

Stormwater Pollution Prevention Plan

For

Tahoma National Cemetery

Prepared For

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Operator/Contractor

TBD

Project Site Location

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Certified Erosion and Sediment Control Lead

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Appendix A Site plans

- Vicinity map (with all discharge points)
- Site plan with TESC measures

Appendix B Construction BMPs

- Possibly reference in BMPs, but likely it will be a consolidated list so that the applicant can photocopy from the list from the SWMM.

Appendix C Alternative Construction BMP list

- List of BMPs not selected, but can be referenced if needed in each of the 12 elements

Appendix D General Permit

Appendix E Site Log and Inspection Forms

Appendix F Engineering Calculations (if necessary)

- Flows, ponds, etc...

1.0 Introduction

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared as part of the United States Environmental Protection Agency (EPA) stormwater permit requirements for the Tahoma National Cemetery Phase II construction project in Kent, Washington. The United States Department of Veterans Affairs (VA) owns and operates Tahoma National Cemetery, which consists of four parcels totaling 157.39 acres. The project proposes developing the second phase of the cemetery's four phase master plan. The second phase includes the addition of approximately 9,100 crypts, 4,400 cremains, 15,300 columbaria niches, and an ossuary – along with associated roads, drainage improvements, and utilities. The project disturbs approximately 16.7 acres, about half of which is currently forested.

Tahoma National Cemetery sits within the Jenkins Creek watershed and currently has three drainage subbasins. The site generally slopes southeast with an average slope of approximately 1.1 percent. Stormwater flows to wetlands scattered throughout the site. Recent delineations show 19 natural wetlands and six man-made stormwater management wetlands within the Phase II development area. During significant rain events, the wetlands connect hydraulically through surface and subsurface flows. According to the United States Department of Agriculture soil survey map, the site is underlain primarily by Alderwood Gravelly Sandy Loam. The geotechnical investigation report states that subsurface conditions consist of “topsoil overlying fill or glacial till that is generally comprised of silty sand with some gravel”.

The phase 1 development met 1992 King County stormwater requirements by installing 8 detention ponds and 2 combined detention/wetpool facilities. The phase 2 development meets the 2009 King County Surface Water Design Manual requirements by:

- Adding one detention pond and one below-grade detention chamber system,
- Expanding one existing detention pond and one combination detention/wetpool facility,
- Converting the expanded detention pond into a combined detention/wetpool facility,
- Installing one bioswale, 23,360 square feet (0.54 acres) of rain garden, and 61,200 square feet (1.40 acres) of porous asphalt.

Additionally, a new below-grade detention chamber system replaces an existing combined detention/wetpool facility in order to make space for compensatory wetland mitigation.

Construction activities will include demolition, grading, installation of new utilities, and the construction of new concrete columbarium structures. The purpose of this SWPPP is to describe the proposed construction activities and all temporary and permanent erosion and sediment control (TESC) measures, pollution prevention measures, inspection/monitoring activities, and

recordkeeping that will be implemented during the proposed construction project. The objectives of the SWPPP are to:

1. Implement Best Management Practices (BMPs) to prevent erosion and sedimentation, and to identify, reduce, eliminate or prevent stormwater contamination and water pollution from construction activity.
2. Prevent violations of surface quality, ground water quality, or sediment management standards.
3. Prevent, during the construction phase, adverse water quality impacts including impacts on beneficial uses of the receiving water by controlling peak flow rates and volumes of stormwater runoff at the Permittee's outfalls and downstream of the outfalls.

