed on hold with no action, or being considered withdrawn and the NOI file closed with forfeiture of the NOI Filing Fee.

E&S and Post Construction Stormwater Management/Site Restoration (PCSM/SR) Technical Preparation Guides

Technical preparation guides for both the E&S and PCSM/SR Plans have been provided as Attachment A and Attachment B respectively. These guides are intended to provide specific points to be addressed in the E&S and PCSM/SR Plans. Following these guides will help ensure submission of complete and technically sound NOIs. The applicant or licensed professional must submit a completed copy of Attachment A and Attachment B with the ESCGP application for expedited review.

1. NOI INSTRUCTIONS

DEP or the delegated Conservation District will give the applicant written acknowledgement of permit coverage under ESCGP-3 or denial. If DEP or the delegated Conservation District determines the NOI is incomplete or contains insufficient information, the applicant will be notified. The applicant will have 60 days to provide the necessary information along with the appropriate filing fees. If the requested information is not submitted in 60 days, the NOI will be considered withdrawn, and no fees will be refunded.

The permit reviewer may deny an NOI if any of the items included in section E. Project Information, are not submitted with the NOI. The application fee is not refundable; however, the disturbed acreage fee will be returned to the applicant if an application is denied. If there is any reason the applicant will not be able to provide all items on the NOI, or has determined there is a valid reason one or more items on the NOI are not required for a specific application, the applicant should contact the office that will be reviewing the NOI prior to submitting the application to ensure not including all items on the instruction is permitted and understood by the permit reviewer.

Section A: Application Type

Check the appropriate boxes for the following types of NOI being submitted.

New – A new NOI for a project that has not yet been permitted.

Renewal – An NOI to renew an existing permit that is nearing expiration. This renewal should be submitted a minimum of 60 days prior to expiration.

Note: An expired permit cannot be renewed. If a permit has expired, it is no longer valid and the applicant must submit a new NOI for a new ESCGP-3.

Modification (Major) – An NOI that will modify an existing permit, which could include such activities as: expanding the total disturbed area or permit boundary, adding a new discharge, or substantial changes to BMPs. The reviewing entity should be consulted for discussion prior to submittal of this type of NOI. Provide ESCGP authorization number with the application.

Phased – An NOI where an additional phase of construction is being added to an already existing permit that was established as a phased project at the time of original permit issuance.

Check the appropriate box for the following types of review requested.

Expedited – An NOI requesting to be reviewed under the "Expedited Review Option".

Note: Expedited Review is not available for all projects. Refer to Section D - Expedited Review Process of the ESCGP-3 NOI Instructions to determine if the project is eligible.

Standard – Any project that does not qualify for expedited review or the applicant does not wish to be included in the expedited review process.

Section B: Client Information

The following information must be provided to identify the applicant.

- 1. Applicant's Last Name, First Name, MI. Enter the Name of the Corporation, Partnership, Agency or Individual. (MI is optional)
- 2. Co-Applicant's Last Name, First Name, MI. Required for additional individuals, partners or operators to be co-permittee. Enter the Name of the Corporation, Partnership, Agency or Individual. (MI is optional)
- 3. Client ID Number. Enter the DEP Client ID number of the applicant.
- 4. Headquarters Mailing Address. The mailing address of the Owner/Operator (applicant) identified above (this should not include locational data that is not appropriate for mail). In addition to the street number and name, PO Box#, RR# Box#, or Highway Contract# designations, use any appropriate designation and number to further define the mailing address of the applicant, e.g., APT (Apartment) FL (Floor) BLDG (Building) RM (Room) DEPT (Department) STE (Suite).
- **5. Email.** Each Applicant and Co-Applicant listed in Section B. of the form must also include the email address they prefer to provide for contact by the permit reviewer and future contact after a permit is acknowledged.
- **6. Telephone Number.** Each Applicant and Co-Applicant listed in Section B. of the form must also include the telephone number of their preference for contact by the permit reviewer and future contact after a permit is acknowledged. This may be cell office or home telephone.
- 7. City, State, ZIP Code. Do not use abbreviations for the city name. Use the two-character abbreviation for the state. Include the four-digit extension to the ZIP code.

Section C: Site Information

Check yes or no for questions related to existing ESCGP, well permits and 911 address of the site and provide additional information as is available.

- 1. Site Name. Provide the name of the site at the specific physical location. **Do not** use abbreviations, acronyms, etc.
- 2. Site Location. Provide the physical address of the location where the permitted activities will occur. No PO Box Numbers will be accepted for site location information. If a physical address is not available, provide the name of the road along which primary access to the site is located. Provide the city (or municipality), state, and the ZIP+4.
- 3. Site Number. Enter the site number if another permit has been issued by the DEP for the same site.
- 4. City/State/Zip Code. Provide the city, state and zip code if a known mailing address exists for the project, otherwise

provide information regarding the nearest known city, state and zip code.

- **5. Detailed Written Directions to Site.** When providing written directions, **do not** use PO Box address data. Include landmarks and approximate number of miles east or west from the nearest intersection. For linear projects which do not have a physical address and cross municipal boundaries, find the project center point and provide the name of the nearest road, approximate distance from nearest intersection, city, municipality, state and the Zip+4.
- **6. County and Municipality.** Indicate the county(ies) and municipality(ies) in which the site is located. Check the appropriate box to identify the type of municipality entered (city, borough, and township). If more than one municipality or county is affected, please list them on an attached separate sheet. Primary location is based on the area where the greatest amount of earth disturbance occurs, if more than one municipality and county.

Section D: Expedited Review

I. Expedited Review Eligibility

Check yes or no for each of the seven questions to determine if the proposed project is eligible for expedited review. If the answer to any of the questions in this section is yes, the project does not qualify for the expedited review process and will therefore deny the permit review and return the application to the applicant. The denied expedited review application won't be automatically reassigned for standard review.

Be sure that the appropriate box is also checked in Section A. for the type of review the project will be subject to.

- 1. **Special Protection Watershed.** If any part of the proposed project is located in the watershed of waters of the Commonwealth that are designated as Special Protection (High Quality HQ or Exceptional Value EV) in Ch. 93 including exceptional value wetlands or siltation impaired streams, the applicant must check "Yes".
- 2. Floodplains. If the proposed project in which the well pad will be constructed is located within the limits of a floodplain of a stream, check "Yes". This requirement is not for linear projects where the disturbed area within the limits of flood plain is restored within one-year of the start of construction. The limits of a floodplain are the 100-year floodway and that maximum area of land that is likely to be flooded by a 100-year flood as shown on the floodplain maps approved or promulgated by FEMA.
- 3. Contaminated Land. If the proposed earth disturbances activities are on lands that are known to be contaminated by the release of regulated substances as defined in § 103 of Act 2, 35 P.S.§ 6026.103, check "Yes".
- **4. Highly Erodible Conditions.** If any of the Highly Erodible Soils conditions listed in the question are present at the site of the proposed project, check "yes".
- 5. Hazardous Geologic Conditions. If any part of the proposed project is located where known geologic conditions may provide hazards to the project or surrounding environment or have the potential to cause or contribute to pollution when disturbed, including, but not limited to land sliding, steep slopes, karst/sinkhole formation, coal seams, acid producing rock, radioactive or arsenic bearing formations, surface mines (existing, abandoned and/or reclaimed), deep mines (active, abandoned where the earth disturbance activities have the potential to encounter a mine void), mine spoil dump area, abandoned mine drainage, or abandoned mine drainage treatment systems, check "yes".
- **6. Existing Compliance Issues.** An applicant with any existing unresolved non-compliance issues must check "yes".
- **7. Transmission Facilities.** If the proposed project is part of a transmission pipeline or associated facilities that are specifically required by a Transmission Pipeline, check "yes".

II. Expedited Review Process

- 1. Once an applicant has determined that the proposed project meets the criteria detailed in Section D.I., above, they must ensure that the project will follow the Expedited Review Process as outlined in this section. Check "yes" for each that apply. To be eligible for Expedited Review, the applicant must answer "yes" to questions #1 through #7. Otherwise the permit application will be denied and returned to the applicant. The denied expedited review application will not be automatically reassigned for standard review. NOI Package. Check whether the applicant is providing a technically and administratively correct NOI package, and that the package was prepared by a licensed professional.
- 2. E&S, PCSM/SR and Interim PCSM/SR Plans. All required Plans, as required by characteristics of the proposed project have been included and sealed by the appropriate licensed professional.
- 3. Include Resource Delineation Report. Resource delineation report is required for both expedited and standard

permit review process. If the resource delineation for a project was done during wintertime, such projects won't be eligible for expedited review. Resource determination report that identifies 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 must be included with Resource Delineation Report. This should include all data sheets to confirm the presence or absence of wetlands within the area and any other supporting documentations for resource determination. The licensed professional is responsible for the determination of resources.

- 4. Include PNDI clearance (if applicable). The ESCGP-3 requires the applicant to consult with the Pennsylvania Natural Heritage Program (PNHP) to verify impacts to threatened and or endangered species are avoided and/or minimized. Proof of this consultation with PNHP must be attached to the NOI. The Pennsylvania Natural Diversity Inventory (PNDI) review is not complete or satisfied unless PNDI receipts are included from all jurisdictional agencies. For expedited review, any potential impacts must be resolved at the time the NOI is submitted as demonstrated by a PNDI clearance letter form the applicable resource agency.
- 5. Riparian Forest Buffer requirements. Any proposed project that will be all or partially located within 100 feet of a river, stream, creek, lake or pond or reservoir must establish new or preserve existing riparian forest buffer at least 100 feet in width between the top of stream bank or normal pool elevation of a lake, pond or reservoir and areas of earth disturbance. Design or maintain, or both, a riparian forest buffer in accordance with Riparian Forest Buffer Guidance, Commonwealth of Pennsylvania, Department of Environmental Protection, No. 395-5600-001 (2009), as amended and updated.
- 6. Licensed Professional. The licensed professional (Professional Engineer, Professional Geologist, Landscape Architect or Professional Surveyor) must provide their name, address, telephone number as well as the information regarding their professional license. Licensed Professionals responsible for the resource determinations may be excluded from future submissions of expedited review applications if any resources are missed. Any licensed professionals who have been subjected to not being eligible to submit ESCGP applications for expedited review may request eligibility after a period of time not less than one year after being notified by the DEP they are no longer eligible to submit permit applications to the DEP.

Section E: Project Information

1. Total Project Area/Project Site. The total project area is the entire area of activity, development, or sale, including the area of an earth disturbance activity, the area planned for an earth disturbance activity and other areas which are not subject to an earth disturbance activity. Enter the size of the area in acres. See ESCGP Policy Document No. 800-2100-008.

Total Disturbed Area. The Total Disturbed Area is that portion of the total project area where earth disturbance activities are planned to occur over the life of the project. For phased projects, this refers to the disturbed area of the initial project phase **plus** the planned disturbed areas of subsequent project phases in sufficient detail as to allow evaluation of the total project impact. Enter the size of the area in acres to the nearest acre. For major permit modifications, provide increased disturbance acreage. Enter the project fee based on the calculation of \$100 per acre pf proposed earth disturbance over the life of the project.

- 2. Project Name. Provide the name by which this proposed earth disturbance activity or project is, or will be known.
- 3. Project Type and Description. Check all boxes that best describe the general type of activity. In the Project Description, provide details including the number of wells to be drilled and/or whether the project includes a tank battery, compressor station, pipeline, other, etc. Applicant should provide approximate dimensions of different parts of the project such as roads, well pads, tank pads, compressor stations, pipelines etc. If the project type is a pipeline, include in the project description (1) whether the pipeline is aboveground, buried, temporary and/or permanent and (2) identify the materials to be transported in the pipeline. NOTE: Clean fill cannot be placed in or on waters of the Commonwealth. If fill will be imported or exported, Form FP-001 (Document #258-2182-773) must be used to certify origin of the fill material. Also provide the date that the applicant/operator/qualified representative of the proposed project attended a pre-application meeting if one was conducted with the DEP.
- 4. Latitude and Longitude. Provide the latitude and longitude coordinates for the approximate center of the project area or facility. The latitude and longitude should be expressed in decimal degrees. For linear projects provide the project's termini. The Reference Datum must be North American 1983 (NAD 83). Check the appropriate horizontal collection method.
- 5. U.S.G.S. Quad Map Name. Locate the project area on an 8 ½" x 11" photocopy of the U.S.G.S. topographic quadrangle. The map must include the name of the appropriate 1:24 000 scale U.S.G.S. 7.5 minute series quadrangle map where the project is located. A copy of this map with the limit of disturbance of the project should be submitted with the completed NOI Form.