This SWPPP was prepared using the Washington State Department of Ecology SWPPP Template downloaded from the Ecology website on August 16, 2011. This SWPPP was prepared based on the requirements set forth in the Construction Stormwater General Permit, *Stormwater Management Manual for Western Washington* (SWMMWW 2005). The report is divided into seven main sections with several appendices that include stormwater related reference materials. The topics presented in the each of the main sections are:

- Section 1 – INTRODUCTION. This section provides a summary description of the project, and the organization of the SWPPP document.
- Section 2 – SITE DESCRIPTION. This section provides a detailed description of the existing site conditions, proposed construction activities, and calculated stormwater flow rates for existing conditions and post-construction conditions.
- Section 3 – CONSTRUCTION BMPs. This section provides a detailed description of the BMPs to be implemented based on the 12 required elements of the SWPPP (SWMMWW 2005).
- Section 4 – CONSTRUCTION PHASING AND BMP IMPLEMENTATION. This section provides a description of the time of the BMP implementation in relation to the project schedule.
- Section 5 – POLLUTION PREVENTION TEAM. This section identifies the appropriate contact names (emergency and non-emergency), monitoring personnel, and the onsite temporary erosion and sedimentation control inspector.
- Section 6 – INSPECTION AND MONITORING. This section provides a description of the inspection and monitoring requirements such as the parameters of concern to be monitored, sample locations, sample frequencies, and sampling methods for all stormwater discharge locations from the site.

- Section 7 – RECORDKEEPING. This section describes the requirements for documentation of the BMP implementation of certain BMPs due to site factors experienced during construction.

Supporting documentation and standard forms are provided in the following Appendices:

Appendix A – Site plans
Appendix B – Construction BMPs
Appendix C – Alternative Construction BMP list
Appendix D – General Permit
Appendix E – Site Log and Inspection Forms
Appendix F – Engineering Calculations

2.0 Site Description

2.1 Existing Conditions

The proposed site is located east of Interstate 5 (I-5) and northwest of State Route 18 (SR-18) in Kent, Washington. A site vicinity map and coordinates are provided in Appendix A. The site is 157.39 acres with 16.7 acres making up the limits of construction. The site is mostly comprised of forested areas and lawns, and also contains three relatively small, one story buildings which share a parking area. The site generally slopes southeast with an average slope of approximately 1.1 percent.

The site consists of three subbasins. The north subbasin, south subbasin, and west subbasin are 76.6, 58.1 and 28.5 acres, respectively. The three basins converge approximately ¼ mile downstream of the south property line. Subsurface borings show topsoil overlying fill or glacial till that is generally comprised of silty sand with some gravel. All disturbed areas are modeled as forested in their preexisting condition, regardless of the current land cover.

In the northern subbasin, the existing detention pond shifts southwest and expands in order to serve the entire north area development. The road utilizes pervious pavement and columbaria are routed through rain gardens in order to meet the prescriptive flow control BMPs. Underdrains in the pervious pavement and rain gardens prevent excessive ponding. Gutters along both edges of the north loop road intercept surface drainage from the crypt field. Catch basins, spaced at regular intervals, collect gutter water and convey it to a bioswale that ends at the detention pond. Underdrains at the base of the crypts collect any subsurface water. Underdrains discharge to the conveyance system when feasible and discharge to wetlands when elevation differences require it.

In the southern area, the existing combined detention/wetpool facility expands in order to serve the new crypt section and a portion of the south loop road. The south loop road also utilizes pervious pavement and underdrains. Gutters along the west edge of the road intercept surface drainage from the crypt fields. Catch basins, spaced at regular intervals, line the east and west edge of the crypt field. The new combined facility area leaves the existing pond undisturbed, but it hydraulically connects through an 18" pipe. The control structure is reconstructed to account for the pond expansion. Crypt underdrains discharge to the wetland because the pond's elevation is too high to receive them.

New detention chambers lie underneath the road and collect approximately 2/3 of the surface and subsurface runoff from the columbaria. Prior to reaching the chambers, the water flows through rain gardens outfitted with underdrains.

The existing combined detention/wetpool facility expands in order to serve the new cremains section, approximately 1/3 of the columbaria, and the new parking pull-off. A swale intercepts surface runoff from the cremains section, before the storm drainage system collects it and conveys it to the pond. Surface and subsurface water from the columbaria and surface water from the parking pull-off drains through rain gardens before the storm drainage system collects and conveys it to the pond.