- 6. Estimated Timetable for Phased Projects. Identify whether the project will be conducted as a phased permitted project and that a master plan identifying the initial and all subsequent phases are included. Also, provide an estimate of the timetable for the major phases (Attach additional sheet(s) of information when necessary). For the initial and subsequent phases, provide a description of the activity undertaken during the phase, total area of the phase, the disturbed area of the phase, and the start and end dates for each phase of the activity. Each phase must be clearly identified on the plan drawings and narrative and on a master project site plan. The sum of the total areas and disturbed areas listed under line 6 should be equal to the size of the Total Project Area and Total Disturbed Area respectively, listed on line 1 in Section E. Project Information of the NOI form. For more information on phased permitted activities, please see DEP Permit Guidelines for Phased NPDES Stormwater Discharges Associated with Construction Activity Permits, Chapter 102 Erosion and Sediment Control Permits, and Chapter 105 Waterway Restoration Project Permits, Technical Guidance Document No. 363-2134-013 and ESCGP Policy Document No. 550-2100-008.
- **7.** Existing and previous land use. List the existing and previous land use for at least 5 years.
- **8. Other Pollutants.** If the stormwater discharge contains a pollutant other than sediment, list the pollutant, the source of the pollutant, and concentration. Provide a plan for removal of the pollutant.
- 9. Preparedness, Prevention and Contingency (PPC) Plan. If the permittee, co-permittee(s) or any other subcontractors or others that will be working on the permitted site will use, store or transport materials including fuels (other than fuels contained in equipment fuel tanks), chemicals, solvents, biocides waste water, wash water, core drilling wastewater, cement, sanitary wastes, solid wastes, hazardous wastes or other waste or materials onto, on or from a project site during earth disturbance activities, a site specific PPC Plan must be developed and implemented. In addition, the PPC Plan must be available on site during earth disturbance activities and available upon request. The PPC plan must be completed in accordance with section 78.55 for conventional operations and section 78a.55 for unconventional operations.
- 10. Siltation impaired waters. If the project has the potential to discharge to siltation impaired waters, demonstrate that the project will not result in a net change (pre- to post condition) in volume, rate, or water quality or otherwise explain how the project will not contribute to a violation of water quality standards. Siltation impaired waters should be protected with Antidegradation Best Available Combination of Technologies (ABACT) E&S BMPs before the site is stabilized to prevent additional sedimentation impairment. See Section F, PCSM Plan of the NOI Instructions and NOI Form.
- 11. Naturally Occurring Geologic Formations or Soil Conditions. Identify naturally occurring geologic formations or soil conditions that may have potential to cause pollutions during earth disturbance activity and include BMPs to avoid or minimize potential pollution and its impacts. If the project site has not been investigated to identify the naturally occurring geologic formations or soil conditions or soil conditions, do not submit the NOI. Naturally occurring geologic formations or soil conditions include but are not limited to coal seams, surface mines (existing, abandoned and reclaimed) and deep mines (existing, abandoned and reclaimed) where earth disturbance associated with the project has the potential to encounter mine voids, mine spoil dump area, abandoned mine drainage, or abandoned mine drainage treatment systems.
- **12. Municipal Notifications.** Act 14 requires applicants to notify municipalities of the proposed project and submit both the notification and proof of notification to the DEP by attaching copies to the NOI. Failure to provide a copy of notification correspondence and evidence of municipal receipt of the notification with the application will delay processing of the application. Failure to comply with municipal notification will result in the return of the application as incomplete.
- 13. PHMC Proof of Consultation. The ESCGP-3 requires the applicant to consult with the Pennsylvania Historical & Museum Commission (PHMC) to verify potential impacts to historic resources on the National Register of Historic Places. Proof of this consultation must be attached to the NOI. The permit may not be issued until each potential impact resolved.
- **14. PNDI Receipt.** The ESCGP-3 requires the applicant to consult with the Pennsylvania Natural Heritage Program (PNHP) to verify impacts to threatened and or endangered species are avoided and/or minimized. Proof of this consultation with PNHP must be attached to the NOI. The Pennsylvania Natural Diversity Inventory (PNDI) review is not complete or satisfied unless PNDI receipts are included from all jurisdictional agencies. The permit may not be issued until each potential impact is resolved.
- **15. E&S and PCSM/SR Plan Consistency.** The E&S Plan must be planned, designed and implemented to be consistent with the PCSM or SR Plan. Unless otherwise approved by DEP, the PCSM Plan must be separate from the E&S Plan and labeled as such in the final plans for construction (See 25 Pa. Code § 102.8(d)). Projects that require site restoration as opposed to PCSM may include the SR Plan as part of the E&S Plan (See 25 Pa.

Code §102.8(n)).

- **16. Riparian Forest Buffers.** Identify existing and proposed riparian forest buffers. Refer to the DEP Riparian Forest Buffer Guidance, Document No. 394-5600-001 for additional information regarding Riparian Forest Buffers.
- 17. Antidegradation Implementation. Indicate whether the antidegradation implementation requirements are met.
- **18. Seasonal High Ground Water.** Indicate whether the seasonal high ground water table has been identified at all proposed pit locations for conventional operations and Well Development Impoundments (WDI) for unconventional operations. A 20-inch separation between the seasonal high groundwater table and the bottom of all pits and Well Development Impoundments is required as per Title 25, Chapter §§ 78.56, 78.57 & 78.62 for conventional operations and §78a.59b for unconventional operations.
- **19. Provide the Chapter 93 stream classifications.** The designated use of the receiving waters can be obtained from 25 Pa. Code Chapter 93 of DEP's regulations located online at

http://www.pacode.com/secure/data/025/chapter93/chap93toc.html

The existing use can be obtained from DEP's Statewide Existing Use Listing at http://www.dep.pa.gov/Business/Water/CleanWater/WaterQuality/Pages/ExistingUse.aspx.

Siltation-impaired waters and watersheds can be identified in Pennsylvania's "2016 Pennsylvania Integrated Water Quality Monitoring and Assessment Report." The report can be viewed at http://www.dep.pa.gov/Business/Water/CleanWater/WaterQuality/Integrated%20Water%20Quality%20Report-2016/Pages/default.aspx

If the project discharges to waters other than surface waters, check "Other". This category includes off-site discharges which may require the applicant to obtain the legal right to discharge.

Municipal or Private Separate Storm Sewer Operator. Provide storm sewer operator names. If not discharging to a municipal or private separate storm sewer, enter N/A.

If the discharge is to something other than those listed above, provide a description of where the stormwater is discharged. Attach additional sheets if necessary).

Section F: Erosion and Sediment Control (E&S) Plan

All earth disturbance activities requiring permit coverage under 25 Pa. Code Chapter 102.5(c) must ensure that a written E&S Plan that meets the requirements as described in § 102.4(b) is prepared and submitted with the NOI. The Chapter 102 regulations require that the design standards be based on the design standards in § 102.11 unless the applicant demonstrates to DEP that an alternative approach will be more protective, or will protect and maintain existing and designated uses. Unless otherwise authorized by DEP or delegated Conservation District, earth disturbance activities must be planned and implemented in accordance with the following:

- Minimize the extent and duration of the earth disturbance.
- Maximize protection of existing drainage features and vegetation.
- Minimize soil compaction.
- Utilize other measures or controls that prevent or minimize the generation of increased stormwater runoff.
 - a. **E&S Plan Summary:** E&S BMPs must be designed and installed in accordance § 102.4(b). Provide a summary of proposed BMPs and their performance to manage E & S for the project. If E & S BMPs and their application do not follow the guidelines referenced in the *Erosion and Sediment Pollution Control Program Manual (E&S Manual), Technical Guidance No.363-2134-008*, provide documentation to demonstrate performance equivalent to, or better than, the BMPs in the Manual.
 - **b. E&S Plan BMP Design:** E&S BMPs included in the E&S Plan attached to the NOI for the above referenced project have been designed in accordance with one of the below;
- E&S manual or
- Alternate BMP already approved by the DEP; Go to <u>Alternate BMP review and approval process</u> to identify the
 alternative BMPs that have been reviewed by DEP. Applicants may utilize this information during the design and
 BMP selection phase of project development.

NOI package submitted with alternate BMPs that have not been approved by the DEP will be returned to the Applicant.

- **c. Riparian Buffer:** The operator must explain details of the riparian buffer information, if the details differs from what was submitted in the Riparian buffer module.
- **d.** Thermal Impact Analysis: Explain how thermal impacts associated with this project were avoided, minimized, or mitigated. The applicant must provide a summary of potential thermal impacts associated with the planned project and how the potential thermal impacts are to be avoided, minimized, or mitigated.

Examples include: minimizing impervious surfaces, maintain shade over and around construction sites to the extent possible and discharging from the bottom of surface impoundments, using subsurface impoundments, infiltration, and maximize the use of vegetated areas to cool runoff prior to discharge. Maintaining canopy cover and riparian buffers that limit ground surface exposure to direct sunlight is effective in the control of thermal pollution of surface waters. Using borings instead of open cuts for utility crossings will limit vegetation disturbance and exposure of the ground surface to sunlight.

The analysis should evaluate the effectiveness of various alternatives or combination of alternatives that prevent or minimize thermal pollution.

e. Off-Site Discharge Analysis: If an applicant proposes off-site discharges of stormwater during construction to areas other than surface waters, documentation must be provided in both E&S and PCSM/SR plans to demonstrate that the discharge will not cause erosion, damage, or a nuisance to off-site properties. It is the applicant's responsibility to obtain legal authority to discharge onto adjacent properties. Please check the appropriate box in this block. Potential offsite discharges should be discussed during preapplication meetings with the permit reviewing agency.

Section G: Riparian Buffer

Check the appropriate box(s). If a waiver is requested, the applicant must provide a demonstration that there are reasonable alternatives for compliance with this section, that any existing riparian buffer is undisturbed to the extent practicable, and that the activity will otherwise meet the riparian buffer requirements of Chapter 102.14.

The applicant may propose to protect, convert and/or establish new riparian buffers throughout a project to support habitat or water quality protection, as long they meet the requirements of Ch. 102.14. Check yes or no to indicate if the applicant intends to protect, convert or establish riparian forest buffers on a voluntary basis. If the proposed project will protect, convert or establish a voluntary riparian or riparian forest buffer, a Buffer Management Plan must be included in the PCSM Plan.

Check "yes" if the project will be located in a Special Protection Watershed (HQ or EV) that is attaining its designated use and is within 150 feet of a perennial or intermittent river, stream or lake, pond or reservoir and site restoration is required by Ch. 78 or 78a. If "yes" is checked the applicant must provide a demonstration that any existing riparian forest buffer will remain undisturbed to the extent practicable. No further action is required if the "no" box is checked.

Check "yes" if the project will be qualified for an exception and indicate the type of project for which the exception applies by marking appropriate box. Pursuant to 25 Pa. Code § 102.14(d)(1)(vii), oil and gas activities for which site reclamation or restoration is part of the permit authorization in Chapters 78 and 78a are not required to provide mandatory riparian buffers in accordance with § 102.14 (a) and (b) so long as any existing riparian buffer is undisturbed to the extent practicable. Projects which involve only repair, replacement or maintenance of existing pipelines and utilities and road maintenance activities are also exempted if riparian buffers are undisturbed to the extent practicable. If exceptions are checked, explain how existing riparian buffer will be undisturbed to the extent practicable.

If the regulations require a riparian buffer or riparian forest buffer and the applicant is not providing one, list the waiver provisions in the Chapter 102 regulations, § 102.14(d)(2)(i)-(vi), that you are requesting and provide additional documentation to demonstrate reasonable alternatives for compliance with 102.14 requirements and to demonstrate that any existing riparian buffer will remain undisturbed to the extent practicable. Riparian Buffer Waivers apply to certain projects and activities. If any of the waivers provided in Ch. 102.14 apply to the project included in the NOI, check the appropriate box.

Projects that do not qualify for exemptions of riparian buffer requirements must provide a buffer of 150 feet unless the project qualifies for a waiver.

Applicants requesting a waiver must submit a written request that demonstrates that reasonable alternatives will meet the requirements of DEP or delegated Conservation District with the NOI. The earth disturbance activities for which waivers may be obtained include:

- Linear projects such as pipelines, public roadways, rail lines or utility lines.
- Project is of a temporary nature where the site will be fully restored to its preexisting conditions during the ESCGP permit term.

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- Projects for which compliance with §§ 102.14(a) or 102.14(b) is not appropriate or feasible due to site characteristics, or existing conditions at the project site. (eg: Tank pads, access roads staging areas, etc)
- Other (see § 102.14(d)(2))

If the operator check "Yes" to question #2 AND "No" to questions #3 and #4, provide an attachment to demonstrate how the requirements of §102.14 are met.

Section H. Post Construction Stormwater Management (PCSM) And/ Or Site Restoration(SR) Plan

PCSM/SR Plans should be designed to use natural measures to eliminate pollution, infiltrate runoff, not require extensive construction/maintenance activity, promote pollutant reduction, and preserve the integrity of stream channels. All PCSM/SR BMPs proposed in the PCSM/SR Plan must be designed in accordance with Ch. 102, and for unconventional operations Ch. 78a and the *Pennsylvania Stormwater Best Management Practices Manual (Stormwater BMP Manual), Technical Guidance No. 363-0300-002*. If alternate design criteria are utilized for the proposed project, they must have prior approval by the DEP, or the NOI Application will be returned to the Applicant.

Check appropriate box to represent how much of the entire disturbed area will be restored to meadow in good condition or better, or existing conditions. If there are additional stages of the project prior to permit termination or expiration, list the stages and provide the documents required by subsection ('a' to 'g') below, for each stage (e.g. partial restoration or changes to the amount of compacted areas, gravel, and/or impervious areas). Upload a narrative for each additional stage in addition to the drawings.

Act 167 Consistency: The PCSM/SR plan must be consistent with any DEP approved and current County Act 167 Plans. DEP considers any Act 167 Plan from 2005 or later to be current and requires that PCSM/SR Plans must demonstrate consistency with the Act 167 Plan. If a project is located within a watershed and municipality covered by an Act 167 plan, approved by DEP prior to 2005, the Act 167 consistency requirement is not applicable and the PCSM/SR plan will only be evaluated for compliance with Chapter 102. To demonstrate consistency with the Act 167 plan, the applicant may select one of the following options:

- 1. Submit a letter provided by the municipal or county planning engineer that verifies plan consistency.
- 2. Submit an Act 167 plan consistency verification report. The report must be prepared and sealed by a licensed professional. The report should include the following:
 - **a.** A summary of the PCSM/SR recommendations in the plan including Peak Rate Controls, Volume Controls, Water Quality Controls and any other PCSM controls recommended in the plan. A separate summary should be submitted for each plan in the project area. The summary should be as detailed as practicable.
 - **b.** Identification of watersheds in the plan where hydrologic modeling was performed and release rates more stringent than the *Stormwater BMP Manual* Recommended Peak Rate Control Guideline have been established.
 - c. Calculations to demonstrate that the PCSM/SR plan is consistent with the DEP approved Act 167 plan including post construction stormwater runoff peak rate, volume, water quality and any other control recommended by the plan. When applicable the appropriate worksheets referenced in the Stormwater BMP Manual should be included.

If no DEP approved Act 167 plan exists, the PCSM/SR plan must otherwise comply with §102.8 and should be consistent with the practices contained within the *Stormwater BMP Manual* and should include the appropriate completed worksheets referenced in the *Stormwater BMP Manual*. In addition to these volume, rate and water quality requirements, all PCSM/SR plans must comply with local flood control requirements.

PCSM/SR BMP Alternative Design Standards: If PCSM/SR BMPs and their application do not follow the guidelines referenced in the *Stormwater BMP Manual*, provide documentation to demonstrate performance equivalent to, or better than, the BMPs in the Manual. Check the appropriate box in this section. NOI package submitted with alternate BMPs that have not been approved by the DEP will be returned to the Applicant.

Permittees and co-permittees are responsible for proper installation of the PCSM/SR Plan BMPs prior to the submission of the Notice of Termination (NOT) for this permit.

Water Quality Compliance: In addition to volume and rate control, PCSM/SR BMPs must ensure that the pollutants generated from the disturbed areas will be prevented or removed from the resultant runoff. Compliance with volume criteria assumes that the major portion of particulate pollutants have been removed from the runoff by one or more BMPs. An additional demonstration that effective solute reduction has been included in the PCSM/SR Plan is required for compliance with water quality criteria.

Check appropriate boxes and attach required worksheets.

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If the stormwater management design achieved volume reduction and at least 90% of the disturbed area is controlled by a BMP, it is assumed that total suspended solids (TSS) and total phosphorus (TP) requirements are met. Applicant must include Worksheet 10 to demonstrate that specific nitrate prevention/reduction BMPs are used in the design. Worksheet 10 is a simple checklist to demonstrate that the site has achieved water quality compliance without performing detailed loading analysis.

If the stormwater management design achieved volume reduction but 90% of the disturbed area is not controlled by a BMP, the applicant must include Worksheet 12 and 13. Worksheets 12 and 13 indicate the uncontrolled load from disturbed areas and give credit for load reduction and source omissions by using both structural and non-structural BMPs.

If the stormwater management design is not able to achieve volume reduction, the applicant must include Worksheet 11, 12 and 13. Worksheet 11 is intended to demonstrate the use of specific BMPs for pollutant prevention. Worksheet 12 estimates the pollutant load from disturbed areas and Worksheet 13 calculates pollutant load reductions with the proposed BMPs.

a. PCSM/SR Plan Summary: The ESCGP-3 requires a written PCSM Plan to be developed, implemented, operated and maintained in accordance with § 102.8(a). The PCSM Plan must comply with 25 Pa. Code § 102.8 and, for unconventional operators, § 78a.65, and should be designed to maximize volume reduction technologies, eliminate, where possible or minimize stormwater discharges to surface waters, preserve the integrity of stream channels, and protect the physical, biological and chemical qualities of receiving waters.

PCSM BMPs and planning must meet the requirements in 25 Pa. Code §102.8 and should be designed to:

- maximize volume reduction technologies,
- eliminate (where possible) or minimize point source discharges to surface waters,
- preserve the integrity of stream channels,
- and protect the physical, biological and chemical qualities of the receiving surface water.

SR BMPs and planning must also be designed to:

- maximize volume reduction technologies,
- eliminate (where possible) or minimize point source discharges to surface waters,
- preserve the integrity of stream channels, and
- protect the physical, biological and chemical qualities of the receiving surface water.

Provide a summary of proposed PCSM/SR BMPs and their performance to manage stormwater for the project. If PCSM/SR BMPs and their application do not follow the guidelines referenced in the *Stormwater BMP Manual*, provide documentation to demonstrate performance equivalent to, or better than, the BMPs in the Manual. Check the appropriate box(s) for PCSM and/or SR BMPs, whichever applies.

Check whether the project will utilize PCSM BMPs and/or SR BMPs.

PCSM/SR plan must be provided with the NOI when they are submitted to DEP Oil and Gas District Office. When they must be submitted to the delegated Conservation District, submit one original and one copy to DEP and another copy to the appropriate delegated Conservation District. The plan should address rate, volume, and water quality impacts to each drainage area.

The portion of the SR plan that identifies PCSM BMPs to manage stormwater may be used to satisfy PCSM requirements if the SR Plan meets the requirements of § § 102.8 (b), (c), (e), (f), (h), (i), and (l) and when applicable (m) for the following activities (1) oil and gas activities permitted in accordance with Chapters 78 and 78a and (2) pipelines and other similar utility infrastructure. Regulated activities not included above must submit PCSM Plans that meet all provisions of §102.8 (See Section H of the NOI Instructions).

The plan should address rate, volume, and water quality impacts to each drainage area.

The NOI allows the use of design standards other than those specified in Chapter 102 if certain criteria are adhered to. The SR plan should be designed to maximize volume reduction technologies, eliminate (where possible) or minimize point source discharges to surface waters, preserve stream channel(s) integrity, and must protect the physical, biological and chemical qualities of the receiving water.

b. Riparian Buffer: The operator must explain details of the riparian buffer information if the details differs from what was submitted in the Riparian Buffer section.

- **c.** Thermal Impact Analysis: The applicant shall provide a summary of potential thermal impacts associated with the planned project and how the potential thermal impacts are to be avoided, minimized, or mitigated.
 - Examples include: minimizing impervious surfaces, maintain shade over and around construction sites to the extent possible and discharging from the bottom of surface impoundments, using subsurface impoundments, infiltration, and maximize the use of vegetated areas to cool runoff prior to discharge. Maintaining canopy cover and riparian buffers that limit ground surface exposure to direct sunlight is effective in the control of thermal pollution of surface waters. Using borings instead of open cuts for utility crossings will limit vegetation disturbance and exposure of the ground surface to sunlight. The analysis should evaluate the effectiveness of various alternatives or combination of alternatives that prevent or minimize thermal pollution.
- d. Off-site Discharge Analysis: If an applicant proposes off-site discharges of stormwater from PCSM BMPs to areas other than surface waters, documentation must be provided in PCSM/SR plan to demonstrate that the discharge will not cause erosion, damage, or a nuisance to off-site properties. It is the applicant's responsibility to obtain legal authority to discharge onto adjacent properties. Check the appropriate box. Potential offsite discharges should be discussed during preapplication meetings with the permit reviewing agency.
- e. Summary Table for Supporting Calculation and Measurement Data: Please provide this summary data from the calculations and measures submitted as part of the PCSM/SR Plan. Reference the Stormwater Methodology used, and check off the appropriate volume measurement used (acre-feet or cubic feet). For a project involving multiple watershed boundaries, submit a complete separate Summary Table for each additional watershed. Watersheds should be identified based on the drainage patterns of the project area.
 - A summary of the PCSM recommendations in the plan including Peak Rate Controls, Volume Controls, Water Quality Controls and any other PCSM controls recommended in the plan. A separate summary should be submitted for each watershed in the project area. The summary should be as detailed as possible.
 - Identification of watersheds in the plan where hydrologic modeling was performed and release rates are more stringent than the Stormwater BMP Manual Recommended Peak Rate Control Guideline have been established.
 - Calculations to demonstrate that the SR plan is consistent with DEP approved Act 167 plan including post
 construction stormwater runoff peak rate, volume, water quality and any other control recommended by the plan.
 When applicable, the appropriate worksheets referenced in the Stormwater BMP Manual should be included.
 - Additional guidance completing this section of the NOI can be found in Attachment D of the instructions.
- f. Summary Description of PCSM/SR BMPs: Check all appropriate boxes. If there is no check box for a planned BMP, check the box for "other" and list the BMP. Do not list erosion and sediment control BMPs. A summary table with infiltration testing information must be submitted for all Bio-infiltration BMPs included in PCSM/SR plan. Additional guidance completing the infiltration BMP summary table can be found in Attachment E of the instructions.
- g. Critical PCSM Plan stages: Identify the critical stages of implementation of the PCSM Plan for which a licensed professional or designee shall be present on site. The critical stages may include the installation of underground treatment or storage BMPs, structurally engineered BMPs or other BMPs as deemed appropriate by DEP or delegated Conservation District.