2.2 Proposed Construction Activities

The second phase includes the addition of approximately 9,100 crypts, 4,400 cremains, 15,300 columbaria niches, and an ossuary – along with associated roads, drainage improvements, and utilities. The project disturbs approximately 19.2 acres, about half of which is currently forested. Phase 2 also includes the additions of a detention pond and below-grade detention chamber system, the expansion of an existing detention pond and combination detention/wetpool facility, the conversion of the expanded detention pond into a combined detention/wetpool facility, installation of a 23,360 square foot bioswale, 0.54 acres of rain garden, 61,200 square feet of porous asphalt, and the addition of a below-grade detention chamber system to replaces an existing combined detention/wetpool facility.

Construction activities will include site preparation, TESC installation, demolition of the existing gravel roads, excavation for the Columbaria foundations and retaining walls' foundations, poured concrete foundations, poured concrete walls, site-wide grading, and porous asphalt paving. The schedule of phasing BMPs can be found in section 4.0.

Stormwater runoff volumes were calculated using the King County Runoff Time Series (KCRTS) software.

The following summarizes details regarding site areas:

- Total site area: 157.39 acres
- Percent impervious area before construction: 7.1 %
- Percent impervious area after construction: 8.6 %
- Disturbed area during construction: 19.2 acres
- Disturbed area that is characterized as impervious (i.e., access roads, staging, parking): 2.3 acres

- 2-year stormwater runoff peak flow prior to construction (existing):
North: 0.58 cfs
South: 1.88 cfs

- 10-year stormwater runoff peak flow prior to construction (existing):
North: 0.94 cfs
South: 2.32 cfs
North Mitigation Area: 1.78 cfs

- 2-year stormwater runoff peak flow during construction:
North: 2.24 cfs
South: 2.33 cfs

- 10-year stormwater runoff peak flow during construction:
North: 3.40 cfs
South: 3.52 cfs
North Mitigation Area: 1.78 cfs

- 2-year stormwater runoff peak flow after construction:
North: 0.58 cfs
South: 1.88 cfs

- 10-year stormwater runoff peak flow after construction:
North: 0.94 cfs
South: 2.32 cfs
North Mitigation Area: 1.78 cfs

All stormwater flow calculations are provided in Appendix F.

3.0 Construction Stormwater BMPs

3.1 The 12 BMP Elements

3.1.1 Element #1 – Mark Clearing Limits

To protect adjacent properties and to reduce the area of soil exposed to construction, the limits of construction will be clearly marked before land-disturbing activities begin. Trees that are to be preserved, as well as all sensitive areas and their buffers, shall be clearly delineated, both in the field and on the plans. In general, natural vegetation and native topsoil shall be retained in an undisturbed state to the maximum extent possible. The BMPs relevant to marking the clearing limits that will be applied for this project include:

- Preserving Natural Vegetation (BMP C101)
- High Visibility Plastic or Metal Fence (BMP C103)

Both tree protection details as well as fences are used in order to physically place limits to control the extents of the construction disturbance, taking special care when dealing with fragile boundaries such as wetlands and forested areas. Many trees will be saved during demolition and special tree protection will be used in certain areas of the site. The special tree protection will be orange construction fence. Special care will be used when working around the many wetlands on the property. A temporary chain link fence will be used to mark the site boundaries, using a visual barrier in some areas of the site.

Alternate BMPs for marking clearing limits are included in Appendix C as a quick reference tool for the onsite inspector in the event the BMPs listed above are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit (Appendix D). To avoid potential erosion and sediment control issues that may cause a violation(s) of the NPDES Construction Stormwater permit (as provided in Appendix D), the Certified Erosion and Sediment Control Lead will promptly initiate the implementation of one or more of the alternative BMPs listed in Appendix C after the first sign that existing BMPs are ineffective or failing.