Section I: Antidegradation Analysis

This section must be completed if the proposed project includes activities that will be conducted in special protection waters, including EV wetlands or siltation-impaired waters. If the answer to question in Section E. 17., Project Information is "yes" the applicant must identify all special protection receiving waters, and siltation impaired waters and complete Section I. Antidegradation Requirements. If the applicant checks "No," indicating that the entire proposed limit of earth disturbance (LOD) for the project is not tributary to special protection (HQ or EV) waters of the Commonwealth and/or siltation impaired waters, then the applicant may leave Section I blank.

Maintaining and protecting existing water quality for High Quality (HQ) and Exceptional Value(EV) streams, and EV wetlands and protecting designated and existing uses for all surface waters is critical. The antidegradation requirements in 25 Pa. Code § 93.4c must be met by following the process established in 25 Pa. Code §102.4(b)(6) and 102.8(h) (relating to implementation of antidegradation requirements). The Antidegradation Analysis outlines that process.

Part 1 – Nondischarge Alternatives Evaluation

Nondischarge alternatives are 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 water of this Commonwealth. Nondischarge alternative BMPs should be

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evaluated and included in E&S and PCSM/SR Plans. If the applicant demonstrates that nondischarge alternatives do not exist for the project, the applicant must utilize ABACT. Check the box provided for each nondischarge BMP that will be utilized for the project. For nondischarge BMPs not checked, provide an explanation of why they are not planned to be utilized.

Determine if the use of nondischarge BMPs, as proposed in this section will eliminate any net change in rate, volume and quality during construction. Check the "yes" box if appropriate and do not complete Section I. Antidegradation Analysis, Part 2. Otherwise, if the project will not utilize nondischarge BMPs to that will eliminate the net change in rate, volume and quality after construction, check "no" and complete part 2 of this Section.

Part 2 – Antidegradation Best Available Combination of Technologies (ABACT)

When nondischarge alternatives for the project do not exist, an applicant must utilize ABACT BMPs in the E&S and PCSM/SR Plans to demonstrate that any net change in stormwater runoff will maintain and protect existing water quality and uses of receiving surface waters. ABACT means 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.

Erosion and Sediment Control Antidegradation Implementation

To satisfy the antidegradation requirements, the applicant should refer to § 102.4(b)(6), as well as the *E&S Manual*, pages 343 through 346 to (1) evaluate and include nondischarge alternatives in the *E&S* plan, and (2) if nondischarge alternatives do not exist for the project, the *E&S* Plan must include ABACT BMPs that manage the change in the 2-year/24-hour storm event.

Check the box for each ABACT BMP included in the E&S Plan that will be utilized on the project.

Determine if the ABACT BMPs proposed in the E&S Plan are sufficient to minimize E&S discharges to the extent that existing and designated surface water uses are protected. If not sufficient, the application doesn't qualify for an ESCGP-3 as proposed and will be returned to the applicant.

PCSM/SR Antidegradation Implementation

To satisfy the antidegradation implementation requirements the applicant should refer to §102.8(h) as well as the *Stormwater BMP Manual* to (1) evaluate and include nondischarge alternatives in the PCSM/SR Plan, and (2) if nondischarge alternatives do not exist for the project, the PCSM/SR Plan must include ABACT BMPs that manage the change in 2-year/24-hour storm event. Where ABACT BMPs will be utilized, the applicant's pre- to post comparative analysis must demonstrate any net change in stormwater will be managed utilizing ABACT BMPs that will protect and maintain water quality and designated uses. For nondischarge alternative and ABACT BMPs not listed in DEP's manuals, the applicant must provide data to support the BMPs, including a demonstration that they will maintain and protect the existing quality of receiving surface waters.

Check the box for each ABACT BMP included in the PCSM/SR Plan that will be utilized on the project.

Determine if the ABACT BMPs proposed in the PCSM/SR Plan are adequate to achieve no net change and assure that existing and designated surface water uses are protected. If not sufficient, the application doesn't qualify for an ESCGP-3 as proposed and will be returned to the applicant.

Section J: Compliance History Review

If the applicant(s) are in violation of any permits issued by DEP or have been in violation of any regulated activities within the past five years, the information in this section must be completed. Check "Yes" if the applicant is or has been in violation of any DEP regulation, order, schedule of compliance or permit or in violation of any DEP regulated activities within the past five years. Otherwise check "No" and skip the remaining portion of this section and proceed to Section K. Complete the remaining Compliance History Review section if the "Yes" box is checked. Use additional pages if necessary.

Section K: Certification by Person Preparing E&S and PCSM/SR Plans

The person responsible for preparing the E&S and PCSM/SR Plans must complete this section. If the applicant is requesting an expedited review, the licensed professional responsible for the development of a complete permit NOI package, including the E&S and PCSM/SR Plans that specifies BMP implementation and maintenance requirements that meet regulatory requirements, must sign and seal the NOI in the space provided certifying that the information provided is true and correct.

Section L: Applicant Certification

The application shall be signed as follows:

a. Corporations:

- (1) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
- (2) The manager of one or more manufacturing, production or operating facilities if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- b. Partnerships or sole proprietorships -a general partner or the proprietor, respectively.
- c. Municipalities, State, Federal or other public agencies -either a principal executive officer or ranking elected official:
 - (1) The chief executive officer of the agency; or
 - (2) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
- d. For individuals, no indication of title is necessary.

Section M: Additional Contact Information

Provide contact information for the individual to provide assistance to DEP or delegated Conservation District with question concerning the NOI.

2. EROSION AND SEDIMENT CONTROL (E&S) PLAN REQUIREMENTS

The E&S Plan that meets the requirements of 25 Pa. Code § 102.4(b) must be submitted with the NOI and must contain BMPs designed to minimize discharges to surface waters, preserve the integrity of stream channels and protect the physical, biological and chemical qualities of the receiving water. DEP recommends that the E&S Plan be developed utilizing guidelines and BMP information provided in the *E&S Manual*.

The E&S Plan must be submitted to DEP Oil and Gas District Office (for production, exploration or processing activities) or DEP Bureau of Waterways Engineering and Wetlands Regional Office if located in a county that does not have a Ch. 102 delegation agreement with DEP, or to an authorized county Conservation District that does have a Ch. 102 delegation agreement with DEP (for transmission facilities). Also, submit the completed NOI, NOI Checklist (only for transmission facilities), Complete Plan Checklist and the Standard E&S Control Plan Technical Review Checklist.

If the project is located in a HQ or EV watershed or EV wetland pursuant to 25 Pa. Code Chapter 93 and 25 Pa. Code Chapter 105, the E&S Plan must address the special protection requirements in DEP's antidegradation implementation requirements at 25 Pa. Code § 102.4(b)(6) and Section II Chapter 4 of the Oil and Gas Operators Manual. The applicant must identify whether the receiving water/watershed is siltation-impaired.

In most applications, an E&S Plan will consist of two parts: a plan narrative and maps/drawings. Maps and drawings are used to show the existing and proposed topography, as well as the construction details and maintenance details for the proposed BMPs. The narrative is used to document the design calculations for the BMPs.

Technical references for E&S BMPs can be found on the DEP website at www.dep.pa.gov and at the following link.

Erosion and Sediment Pollution Control Program Manual.

The applicant's Erosion and Sediment Control Plan must include the following:

a. Topographic Features

Plan drawings showing the existing topographic features of the project site including the immediate surrounding area must be provided. The scale of the drawings must be large enough to clearly depict the topographic features

and the contours must be at an interval that will adequately describe the topography of the site. Scales of 1-inch equals 50 feet or less, with 2-foot maximum contour intervals are recommended. The drawings must include the location of the project with respect to roadways, municipalities, streams, watercourses, public and private water supplies (wells, springs and water withdrawal locations etc.) existing structures, existing ground cover, utilities and other identifiable landmarks, etc. The immediate surrounding area must be of sufficient size to include all areas contributing runoff to the project site, planned BMPs and water courses receiving runoff from the project for evaluation relative to resistance to erosion. All symbols shown on the drawings must be included in a legend; a north arrow and scale must also be shown on the drawings. These requirements also apply to all offsite disposal or borrow areas.

In addition to the topographic map, a location map is required that shows the relationship of the project to municipal boundaries and major highways. The location map may be included on the topographic map as an insert or may be included as a separate sheet in the narrative report. A reprint or a copy of a portion of a 7½ minute (1:24 000) USGS quadrangle map is recommended for this purpose. The name of the USGS quadrangle map must be included on the location map. For permit applications, a location map reprinted or copied from USGS quadrangle maps is required.

b. Soil Characteristics

The locations of the soils may be delineated on the drawings discussed above, or on a separate map of the site. A photocopy of a portion of the county soil survey on which the proposed project can be clearly shown may also be used. The types, depth, slope and limitations of the soils should be included in the project narrative or included on the drawings. Data on the physical characteristics of the soils, such as their texture, resistance to erosion and suitability for intended (limitations) use is to be included in the narrative report. This information is available in soil survey reports, published by the USDA, Natural Resources Conservation Service (formerly Soil Conservation Service; NRCS website: https://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/), in cooperation with the Pennsylvania State University College of Agriculture and others. The reports are available from the county conservation districts. The means to address the identified soils limitations must be included on the drawings. For example, a note to use only certain areas as borrow areas for fill for sediment basins or traps, or special fertilization requirements for portions of the project, etc.

c. Earth Disturbance Activity

The proposed alteration in the project area and the limits of the project area must be shown on the plan drawings. Such information as the LOD, areas of cuts and fills and the locations of roads, existing and proposed structures should be included. Proposed contours of the project area must be included on the drawings. Separate drawings, or inserts on the plan drawings must be included for off-site borrow or disposal areas which are part of the project. These drawings or inserts must include the same information as required on the plan drawings. A legend that describes all alterations and BMPs to be used for erosion and sediment control must be included on the drawings.

A description of the past, present and proposed land use in the project area must be included in the project narrative.

d. Project Site Runoff

The maximum area draining to all basins, traps and channels must be determined to calculate volume and rate of runoff. In some instances, the drainage area will increase or decrease as the site grading proceeds. In such cases, the maximum drainage area to the BMP must be used to determine the design capacity. An analysis must be included in the project narrative showing the impact that runoff from the project site will have on existing downstream watercourses' resistance to erosion. Design computations for appropriate protective measures for downstream watercourses must be included when applicable. A discharge analysis for all non-surface water discharges must be provided in the project narrative.

e. Surface Water Classification

All streams in Pennsylvania are classified based on their designated and existing water uses and water quality criteria. If the runoff from a project area discharges to a stream that is classified for Special Protection or siltation-impaired waters, more stringent criteria are used to design the BMPs for that site. The criteria are found in Chapter 102.

The applicant must show on the drawings all streams, springs, wetlands, and floodways within, adjacent or receiving water from the project site. All special protection waters and existing uses as presented in Chapter 93 must be clearly identified on the drawings and in the project narrative.

f. BMP Description Narrative

A description of the location and type of perimeter and onsite BMPs used before during and after earth disturbance activity must be included in the project narrative.

g. BMP Installation Sequence Narrative

The project narrative must provide a sequence of BMP installation and removal. This requires a list of temporary or permanent BMPs to be installed and a schedule for their installation and removal as related to the various phases of the project. Other BMPs are constructed when needed to accommodate the planned sequence of project installation. The narrative must include a complete schedule of installation and removal of erosion control BMPs as they relate to the various phases of earthmoving activities.

Appropriate BMPs for sediment pollution control must be in place before earth disturbance occurs within a given drainage area. All steps to be taken from the initial site clearing through the final stabilization of the site must be included.

h. Supporting Calculations and Measurements

All design information for BMPs must be included in the project narrative. The information will vary according to the BMP, but should include such information as the drainage area, flow rate, velocity and the proposed method of stabilization. The STANDARD WORKSHEETS included in the Appendix B of the <u>E&S Manual</u> gives guidance for the design calculations and information required. The applicant is not required to use the STANDARD WORKSHEETS, but must furnish the same information as indicated in the worksheets.

i. Plan Drawings

The locations of proposed BMPs must be shown on the plan drawings as previously described. A legend, describing all symbols must be included on all plan drawings. All construction details and specifications for the facilities must be included on the drawings including standard notes and optional notes to clarify or explain requirements. Typical sketches may be used; these sketches must provide sufficient information to show critical dimensions and construction details for each specific BMP. Standard Construction Details may be copied from those in the *E&S Manual* and inserted into the erosion and sediment control plan drawings of specific projects. Proposed new contours must tie into existing contours.

j. Maintenance Program

A maintenance program for both the temporary and permanent erosion and sediment control BMPs, including disposal of materials removed from the BMPs or project area, must be included in the project narrative and plan drawings. The maintenance program must include a schedule for inspection of each BMP and provides for inspection after each measurable runoff event as well as on a weekly basis. The type of maintenance, such as cleanout, repair, replacement, re-grading, stabilizing, etc. for each of the BMPs is to be included in the program. For sediment basins, the elevation corresponding to top of sediment storage level must be specified and a means to identify this elevation must be identified. The means of disposal of the materials removed from the BMPs must be specified. If materials removed from the BMPs are to be removed from the project area, the site and method of disposal must be indicated. Guidance on appropriate maintenance actions is provided for each BMP described in the *E&S Manual*. Maintenance requirements must be shown on the plan drawings.

k. Material Recycling and Disposal

Applicants for earth disturbance activities must ensure that proper mechanisms are in place to control waste materials. Construction wastes include, but are not limited to, excess soil materials, building materials, concrete wash water, sanitary wastes, etc. that could adversely impact water quality if not handled properly. The applicant must develop a plan in the project narrative which implements measures for housekeeping, materials management, and litter control. Wherever possible, recycling of excess materials is preferred, rather than disposal. A note directing proper handling, recycling and disposal of waste materials must be added to the plan drawings.

I. Soil Conditions and Geologic Formations

Geologic formations containing minerals (e.g. pyrite) in sufficient quantities that could result in discharges which do not meet water quality standards for the receiving surface water(s) should be identified and discussed in the project narrative.

The locations of the formations containing those minerals (if not site wide) must be shown on the plan drawings. Appropriate measures to prevent such discharges (including but not limited to proper handling, isolation, disposal, etc.) should also be provided on the plan drawings along with typical details illustrating the procedures and/or BMPs to be used to avoid or minimize potential pollution.

Bedrock or soil conditions which could result in significant slope failures causing mass soil movement into surface waters, property damage, or a public safety hazard should also be identified and discussed in the project narrative. The erosion control project narrative should briefly state the methods incorporated into the plan which address such hazards. Plan drawings should clearly mark the locations where potential for slope failures exist, and appropriate construction details and typicals should be provided. When poor geologic or soil conditions cannot be avoided, BMPs to minimize or mitigate their impact must be identified in the plan drawings and implemented at the construction site. If the Applicant suspects any possibility of slope failure, a geotechnical report prepared by a geotechnical engineer must be submitted with the E&S Plan to ensure the hazard has been assessed and addressed properly.

m. Thermal Impacts

An analysis of how thermal impacts, associated with the project, will be avoided should be provided in the project narrative. If thermal impacts cannot be avoided, describe in the project narrative how impacts are to be minimized and the BMPs that will be used to mitigate the impacts in a manner that will protect and maintain surface water quality. BMPs to be used to minimize or mitigate thermal impacts must be provided on the plan drawings with associated details and /or typicals. The primary means to address thermal pollutions is to limit the size and duration of exposed earth or through infiltration. Additional information on minimizing thermal impacts can be found in the *Stormwater BMP Manual*.

n. E&S Plan and PCSM/SR Plan Consistency

The overall design of the project should support the management of stormwater for erosion and sediment control during earth disturbance activities in a manner that is compatible with and can be integrated into, structural and non-structural PCSM/SR practices and approaches. The project narrative should discuss the overall project and how the E&S Plan will accommodate PCSM/SR BMPs.

The plan drawings should identify locations where BMPs are planned and designed to be integrated into PCSM/SR structural and non-structural practices and approaches.

o. Riparian Forest Buffers

When riparian forest buffers will be incorporated into a project site, the areas of existing buffers or the areas where buffers will be developed should be identified on the plan drawings.

p. Antidegradation Requirements

Applicants proposing earth disturbance activities within special protection watersheds or siltation-impaired watersheds must implement nondischarge alternatives wherever cost-effective and environmentally sound. An evaluation of nondischarge alternatives should be provided in the project narrative that identifies viable alternatives for the proposed project. If no viable nondischarge alternatives exist, the Erosion and Sediment Control Plan must include ABACT. The plan drawings must show the locations and details for all non-discharge alternatives when identified or ABACTs when non-discharge alternatives don't exist.

3. PERMIT NOI FILING FEES

The applicant must submit \$500 plus \$100 per acre of earth disturbance with the NOI. Fractional acreage shall be rounded to the closest whole number (≥ 0.5 Round up; < 0.5 Round down).

For an NOI submitted to DEP for transmission facilities, a check is to be made payable to the "Commonwealth of Pennsylvania, Clean Water Fund". The Check is to be dated within 10 days of the NOI submittal date and sent with the NOI directly to the appropriate DEP Regional Office.

For an NOI submitted to a delegated Conservation District, two checks are required. A check for the administrative fee of \$500 made payable to the delegated Conservation District "Clean Water Fund". A second check for the \$100 per acre disturbance fee made payable to the "Commonwealth of Pennsylvania, Clean Water Fund". Both checks are to be dated within 10 days of the NOI submittal date and sent with the NOI directly to the delegated Conservation District. Only certain federal and state government agencies are exempt from the fee.

Phased projects will need to pay the base administrative fee and the disturbed acreage fee for the initial phase or phases being submitted. Subsequent phase submissions must include only the disturbed acreage fee for that phase.

Applications submitted through DEP's ePermit system will provide payment with a credit card or electronic fund transfer.

Note: The delegated Conservation District will forward the "per acre disturbance fee" check to the Water Management Program of the appropriate DEP Regional office.

4. MUNICIPAL NOTIFICATION

a. Act 14

Act 14, which amended the Commonwealth's Administrative Code (71 P.S. § 510-5), requires every applicant for a new, amended, or revised permit to give written notice to each municipality (borough, township) and county government in which the facility is located. The municipality and county government must receive the written notice at least thirty (30) - days before DEP may issue or deny approval of coverage. A sample of the municipal notification is provided in these instructions as **Attachment C**. The attached sample letter should be used when providing notification in accordance with Act 14.

Proof of Receipt - The applicant must submit with the NOI:

- A copy of correspondence notifying the municipality and county government of your intention to submit a NOI, and
- 2. Evidence that the municipality and county government has received your notification. Acceptable forms of this evidence include certified mail receipt, proof of deliver from a commercial carrier or written acknowledgement of the notification from the municipality.

Submit a copy of the NOI and E&S and PCSM/SR Plan drawings to each municipality and county where the project is located with the notification. The plan drawings should accurately portray the type and scope of work that is proposed. If the plans included in the municipal notification are not final, they should be marked accordingly. Failure to comply with municipal notification requirements will result in the return of the NOI as incomplete.

b. Cultural Resources Notice

Submit a Project Review Form to PHMC, at http://www.phmc.pa.gov/Preservation/About/Documents/SHPO%20Project%20Review%20Form.pdf.

5. PENNSYLVANIA NATURAL HERITAGE PROGRAM (PNHP)

Proof of consultation with PNHP is required. In order to provide proof of consultation with PNHP in accordance with 25 Pa. Code § 102.6(a)(2) regarding the presence of a State or Federal threatened or endangered species (T&E Species) on the project site, submit a Pennsylvania Natural Diversity Inventory Project Environmental Review Receipt (PNDI Receipt). Information on PNHP searches is available through the PA Department of Conservation and Natural Resources, Bureau of Forestry, Ecological Services Section, P.O. Box 8552, Harrisburg, PA 17105-8852, telephone (717) 787-3444 and at https://conservationexplorer.dcnr.pa.gov/. If the PNHP review determines there are potential impacts to a T&E species, the PNHP review receipt will provide an explanation of the potential impact(s) and instructions on how to resolve the potential impact. Following the procedure outlined in the Policy for Pennsylvania Natural Diversity Inventory (PNDI) Coordination During Permit Review and Evaluation (PNDI Policy), No. 021-0200-001 meets the requirements in § 102.6(a)(2).

There are two options available to applicants for a standard NOI for handling PNDI coordination in conjunction with DEP's permit review process: sequential review and concurrent review. If selecting sequential review, submit a PNDI receipt and clearance letters, if any, with the NOI. If selecting concurrent review, submit a PNDI receipt, a completed PNDI Form and a U.S.G.S. 7.5 minute quadrangle map with the project boundaries delineated on the map with the NOI. Additionally, submit the PNDI receipt to the appropriate jurisdictional agency. While DEP is commencing its completeness and technical review of the application, the applicant will engage in any consultation with the jurisdictional agencies. It is important to note, however, that the concurrent review option, carries certain risks and consequences to the applicant, including delay and redesign. See PNDI Policy pages 7-8.

When the activities are on lands of the ANF, evaluation of potential conflicts is to be coordinated with the appropriate ANF Ranger District.

Please note, early coordination (prior to NOI submission), by prospective applicants and their consultants with the appropriate jurisdictional agencies using the PNDI system is the most effective means of timely permit decision. For additional information, refer to DEP's PNDI Policy.

6. POST CONSTRUCTION STORMWATER MANAGEMENT/SITE RESTORATION PLANS

A Post Construction Stormwater Management/Site Restoration Plan (PCSM/SR Plan) that meets the requirements of Pa. Code § 102.8 and § 78a.65, for unconventional operations, must also be submitted with the NOI and must identify the BMPs to be installed, which manage and treat the stormwater discharges to protect water quality after construction. DEP recommends that the PCSM/SR Plan be developed utilizing *Stormwater BMP Manual*. PCSM/SR Plan BMPs should be designed to maximize replication of the natural hydrologic cycle, to protect the structural integrity of the stream, and to protect and maintain existing and designated uses of the Commonwealth waters.

The PCSM/SR Plan must be submitted to DEP Oil and Gas District Office (for production, exploration or processing activities) or DEP Bureau of Waterways Engineering and Wetlands Regional Office if located in a county that does not have a Ch. 102 delegation agreement with DEP or to an authorized Conservation District that does have a Ch. 102 delegation agreement with DEP (for transmission facilities) along with the completed NOI, E&S Plan, Checklist and Standard PCSM Technical Review Guide. The Checklist is an outline of the information needed to submit a complete PCSM/SR Plan and the Technical Review Guide identifies specific content required in each item in the Checklist.

If the project is located in a High Quality or Exceptional Value watershed or Exceptional Value wetland pursuant to 25 Pa. Code Chapter 93 and 25 Pa. Code chapter 105, the PCSM/SR Plan must address the special protection requirements in DEP's antidegradation implementation requirements at 25 Pa. Code § 102.8(h).

Technical references for PCSM/SR BMPs can be found on the DEP website at <u>www.dep.pa.gov</u> and at the following links below.

Erosion and Sediment Pollution Control Program Manual

Pennsylvania Stormwater Best Management Practices Manual

Pennsylvania's Comprehensive Stormwater Management Policy (No. 392-0300-002)

Note: BMP's not included in DEP's manuals will require documentation to support their effectiveness.

The PCSM/SR plan must include the following:

a. Topographic Features

Plan drawings showing the existing topographic features of the project site including the immediate surrounding area must be provided. The scale of the drawings must be large enough to clearly depict the topographic features and the existing and proposed contours must be at an interval that will adequately describe the topography of the site. Scales of 1-inch equals 50 feet or less, with 2-foot maximum contour intervals are recommended.