Element #2 – Establish Construction Access

Construction access or activities occurring on unpaved areas shall be minimized, yet where necessary, access points shall be stabilized to minimize the tracking of sediment onto public roads, and wheel washing, street sweeping, and street cleaning shall be employed to prevent sediment from entering state waters. All wash wastewater shall be controlled on site. The specific BMPs related to establishing construction access that will be used on this project include:

- Stabilized Construction Entrance (BMP C105)

- Wheel Wash (BMP C106)

In order to prevent waste from entering or exiting the site due to traffic, four stabilized construction entrances will be implemented as well as two wheel wash stations. The stabilized construction entrances are located on Kerstetter Memorial Drive (at the north and south entrances into the site boundaries), on the south entrance of Young Memorial Drive, and one provides a connection from Barrick Memorial Circle to the south portion of the site. The two wheel wash stations are located on Kerstetter Memorial Drive and Young Memorial Drive.

Alternate construction access BMPs are included in Appendix C as a quick reference tool for the onsite inspector in the event the BMPs listed above are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit (Appendix D). To avoid potential erosion and sediment control issues that may cause a violation(s) of the NPDES Construction Stormwater permit (as provided in Appendix D), the Certified Erosion and Sediment Control Lead will promptly initiate the implementation of one or more of the alternative BMPs listed in Appendix C after the first sign that existing BMPs are ineffective or failing.

3.1.3 Element #3 – Control Flow Rates

In order to protect the properties and waterways downstream of the project site, stormwater discharges from the site will be controlled. The specific BMPs for flow control that shall be used on this project include:

- Sediment Trap (BMP C240)
- Temporary Sediment Pond (BMP C241)
- Detention Pond or Vault

These BMPs were chosen in order to catch sediment from runoff, as well as slow the runoff on site during construction. By collecting sediment in designated areas, the TESC team can appropriately tend to sediment as opposed to allowing it to reach and pollute the storm system. There are three temporary sediment ponds located on the site during construction. One is in the southern portion of the site off of Kerstetter Memorial Drive, the second is located just below the north entrance/exit of Kerstetter Memorial Drive, and the third is located in the southwest corner of the northern portion of the site. The proposed design will have two large detention chambers, one located within the proximity of the majority of the work - just south of Columbaria 3, and the other to the northeast of where the main construction will be taking place.

Alternate flow control BMPs are included in Appendix C as a quick reference tool for the onsite inspector in the event the BMPs listed above are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit (Appendix D). To avoid potential erosion and sediment control issues that may cause a violation(s) of the

NPDES Construction Stormwater permit (as provided in Appendix D), the Certified Erosion and Sediment Control Lead will promptly initiate the implementation of one or more of the alternative BMPs listed in Appendix C after the first sign that existing BMPs are ineffective or failing.

The project site is located west of the Cascade Mountain Crest. As such, the project must comply with Minimum Requirement 7 (Ecology 2005).

In general, discharge rates of stormwater from the site will be controlled where increases in impervious area or soil compaction during construction could lead to downstream erosion, or where necessary to meet local agency stormwater discharge requirements (e.g. discharge to combined sewer systems).

3.1.4 Element #4 – Install Sediment Controls

All stormwater runoff from disturbed areas shall pass through an appropriate sediment removal BMP before leaving the construction site or prior to being discharged to an infiltration facility. The specific BMPs to be used for controlling sediment on this project include:

- Silt Fence (BMP C233)
- Sediment Trap (BMP C240)
- Storm Drain Inlet Protection (BMP C220)
- Portable Water Storage Tanks (e.g., Baker Tank) for Sedimentation.

In order to protect the site and surrounding areas, sedimentation BMPs were selected to collect and convey sediment in a manner that it can be handled in a safe and clean fashion. A silt fence surrounds the site in order to contain sediment within the boundaries of our work. Catch basin filters protect the storm system from sediments that may be on site, or escape to offsite catch basins. Eight Baker Tanks are used to filter the storm water that is collected onsite and routed by interceptor swales.