The drawings must include the location of the project with respect to roadways, municipalities, streams, watercourses, existing structures, existing ground cover, utilities and other identifiable landmarks, etc. The immediate surrounding area must be of sufficient size to include all areas contributing runoff to the project site, planned BMPs and water courses receiving runoff from the project for evaluation relative to resistance to erosion. All symbols shown on the drawings must be included in a legend; a north arrow and scale must also be shown on the drawings. These requirements also apply to all offsite disposal or borrow areas.

In addition to the topographic map, a location map is required that shows the relationship of the project to municipal boundaries and major highways. The location map may be included on the plan drawings as an insert or may be included as a separate sheet in the project narrative. A reprint or a copy of a portion of a 7½ minute USGS quadrangle map is recommended for this purpose. The name of the USGS quadrangle map must be included on the location map. For permit applications, a location map reprinted or copied from USGS quadrangle maps is required.

b. Soil and Geologic Formation Characteristics

The types, depth, slope, locations and limitations of the soils and geologic formations must be identified for the entire project. The soil types should be delineated on the plan drawings along with notes describing any limitation and the proposed resolutions to address the limitations. Geologic formations that have the potential to impact the project site such as unstable rock, Karst formations and formations prone to landslides when exposed by earth disturbance should be identified on the plan drawings and in the project narrative with proposed resolutions. A photocopy of a portion of the soil survey on which the proposed project can be clearly shown may also be used as a soils map.

Data on the physical characteristics of the soils, such as their permeability, depth to seasonal high ground water, texture, landslide potential, resistance to erosion and suitability for intended (limitations) use is available in soil

survey reports, published by the USDA Natural Resources Conservation Service (formerly Soil Conservation Service), in cooperation with the Penn State College of Agriculture and others should be included in the project narrative. Of special interest are soils identified as "hydric" indicating the potential for the presence of wetlands. Soils identified as "hydric" in the USDA soil surveys must be investigated in the field to determine the presence or absence of wetlands.

c. Earth Disturbance Activity Characterization

The proposed alteration in the project area and the limits of construction must be shown on the plan drawings. Such information as the limits of earth disturbance, the areas of cuts and fills, proposed impervious areas and the locations of roads, existing and proposed structures are to be included. Proposed contours and grades of the project area must be included on the project drawings. Separate drawings, or inserts on the plan drawings must be included for off-site borrow or disposal areas which are part of the project. These drawings or inserts must include the same information as required on the plan drawings. A legend that describes all of the alterations and PCSM/SR BMPs to be used for erosion and sediment control must be included on the drawings.

A description of the past, present and proposed land use in the project area must be included in the project narrative.

d. Net Change in Volume and Rate of Runoff

The net change in runoff volume and rate between preconstruction hydrology and post construction hydrology for the entire project site and each drainage area must be identified. The PCSM/SR BMPs should manage the net change in runoff volume and rate for a 2-year/24-hour storm event. An analysis must be included in the project narrative that describes how any net change in runoff volume and rate will be managed. The PCSM/SR Plan must meet the requirements under 25 Pa. Code § 102.8. DEP recommends that the PCSM/SR Plan be developed using *Stormwater BMP Manual*. Include pre-development drainage area map as well as post-development drainage area map. Post-development drainage area map must show Point of Discharge(s) (PODs) from PCSM BMPs.

e. Surface Water Classification

All streams in Pennsylvania are classified based on their designated and existing water uses and water quality criteria. If the runoff from a project area discharges to a stream that is classified HQ or EV, more stringent criteria applied to design of the PCSM/SR BMPs. The criteria are found in Chapter 102.

The applicant must show on the plan drawings all streams, springs, wetlands, and floodways within, adjacent or receiving watercourses from the project site. All special protection waters, classifications and existing uses as presented in Chapter 93 must be clearly identified on the plan drawings and in the project narrative.

f. BMP Description Narrative

A written description of the location and type of PCSM/SR BMPs must be provided in the project narrative. Project drawings must show the location of permanent PCSM/SR BMPs and provide construction details including permanent stabilization specifications. Proprietary BMP systems should be presented on the plan drawings in accordance with the manufacture's requirements. All infiltration BMPs shall be provided with overflows and /or underdrains as needed to meet site and soil limitations.

g. BMP Installation Sequence Narrative

A sequence of PCSM/SR BMP implementation and installation in relation to earth disturbance activities of the project site and a schedule of inspection for critical stages of PCSM/SR BMP installation must be provided in the project narrative. Removal of temporary BMPs and activities or actions to be taken limit exposed area on the project site should be included in the plan narrative. The location of the PCSM/SR BMPs with construction details must be included on the project drawings.

h. Supporting Calculations

All design information and calculations for PSCM/SR BMPs and other points of concern must be included in the project narrative. The information will vary according to the PCSM/SR BMP, but should include such information as the methodology used for all calculations, drainage area, flow rate, flow velocity, design storm used for each calculation and the proposed method of stabilization. The FLOWCHARTS and STANDARD WORKSHEETS included in Chapter 8 of the *Stormwater BMP Manual* provide guidance for the design calculations and information required and is recommended by DEP to facilitate submittal and review. Although the FLOWCHARTS and WORKSHEETS are recommended by DEP, the applicant is not required to use them, but must furnish the same information as indicated on the forms.

Identify any current (2005 or more recent) and approved Act 167 Plan that covers the project site and include verification of PCSM/SR plan consistency with the Act 167 Plan in the Plan Narrative.

A summary of bio-infiltration BMPs used for the project must be provided using attachment E.

i. Plan Drawings

The locations of the PCSM/SR BMPs with tributary drainage areas must be shown on the plan drawings along with construction details and specifications for the facilities including standard notes to clarify or explain construction requirements. Typical sketches maybe used; these sketches must provide sufficient information to show critical dimensions and construction details for each specific PCSM/SR BMP. Areas sufficient in size and number where infiltration testing is to be conducted for proposed volume and rate control BMPs should be identified and marked as restricted access areas to avoid soil compaction.

The PCSM/SR Plan is to be consistent with the E&S Plan in regard to proposed contours, improvements, soils, wetlands, floodways, streams, discharge locations BMPs etc. All easements and rights-of-way on the project site must be shown on the plan drawings. Delineations of sensitive resources such as floodplains, floodways, steep slopes, riparian buffer areas, existing and proposed discharge points, points of interest or concern etc. should be clearly shown on the plan drawings. A legend, describing all symbols must be included on all plan drawings.

j. Long Term Operation and Maintenance Schedule

A long-term operation and maintenance schedule, which provides for inspection of PCSM/SR BMPs, including the direction for repair, replacement, or other routine maintenance of the PCSM/SR BMPs to ensure their proper function and operation must be included in the project narrative. The program must provide for completion of a written report documenting each inspection and all PCSM/SR BMP repair and maintenance activities including directions for the disposal of accumulated sediment. The long-term operation and maintenance schedule must identify the responsible party (owner, operator, and inspector) for program conduct and how access to the PCSM/SR BMPs will be provided.

k. Material Recycling and Disposal

Procedures which ensure that the proper measures for recycling or disposal of materials associated with or from the PCSM/SR BMPs are in accordance with DEP laws, regulations and requirements. The applicant must develop a plan in the project narrative which identifies project wastes and provides directions to implement measures for recycling, disposal, housekeeping, materials management, and litter control etc. Wherever possible, recycling of excess materials is preferred, rather than disposal. A note directing proper handling, recycling and disposal of waste materials must be added to the plan drawings where appropriate.

I. Geologic Formations and Soil Conditions

The applicant must identify naturally occurring geologic formations or soil conditions that may have the potential to cause pollution after earth disturbance activities and PCSM/SR BMPs are operational as well as old mines and mine spoil piles/dumps. A management plan to avoid or minimize potential pollution and its impacts form geologic formations or soil conditions must be included in the project narrative. Appropriate measures to prevent discharges (including but not limited to proper handling, isolation, disposal, etc.) should be included in the management plan. Details for the proper handling, isolation and/or disposal of these materials must be provided. The locations of the geologic formations containing those minerals or soil conditions exhibiting limitations (if not site wide) must be shown on the plan drawings along with typical details illustrating the procedures and/or PCSM/SR BMPs to be used to avoid or minimize potential pollution.

Bedrock or soil conditions which could result in significant slope failures causing mass soil movement into surface waters, property damage, or a public safety hazard should also be identified and discussed in the project narrative. The project narrative should briefly state the methods incorporated into the plan which address such hazards. Plan drawings should clearly mark the locations where the potential for slope failures exist. When poor geologic or soil conditions cannot be avoided, BMPs to minimize or mitigate their impact must be identified in the plan drawings and implemented at the construction site.

m. Thermal Impacts

An analysis of how thermal impacts associated with the project will be avoided must be provided in the project narrative. If thermal impacts cannot be avoided, describe in the project narrative how impacts are to be minimized and the BMPs that will be used to mitigate the impacts in a manner that will protect and maintain surface water quality. BMPs to be used to minimize or mitigate thermal impacts must be shown on the plan drawings including associated BMP details. The primary means to address thermal pollutions is to limit the size and duration of exposed earth or through infiltration. Additional information on minimizing thermal impacts can be found in the *Stormwater BMP Manual*.

n. Riparian Forest Buffer Management Plan

When riparian forest buffers are part of the project, a Riparian Forest Buffer Plan is required. The plan must show the existing and/or proposed buffers on the plan drawings and include a planting plan that shows the number, density, species and approximate location of trees and shrubs; a maintenance plan to ensure survival and growth of plantings and protection from competing plants and animals for a 5-year establishment period; and, an inspection to ensure long-term maintenance and functioning of the riparian forest buffer.

o. Antidegradation Requirements

Applicants proposing earth disturbance activities within special protection watersheds or siltation- impaired watersheds must implement nondischarge alternatives wherever cost-effective and environmentally sound. An evaluation of nondischarge alternatives must be provided, in the project narrative that identifies viable nondischarge alternatives for the proposed project. If no viable nondischarge alternatives exist, the E&S Plan must include ABACT. The plan drawings must show the locations and details for all non-discharge alternatives when identified or ABACTs when non- discharge alternatives don't exist.

7. PCSM PLAN STORMWATER ANALYSIS

PCSM Plans must comply with §102.8 and when applicable Chapter § 78a.65.

For unconventional well sites, in accordance with § 78a.65(d), disturbed areas associated with well sites that are not included in a restoration plan, and other remaining impervious surfaces, must comply with all requirements in Chapter 102. For these projects, the PCSM plan provisions in § 102.8(n) apply only to the portions of the restoration plan that provide for restoration of disturbed areas to meadow in good condition or better or otherwise incorporate ABACT or nondischarge PCSM BMPs.

a. Site Characterization and Assessment

A predevelopment site characterization and assessment of soil and geology including appropriate infiltration and geotechnical studies that identify the location and depths of test sites and methods used must be included in the project narrative. The assessment should identify the pre- construction hydrology of the project site as a base line to which post construction hydrology will be compared. In addition, the assessment should identify site characteristics that may be useful when addressing volume, rate and water quality requirements disused below.

b. Volume Reduction and Water Quality Requirements

The applicant must include an analysis in the project narrative that demonstrate the PCSM BMPs to be used will meet the volume and water quality requirements specified in an applicable DEP approved and current Act 167 stormwater management watershed plan <u>or</u> 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.

c. Rate Requirements

The applicant must include an analysis in the project narrative that demonstrates the PCSM BMPs to be used will meet the rate requirements specified in and applicable DEP approved and current Act 167 stormwater management watershed plan <u>or</u> 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 raters.

d. Calculation Methodologies

The applicant must identify and describe the methodologies used to calculate the total runoff volume and peak rate of runoff and provide supporting documentation and calculations in the project narrative.

e. Construction Techniques

Construction techniques or special considerations used by the applicant to address soil and geologic limitations affecting the project site as they relate to PCSM should be identified and described in the project narrative. Detail drawings of specific PCSM BMPs to be used should be included on the project drawings with appropriate notes describing their use and any special conditions necessary to ensure proper installation and operation.

f. Antidegradation Requirements

Applicants proposing earth disturbance activities within special protection watersheds or siltation- impaired watersheds must implement nondischarge alternatives wherever cost-effective and environmentally sound. An evaluation of nondischarge alternatives should be provided in the project narrative that identifies viable alternatives for the proposed project. If no viable nondischarge alternatives exist the Erosion and Sediment Control Plan must include ABACT (Antidegradation Best Available Combinations of Technology). The plan drawings must show the locations and details for all non-discharge alternatives when identified or ABACTs when non- discharge alternatives don't exist.

8. PHASED PROJECTS

Under 25 Pa. Code § 102.5(e), "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 Chapter 102 prior to commencing the earth disturbance activity." In some cases, the life of the project as defined above may be a long term or large-scale project and the operator may wish to develop the project over time or in phases.

If an applicant plans to develop a phased project, but the exact location of wells in the subsequent phases cannot be determined until some wells are drilled, an operator may still seek an ESCGP-3 for a phased project so long as the operator identifies the anticipated scope, locations, and types of activities of such subsequent phases.

An NOI for Oil and Gas Activities to be covered by a phased ESCGP-3 can be submitted with the initial phase or phases accompanied with detailed construction plans and drawings. The subsequent phases as described in the original NOI can be submitted without detailed construction plans and drawings but with sufficient detail to describe the scope, location and type of activity to allow DEP to assess the total environmental impact of the project. All phases must be included within the proposed LOD for the entire project. Future phases may not exceed the LOD without a Major Modification to the permit.

9. PREPAREDNESS, PREVENTION AND CONTINGENCY (PPC) PLAN

The applicant must prepare and implement a Preparedness, Prevention and Contingency (PPC) Plan when storing, using or transporting materials including: fuels, chemicals, solvents, pesticides, fertilizers, lime, petrochemicals, wastewaters, 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 DEP or delegated Conservation District as required by sections 102.5(I) and 78a.55.

The PPC Plan should include a description of operations, pollution prevention methods, waste disposal methods, pollution incident response, a narrative section describing the potential types of pollution problems associated with the proposed operations and a PPC Schedule describing the implementation of the PPC Plan and Plan updates as dictated by changes in operations. <u>Guidelines for the Development and Implementation of Environmental Emergency Response Plans 400-2200-001</u> provides guidelines for PPC Plan development associated with oil and gas operations.

10. SUBSEQUENT PHASE CERTIFICATION FOR EXPEDITED REVIEW

Expedited review for subsequent phases of a phased project the applicant must answer the question accordingly and provide the following:

- Signature
- Company Name
- Address
- Phone Number

11. PERMIT RENEWAL

In cases where a well owner or operator conducts earth disturbance activities authorized by an ESCGP, the owner or operator must restore the oil or gas well site prior to expiration of permit coverage and terminate the permit in accordance with 102.7(c) or renew coverage in accordance with 25 Pa. Code Chapter 102. After October 15, 2018

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any NOI for renewals must be submitted in accordance with the ESCGP-3 terms and conditions on the new forms and will be processed in accordance with the terms and conditions of ESCGP-3 and PDG guidelines.

The NOI being submitted for renewal should be sent to the same office (delegated Conservation District, Bureau of Waterways Engineering & Wetlands or Bureau of District Oil and Gas Operations) that processed and authorized the original permit.

Owners or operators of projects which were initially authorized under ESCGP-1, and permit coverage is renewed under ESCGP-2 after January 1, 2013 or as an ESCGP-3, shall implement, operate and maintain the PCSM Plan and BMPs in accordance with 25 Pa. Code § 102.8.

Application fee of \$500 plus \$100 for any acreage that remains to be disturbed or is not stabilized must be included with the NOI. The areas of additional earth disturbance as well as areas remaining that are not stabilized will need to be calculated for the application fee. These areas should be indicated on the plans attached to the NOI.

Permittees requesting a renewal of coverage must submit to the DEP or delegated Conservation District an administratively complete and acceptable NOI, at least 60 days prior to the expiration date of coverage, unless permission has been granted by the DEP or delegated Conservation District for submission at a later date. If a timely, administratively complete, and acceptable application for renewal of coverage has been submitted and the DEP or delegated Conservation District is unable, through no fault of the permittee, to reissue the authorization before the expiration date, the terms and conditions will be automatically continued. The terms and conditions will remain fully effective and enforceable pending the issuance or denial of the renewal of coverage, provided the permittee is operating in compliance with the terms and conditions of the permit. The permittee shall be responsible for complying with the final renewed, reissued or amended General Permit.



ATTACHMENT A

STANDARD E&S CONTROL PLAN TECHNICAL REVIEW CHECKLIST

Project:			
Project Name:		Date:	
Item Location:	D = E&S Drawings, N = E&S Narrative	e, D&N = Drawings and Narrative	
Check that the	following items are completed in the E&S	Plan. If an item is not applicable write N/A.	
	n shall be prepared by a person traine he size and scope of the project being	ed and experienced in E&S control methodesigned"	ods and technique
Name	Address	Telephone No	D&N
"The existing t	topographic features of the project site	e and the immediate surrounding area"	
	Type of cover Existing improvements, i.e. roads, bu	nildings, utilities, etc.	D D D D
	Complete mapping symbols legend a	and north arrow	D D or N
"The types, de	epth, slope, locations and limitations o	the soils"	
	Types, slopes, and locations of soil type use limitations and resolution Hydric soils		D N N
	ristics of the earth disturbance activity ration to the project site"	, including the past, present, and propose	ed land uses and th
	Barrella Maria Carata de Carata de	r management facilities buildings, utilities, etc.	D D D D
"The volume a	and rate of runoff from the project area	and its upstream watershed area"	
	 Maximum during construction draina Offsite drainage area(s) on USGS qu Discharge analysis provided for non- 	adrangle map surface water discharges	D N N
	of all surface waters of this Common classification under Chapter 93"	nwealth which may receive runoff within	or from the project
	 Existing streams, wetlands, floodway Receiving watercourses Chapter 93 classification of streams 		D D N

"A narrative des		on and type of	perimeter and	I onsite BMPs used before, during	and after the
	Description provided	in the narrative			N
				neduling of earth disturbance activi er functioning of all BMPs"	ties, prior to,
	Complete and site sp Activities planned to Removal of temporar	limit exposed are		ation	D D D
"Supporting cal	culations and measu	rements" and "	Plan Drawing	s"	
Stabilized Constr	uction Entrance Locations	Comp	lete Details		D
Silt Fencing	Locations	Slope L	_ength	Complete Details	D
Channels	Locations Contours and Grades Peak flow calculation Protective lining calcu	s		Complete details and freeboard calculations	D D N
Sediment Basins	Locations Complete berm & out Discharge to surface Structurally sound Capacity calculations Dewatering calculation	waters or appro	ved alternative		D D&N D D&N N
Sediment Traps	Locations Complete berm & out Discharge to surface Capacity information	tlet details waters or appro	ved alternative	Drainage Areas Cleanout information alculations	D D&N D N
Outlet Protection	Locations Design Calculations	Com	plete Details		D N
Inlet Protection	Locations	Com	plete Details		D
Other BMPs (spe	ecify) Locations Design Calculations	_ Complete Deta	ails		D N
Temporary Stabil Seed Types Rates	Lime	Fertilizer	Mulch	Others	D D

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Perma	nent Stat	oilization Topsoil replacement					D
	Seed	Lime	Fertilizer	Mulch	Others		D
Types							D D
Rates							D
BMPs ensure	on a we	ekly basis and after we and efficient ope	each stormwaration. The p	ater event, ind program must	d maintenance of BMP cluding the repair or re provide for completi nt and maintenance act	eplacement of E on of a writter	BMPs to
		Inspection schedule Maximum sediment si Time frames for comp			s and repairs for each type	of BMP	D D
		Proposed			ina repairs for each type	0. 2	D
		Site stabilization repa			Do		D D
		Disposal directions fo Note provided requirir			rs spection & repair/replace	ement	D
		of BMPs by contracto	-		,-p		D
		which ensure that the poject site will be under			ycling or disposal of m his title"	aterials associa	ted with
		Project construction w Directions for recyclin Soil/rock disposal are	g/disposal of c	onstruction wa	stes		N D D
polluti	on durin				conditions that may hav to avoid or minimize po		
		Instructions for proper			llution during constructio		N
		are provided Typical details are pro The locations of all su			d/or disposal of all such r n on the plan maps	naterials	D D D
					raters of this Commonate potential pollution		
		If impacts cannot be a	avoided, impac	ts are minimize	e project will be avoided ed and BMPs provided to		N
		impacts and protect a	nd maintain su	ırface water qu	ality		D&N
(relation	ng to PC	CSM requirements). the PCSM Plan and la	Unless other	wise approve	oe consistent with the P d by the Department, d Sediment Control Pla	the E&S Plan r	must be
		earth disturbance acti	vities		for erosion and sediment	· ·	D&N
		Practices	willi allu call l	oe integrated in	to structural and non-str	uciulai FUSIVI	D&N
"Ident	ification	of existing and propo	sed riparian f	orest buffers"			
		Existing and/or propo	sed huffers are	shown on the	nlan drawings		D

ATTACHMENT B STANDARD PCSM TECHNICAL GUIDE

Project:		
Project Name: _	Date:	
Check that the f	following items are completed in the PCSM Plan. If an item is not applicable write N/A.	
	In shall be prepared by a person trained and experienced in PCSM design methods and ne size and scope of the project being designed"	techniques
Item Location:	D = E&S Drawings, N = E&S Narrative, D&N = Drawings and Narrative	
"The existing t	opographic features of the project site and the immediate surrounding area"	
	Legible Mapping Existing Contours Type of Cover Existing Improvements (i.e. roads, buildings, utilities, etc.) Sufficient surrounding area Complete mapping symbols and north arrow Location Map (i.e. USGS)	D D D D D D or N
"The types, de	pth, slope, locations and limitations of the soils and geologic formations"	
	Types, slopes and locations of soil types Soil type use limitations and resolutions Hydric Soils	D N N
"The character alteration to the	ristics of the project site, including the past, present and proposed land uses and the e project site"	e proposed
	Proposed limits of construction Proposed contours and grades Proposed improvements (i.e. roads, buildings, utilities etc.) Past, present and proposed land uses Existing features Proposed Impervious Areas	D D D N D
	ion of the net change in volume and rate of stormwater from preconstruction hydrology for the entire project site and each drainage area"	ogy to post
	The design storm used for calculations is identified Preconstruction hydrology runoff rate and volume are identified for the entire project site and each drainage area	N N
	Post-construction hydrology runoff rate and volume are identified for the entire project site and each drainage area The net change in runoff rate and volume are identified for the entire project site and	N
	each drainage area	N
	ion of the location of surface waters of this Commonwealth, which may receive runoct site and their classification under Chapter 93 (relating to water quality standards)"	ff within or
	 Existing streams, wetlands, floodway, etc. Receiving watercourses Chapter 93 classification streams or other water bodies 	D D N