Alternate sediment control BMPs are included in Appendix C as a quick reference tool for the onsite inspector in the event the BMPs listed above are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit (Appendix D). To avoid potential erosion and sediment control issues that may cause a violation(s) of the NPDES Construction Stormwater permit (as provided in Appendix D), the Certified Erosion and Sediment Control Lead will promptly initiate the implementation of one or more of the alternative BMPs listed in Appendix C after the first sign that existing BMPs are ineffective or failing.

In addition, sediment will be removed from paved areas in and adjacent to construction work areas manually or using mechanical sweepers, as needed, to minimize tracking of sediments on vehicle tires away from the site and to minimize wash off of sediments from adjacent streets in runoff.

Whenever possible, sediment laden water shall be discharged into onsite, relatively level, vegetated areas (BMP C240 paragraph 5, page 4-102).

In some cases, sediment discharge in concentrated runoff can be controlled using permanent stormwater BMPs (e.g., infiltration swales, ponds, trenches). Sediment loads can limit the effectiveness of some permanent stormwater BMPs, such as those used for infiltration or biofiltration; however, those BMPs designed to remove solids by settling (wet ponds or detention ponds) can be used during the construction phase. When permanent stormwater BMPs will be used to control sediment discharge during construction, the structure will be protected from excessive sedimentation with adequate erosion and sediment control BMPs. Any accumulated sediment shall be removed after construction is complete and the permanent stormwater BMP will be restabilized with vegetation per applicable design requirements once the remainder of the site has been stabilized.

The following BMPs will be implemented as end-of-pipe sediment controls as required to meet permitted turbidity limits in the site discharge(s). Prior to the implementation of these technologies, sediment sources and erosion control and soil stabilization BMP efforts will be maximized to reduce the need for end-of-pipe sedimentation controls.

- Temporary Sediment Pond (BMP C241)
- Construction Stormwater Filtration (BMP C251)
- Construction Stormwater Chemical Treatment (BMP C 250)
- Mechanical Stormwater Filtration

3.1.5 Element #5 – Stabilize Soils

Exposed and unworked soils shall be stabilized with the application of effective BMPs to prevent erosion throughout the life of the project. The specific BMPs for soil stabilization that shall be used on this project include:

- Nets and Blankets (BMP C122)
- Sodding (BMP C124)

Due to steep slopes and areas such as ponds and wetlands, soils on the site are more prone to failing in the event of a heavy rainfall. In order to prevent erosion on the site and its grading soil stabilization BMPs are to be put in place.

Alternate soil stabilization BMPs are included in Appendix C as a quick reference tool for the onsite inspector in the event the BMPs listed above are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit (Appendix D). To avoid potential erosion and sediment control issues that may cause a violation(s) of the NPDES Construction Stormwater permit (as provided in Appendix D), the Certified Erosion and Sediment Control Lead will promptly initiate the implementation of one or more of the alternative BMPs listed in Appendix C after the first sign that existing BMPs are ineffective or failing.

The project site is located west of the Cascade Mountain Crest. As such, no soils shall remain exposed and unworked for more than 7 days during the dry season (May 1 to September 30) and 2 days during the wet season (October 1 to April 30). Regardless of the time of year, all soils shall be stabilized at the end of the shift before a holiday or weekend if needed based on weather forecasts.

In general, cut and fill slopes will be stabilized as soon as possible and soil stockpiles will be temporarily covered with plastic sheeting. All stockpiled soils shall be stabilized from erosion, protected with sediment trapping measures, and where possible, be located away from storm drain inlets, waterways, and drainage channels.