	All permanent PCSM BMPs are identified in the narrative and shown in the plan	
	drawings	D&N
	Construction details are included for all permanent PCSM BMPs	N
	Permanent stabilization specifications for all permanent PCSM BMPs are included Proprietary BMP systems are illustrated on the drawings in accordance with their	N
	manufacturer's requirements	D
	Infiltration BMPs are provided with overflows and/or underdrains as needed to meet site and soil limitations	D&N
	f PCSM BMP implementation or installation in relation to earth disturbance activities of edule of inspections for critical stages of PCSM BMP installation"	f the project
	Complete and site specific sequence of BMP installations	D&N
	Activities planned to limit exposed areas	D&N
	Removal of temporary BMPs	D&N
	Critical stages of BMP installation are identified	N
"Supporting cal	culations"	
	Calculations for all BMPs and points of interest are provided.	N
	Methodology used for all calculations is identified.	N
	The design storm used for each calculation is identified.	N
	Current (2005 or more recent) Act 167 plans are identified	D or N
	Act 167 plan consistency verification is provided	N
	All flowcharts from the Pennsylvania Stormwater BMP Manual with flow path highlighted	
	have been provided	N
	All appropriate worksheets from the Pennsylvania Stormwater BMP Manual have been completed and are provided	N
		IN
"Plan drawings"		
	Locations of BMPs are shown along with tributary drainage areas	D
	Construction details are included for all PCSM BMPs	D
	All easements and rights-of-way are shown on plan drawings.	D
	Sensitive resources are shown (i.e. steep slopes, riparian, etc.)	D&N
	Existing and proposed discharges & points of interest	D
	Floodplain and floodway delineations Locations and sufficient infiltration testing to represent proposed locations of volume and	D
	rate control BMPs	D
	PCSM Plan Drawings are consistent with E&S Plan in relation to proposed contours,	D
	improvements, soils, wetlands, floodways, streams, discharge locations, E&S BMPs, etc.	D
Infiltration BMPs		
	All infiltration PMDs must have infiltration testing completed	NI
	All infiltration BMPs must have infiltration testing completed All infiltration BMPs must have soil testing completed	N N
	All infiltration BMPs should be sited on un-compacted soils	D & N
BMP 6.4.2 Infiltra	ation Basins	
	Maintain a minimum 2-foot separation to bedrock and high water table	D&N
	Do not install on recently placed fill (<5 years)	D&N
	Allow 2 foot buffer between bed bottom and seasonal high groundwater table	D&N

BMP 6.4.4 Infiltration Trench Perforated pipe set at a minimum slope in a stone filled, level-bottomed trench D & N Limited in width (3 to 8 feet) and depth of stone (6 feet max recommended) D & N Trench is wrapped in nonwoven geotextile (top, sides, and bottom) D & N A minimum of 6" of topsoil is placed over trench and vegetated **D & N** BMP 6.4.5 Bio-retention Ponding depths generally limited to 12 inches or less D & N D & N Native vegetation that is tolerant of variability, salts and stress Modify soil with compost D & N BMP 6.4.8 Vegetated swale Longitudinal slopes range from 1 to 6 % D & N Side slopes range from 3:1 to 5:1 **D & N** Bottom width of 2 to 8 feet D & N Convey the 10-year storm event with a minimum of 6 inches of freeboard **D & N** Designed for non-erosive velocities up to the 10-year storm event D & N BMP 6.4.9 Vegetated Filter strip Filter Strip length is a function of the slope, vegetative cover, and soil type D & N Minimum recommended length of filter strip is 25 feet D & N Filter strip slope should never exceed 8%; less than 5% are preferred **D & N** Level spreading devices are recommended to provide uniform sheet flow **D & N** Maximum contributing drainage area slope is generally less than 5% D & N Minimum filter strip width should equal the width of the drainage area D & N BMP 6.4.10 Infiltration Berm Maintain a minimum 2-foot separation to bedrock and high water table D & N Berms should be relatively low, preferable no more than 24 inches in height D & N If berms are to be mowed, the berm side slopes should not exceed a ratio of 4:1 D & N Berms should be vegetated with turf grass at a minimum D & N BMP 6.5.2 Runoff recapture and use Storage devices designed to capture a portion of small, frequent storm events **D & N** Systems must provide for bypass or overflow of large storm events D & N Water budget incorporating anticipated water inflow and usage required D & N Water Quality and Rate Control BMPs BMP 6.6.1 Constructed Wetlands Adequate drainage area or proof of sustained base flow D & N Maintenance of permanent water surface D & N __ Relatively impermeable soils or engineered liner D & N Sediment collection and removal D & N Adjustable permanent pool and dewatering mechanism D & N BMP 6.6.2 Wet pond/Retention basin Adequate drainage area or proof of sustained baseflow D & N Natural high groundwater table D & N Maintenance of permanent water surface D & N Should have at least 2 to 1 length to width ratio D & N Forebay for sediment collection and removal D & N Dewatering mechanism D & N

BMP 6.6.3 Dry extended basin	
Hydraulic capacity controls effectiveness Ideal in combination with other BMPs	D & N D & N
Restoration BMPs	
BMP 6.7.1 Riparian buffer restoration	
Reestablish buffer areas along perennial, intermittent, and ephemeral streams Plant native, diverse tree and shrub vegetation Create a short-term maintenance and long-term maintenance plan Clear, well-marked boundary	D & N D & N D & N D & N
BMP 6.7.2 Landscape restoration	
Minimize traditional turf lawn area Maximize landscape restoration area planted with native vegetation Protect landscape restoration area during construction Prevent post-construction erosion through adequate stabilization Minimize mowing (two times per year)	D & N D & N D & N D & N D & N
BMP 6.7.3 Soil amendment and restoration	
Physical loosening Compost amendments	D & N D & N
BMP 6.7.4 Floodplain restoration	
Can prevent riparian problems from getting worse or can fix problems caused by historical practices Reattachment of root systems of floodplain vegetation/riparian areas connected to groundwater and/or base flow Removal of "legacy sediments" and associated nutrients stored within the stream	D & N D & N
corridors prior to release through bank erosion	D & N
Other BMPs and related structural measures	
Must be level Are not applicable in areas with easily erodible soils and/or little vegetation Should safely diffuse at least the 10-year storm peak rate Bypassed flows should be stabilized in a sufficient manner	D & N D & N D & N D & N
"A long-term operation and maintenance schedule, which provides for inspection of PCSM BM repair, replacement, or other routine maintenance of the PCSM BMPs to ensure proper function	
Inspection schedule of each permanent BMP is provided Directions for maintenance and/or replacement of each BMP Directions for sediment disposal Responsible party (owner, operator, inspector) has been identified	N N N N
"Procedures which ensure that the proper measures for recycling or disposal of materials as from the PCSM BMPs are in accordance with DEP laws, regulations and requirements"	ssociated with or
Project wastes are identified Directions for recycling /disposal of wastes	N D or N

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cause pollution	on of naturally occurring geologic formations or soil conditions that may have the poter n after earth disturbance activities are completed and PCSM BMPs are operationa a management plan to avoid or minimize potential pollution and its impacts"	
	Potential for geologic or soil conditions to cause pollution during construction Instructions for proper handling and/or disposal of all materials which could cause	N
	pollution are provided	D
	Typical details are provided for proper handling and/or disposal of all such materials	D
	The locations of all such materials are clearly shown on the plan maps	D
Commonwealth	including BMPs to avoid, minimize or mitigate potential pollution from thermal impacts" Applicant has described how thermal impacts of stormwater runoff from the project site were avoided	
		N
	Applicant has described how thermal impacts were minimized and mitigated	D&N
"A riparian for requirements)"	rest buffer management plan when required under § 102.14 (relating to riparian	buffer
	Existing and/or proposed buffers are shown on the plan drawings	D

ATTACHMENT C

Instructions

This letter is provided as an example only. Applicants may draft their own letter of notification. This letter must be modified to meet the specific requirements of the project if the applicant chooses to use the following text.

SAMPLE NOTICE LETTER TO MUNICIPALITY AND COUNTY

Date:

Dear (Municipal Secretary): or Dear (County Commissioners):

This municipal notice, under the requirements of Act 14, 97 P.S. § 510-5, is to inform you that (I am/we are) applying for coverage under the Erosion and Sediment Control General Permit (ESCGP-3) for Earth Disturbance Associated with Oil & Gas Exploration, Production, Processing or Treatment Operations or Transmission Facilities from the Pennsylvania Department of Environmental Protection (DEP):

Applicant Contact: Project Location: Project Description:

Enclosed is a complete copy of the Notice of Intent (NOI) completed by the applicant for this project as well as copies of the erosion and sediment control plan and post construction stormwater management plans.

Sincerely, Enclosures

cc: /county planning agencies

ATTACHMENT D

Instructions to Complete the Summary Table (This table is located in Section H of the NOI Application Form)

SUMMARY TABLE FOR SUPPORTING CALCULATIONS AND MEASUREMENT DATA See the Instructions below on how to Complete This Section									
Design storm frequency Rainfall amountinches	Pre-construction	Post Construction	Net Change						
Impervious area (acres)	1	2	3						
Volume of stormwater runoff (acre-feet) without planned stormwater BMPs	4	5	6						
Volume of stormwater runoff (acre-feet) with planned stormwater BMPs		7	8						
Stormwater discharge rate for the design frequency storm	9	10	11						

- Box 1. **Pre-construction impervious area**: The total acres of impervious area on the project site before construction activities begin.
- Box 2. **Post construction impervious area**: The total acres of impervious area on the project site after construction activities have been completed.
- Box 3. **Net change of impervious area**: The difference between the acres of impervious area listed in Box 1 and Box 2.
- Box 4. **Pre-construction stormwater runoff volume without planned BMPs**: The amount of stormwater runoff volume from the project site that would result from the design storm occurrence before construction activities begin.
- Box 5. **Post construction stormwater runoff volume without planned BMPs**: The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished if no stormwater infiltration or retention BMPs have been installed.
- Box 6. **Net change in stormwater volume without planned BMPs**: The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 5.
- Box 7. **Post construction stormwater runoff volume with planned BMPs**: The amount of stormwater runoff volume from the project site that would result from the design storm occurrence after construction activities have finished and the planned stormwater infiltration or retention BMPs have been installed.
- Box 8. **Net change in stormwater runoff volume with planned BMPs**: The difference between the amounts of stormwater runoff volume listed in Box 4 and Box 7.
- Box 9. **Pre-construction stormwater discharge rate**: The stormwater runoff discharge rate for the design frequency storm as determined by the land use for the past five years.
- Box 10. **Post construction stormwater discharge rate**: The stormwater runoff discharge rate for the design frequency storm event after all planned stormwater BMPs are installed.
- Box 11. **Net change stormwater discharge rate**: The difference between the stormwater runoff discharge rates listed in Box 9 and Box 10.

ATTACHMENT E

Summary of Bio-Infiltration BMPs														
		Infilt	ration Info	mation		Drainage Information			BMP Information					
Proposed Structural bio- Infiltration BMPs (site specific)	Measured Infiltration Rate ¹ (in./hr)	Factor of safety (min. of 2)	Design Infiltration rate (in./hr)	De- watering time ² (hr)	Elevation of limiting zone-water table bedrock, etc. ³	Total drainage area to BMP (sq. ft)	Total impervious drainage area to BMP (sq. ft)	Infiltration BMP Surface area (sq. ft)	Volume of runoff tributary to BMP during the 2yr/24 hr design storm ⁴ (cf)	Calculated removed volume ⁵ (cf)	Maximum water surface elevation in BMP from 2yr storm ⁶	Infiltration elevation bottom of bed/basin ⁶	Elevation of infiltration test ⁷	Elevation of E&S sediment basin bottom (if applies)

All information should be based on the 2-yr/24-hr storm.

Provide page numbers from the stormwater narrative identifying the location of the above information.

Any deviation from the recommendations above should be adequately justified by a qualified professional and included with the application.

Note: This chart is for summary purposes only and should be consistent with all design calculations and worksheets.

¹The infiltration testing information should be located on the plan view of the PCSM plan and should include infiltration test elevation and rate

²Can include active infiltration time-dewatering time should not exceed 72 hours after the 2-yr/24-hr storm

³Depth to limiting zone is recommended to be at least 2 ft below infiltration

⁴The value should be greater than or equal to the volume to be infiltrated or managed by the BMP

⁵Calculated removed volume

⁶A maximum of 2 ft hydraulic head is recommended

⁷Provide supporting field notes/documentation from soil evaluation