3.1.6 Element #6 – Protect Slopes

All cut and fill slopes will be designed, constructed, and protected in a manner that minimizes erosion. The following specific BMPs will be used to protect slopes for this project:

- Interceptor Dike and Swale (BMP C200)
- Channel Lining (BMP C202)
- Check Dams (BMP C207)

In order to convey runoff during construction in the desired direction, interceptor swales shall be built along with check dams to help control the speed of the runoff. Some channels may require lining in order to protect them from erosion. Four incceptor swales will be used in the southern portion of the site, one running from where Barrick Memorial Circle connects to the site boundary and southward around the west edge of the construction limits, eventually discharging into a temporary sediment pond. The other swale in the southern portion will run from the high point of the pervious southern portion then runs down along Kerstetter Memorial Drive down to the same temporary sediment pond. Two other swales collect runoff from the areas near

proposed Columbaria 3 and direct it to areas where runoff can be pumped to a treatment BMP such as a Baker Tank. There are seven interceptor swales in the northern portion of the site and on permanent bioswale. The interceptor swales collect runoff from the north, from Young Memorial Drive (in both directions), and the area proposed for Columbaria 4. All of the interceptor swales discharge to a temporary sediment pond. From the temporary sediment pond the runoff is pumped to tanks where mechanical stormwater filtration takes place. Check dams are used with the interceptor swales on both the north and south portions of the site. The bioswale is lined with an erosion control blanket in order to protect it for use once construction is complete.

Alternate slope protection BMPs are included in Appendix C as a quick reference tool for the onsite inspector in the event the BMP(s) listed above are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit (Appendix D). To avoid potential erosion and sediment control issues that may cause a violation(s) of the NPDES Construction Stormwater permit (as provided in Appendix D), the Certified Erosion and Sediment Control Lead will promptly initiate the implementation of one or more of the alternative BMPs listed in Appendix C after the first sign that existing BMPs are ineffective or failing.

3.1.7 Element #7 – Protect Drain Inlets

All storm drain inlets and culverts made operable during construction shall be protected to prevent unfiltered or untreated water from entering the drainage conveyance system. However, the first priority is to keep all access roads clean of sediment and keep street wash water separate from entering storm drains until treatment can be provided. Storm Drain Inlet Protection (BMP C220) will be implemented for all drainage inlets and culverts that could potentially be impacted by sediment-laden runoff on and near the project site. The following inlet protection measures will be applied on this project:

Drop Inlet Protection

- Catch Basin Filters

In order to prevent sediment due to construction from entering the storm system, 60 catch basin filters will be placed in and around the site. All catch basins within the limits of construction will be equipt with catch basin filters, as well as many of the catch basins surrounding the limit of work as they may still be areas which would receive runoff from the site.

If the BMP option listed above are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit (Appendix D), or if no BMPs are listed above but deemed necessary during construction, the Certified Erosion and Sediment Control Lead shall implement one or more of the alternative BMP inlet protection options listed in Appendix C.

3.1.7 Element #8 – Stabilize Channels and Outlets

Where site runoff is to be conveyed in channels, or discharged to a stream or some other natural drainage point, efforts will be taken to prevent downstream erosion. The specific BMPs for channel and outlet stabilization that shall be used on this project include:

- Channel Lining (BMP C202)
- Check Dams (BMP C207)
- Outlet Protection (BMP C209)

Channel lining is used in the bioswale to protect from erosion. Check dams are used along the interceptor swales in order to stabilize the channels as well as slow runoff which furthermore lessens the potential of erosion in these temporary swales. Outlet protection will be used permanently where there are outlets discharging to the permanent ponds on site following construction. There will be ten outfalls where the protection BMP will be implemented, three in the most southern pond, three near Columbaria 3, and four in the pond within the northern portion of the site.

Alternate channel and outlet stabilization BMPs are included in Appendix C as a quick reference tool for the onsite inspector in the event the BMPs listed above are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit (Appendix D). To avoid potential erosion and sediment control issues that may cause a violation(s) of the NPDES Construction Stormwater permit (as provided in Appendix D), the Certified Erosion and Sediment Control Lead will promptly initiate the implementation of one or more of the alternative BMPs listed in Appendix C after the first sign that existing BMPs are ineffective or failing.

The project site is located west of the Cascade Mountain Crest. As such, all temporary on-site conveyance channels shall be designed, constructed, and stabilized to prevent erosion from the expected peak 10 minute velocity of flow from a Type 1A, 10-year, 24-hour recurrence interval storm for the developed condition. Alternatively, the 10-year, 1-hour peak flow rate indicated by an approved continuous runoff simulation model, increased by a factor of 1.6, shall be used. Stabilization, including armoring material, adequate to prevent erosion of outlets, adjacent streambanks, slopes, and downstream reaches shall be provided at the outlets of all conveyance systems.

3.1.9 Element #9 – Control Pollutants

All pollutants, including waste materials and demolition debris, that occur onsite shall be handled and disposed of in a manner that does not cause contamination of stormwater. Good housekeeping and preventative measures will be taken to ensure that the site will be kept clean, well organized, and free of debris. If required, BMPs to be implemented to control specific sources of pollutants are discussed below.

Vehicles, construction equipment, and/or petroleum product storage/dispensing:

- All vehicles, equipment, and petroleum product storage/dispensing areas will be inspected regularly to detect any leaks or spills, and to identify maintenance needs to prevent leaks or spills.
- On-site fueling tanks and petroleum product storage containers shall include secondary containment.
- Spill prevention measures, such as drip pans, will be used when conducting maintenance and repair of vehicles or equipment.
- In order to perform emergency repairs on site, temporary plastic will be placed beneath and, if raining, over the vehicle.
- Contaminated surfaces shall be cleaned immediately following any discharge or spill incident.

Demolition:

- Dust released from demolished sidewalks, buildings, or structures will be controlled using Dust Control measures (BMP C140).
- Storm drain inlets vulnerable to stormwater discharge carrying dust, soil, or debris will be protected using Storm Drain Inlet Protection (BMP C220 as described above for Element 7).
- Process water and slurry resulting from sawcutting and surfacing operations will be prevented from entering the waters of the State by implementing Sawcutting and Surfacing Pollution Prevention measures (BMP C152).

Concrete and grout:

- Process water and slurry resulting from concrete work will be prevented from entering the waters of the State by implementing Concrete Handling measures (BMP C151).

The facility does not require a Spill Prevention, Control, and Countermeasure (SPCC) Plan under the Federal regulations of the Clean Water Act (CWA).

3.1.10 Element #10 – Control Dewatering

All dewatering water from open cut excavation, tunneling, foundation work, trench, or underground vaults shall be discharged into a controlled conveyance system prior to discharge to a sediment trap or sediment pond. Channels will be stabilized, per Element #8. Clean, non-turbid dewatering water will not be routed through stormwater sediment ponds, and will be discharged to systems tributary to the receiving waters of the State in a manner that does not cause erosion, flooding, or a violation of State water quality standards in the receiving water. Highly turbid dewatering water from soils known or suspected to be contaminated, or from use of construction equipment, will require additional monitoring and treatment as required for the specific pollutants based on the receiving waters into which the discharge is occurring. Such monitoring is the responsibility of the contractor.

However, the dewatering of soils known to be free of contamination will trigger BMPs to trap sediment and reduce turbidity. At a minimum, geotextile fabric socks/bags/cells will be used to filter this material. Other BMPs to be used for sediment trapping and turbidity reduction include the following:

- Concrete Handling (BMP C151)
- Temporary Sediment Pond (BMP C241)
- Construction Stormwater Filtration (BMP C 251)

This site contains construction of three columbaria areas which will include many concrete walls. There will also be a five larger retaining walls built on site. Due to this construction proper concrete handling techniques will need to be followed. Also the treatment of runoff must be performed to the necessary requirements.

Alternate dewatering control BMPs are included in Appendix C as a quick reference tool for the onsite inspector in the event the BMPs listed above are deemed ineffective or inappropriate during construction to satisfy the requirements set forth in the General NPDES Permit (Appendix D). To avoid potential erosion and sediment control issues that may cause a violation(s) of the NPDES Construction Stormwater permit (as provided in Appendix D), the Certified Erosion and Sediment Control Lead will promptly initiate the implementation of one or more of the alternative BMPs listed in Appendix C after the first sign that existing BMPs are ineffective or failing.

3.1.11 Element #11 – Maintain BMPs

All temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as needed to assure continued performance of their intended function. Maintenance and repair shall be conducted in accordance with each particular BMP's specifications. Visual monitoring of the BMPs will be conducted at least once every calendar week and within 24 hours of any rainfall event that causes a discharge from the site. If the site becomes inactive, and is temporarily stabilized, the inspection frequency will be reduced to once every month.

All temporary erosion and sediment control BMPs shall be removed within 30 days after the final site stabilization is achieved or after the temporary BMPs are no longer needed. Trapped sediment shall be removed or stabilized on site. Disturbed soil resulting from removal of BMPs or vegetation shall be permanently stabilized.

3.1.12 Element #12 – Manage the Project

Erosion and sediment control BMPs for this project have been designed based on the following principles:

- Design the project to fit the existing topography, soils, and drainage patterns.
- Emphasize erosion control rather than sediment control.
- Minimize the extent and duration of the area exposed.
- Keep runoff velocities low.
- Retain sediment on site.
- Thoroughly monitor site and maintain all ESC measures.
- Schedule major earthwork during the dry season.

In addition, project management will incorporate the key components listed below:

As this project site is located west of the Cascade Mountain Crest, the project will be managed according to the following key project components:

Phasing of Construction

- The construction project is being phased to the extent practicable in order to prevent soil erosion, and, to the maximum extent possible, the transport of sediment from the site during construction.
- Revegetation of exposed areas and maintenance of that vegetation shall be an integral part of the clearing activities during each phase of construction, per the Scheduling BMP (C 162).

Seasonal Work Limitations

- From October 1 through April 30, clearing, grading, and other soil disturbing activities shall only be permitted if shown to the satisfaction of the local permitting authority that silt-laden runoff will be prevented from leaving the site through a combination of the following:
 - Site conditions including existing vegetative coverage, slope, soil type, and proximity to receiving waters; and
 - Limitations on activities and the extent of disturbed areas; and
 - Proposed erosion and sediment control measures.
- Based on the information provided and/or local weather conditions, the local permitting authority may expand or restrict the seasonal limitation on site disturbance.
- The following activities are exempt from the seasonal clearing and grading limitations:
 - Routine maintenance and necessary repair of erosion and sediment control BMPs;
 - Routine maintenance of public facilities or existing utility structures that do not expose the soil or result in the removal of the vegetative cover to soil; and
 - Activities where there is 100 percent infiltration of surface water runoff within the site in approved and installed erosion and sediment control facilities.

Coordination with Utilities and Other Jurisdictions

- Care has been taken to coordinate with utilities, other construction projects, and the local jurisdiction in preparing this SWPPP and scheduling the construction work.

Inspection and Monitoring

- All BMPs shall be inspected, maintained, and repaired as needed to assure continued performance of their intended function. Site inspections shall be conducted by a person who is knowledgeable in the principles and practices of erosion and sediment control. This person has the necessary skills to:
 - Assess the site conditions and construction activities that could impact the quality of stormwater, and
 - Assess the effectiveness of erosion and sediment control measures used to control the quality of stormwater discharges.
- A Certified Erosion and Sediment Control Lead shall be on-site or on-call at all times.
- Whenever inspection and/or monitoring reveals that the BMPs identified in this SWPPP are inadequate, due to the actual discharge of or potential to discharge a significant amount of any pollutant, appropriate BMPs or design changes shall be implemented as soon as possible.

Maintaining an Updated Construction SWPPP

- This SWPPP shall be retained on-site or within reasonable access to the site.
- The SWPPP shall be modified whenever there is a change in the design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the state.
- The SWPPP shall be modified if, during inspections or investigations conducted by the owner/operator, or the applicable local or state regulatory authority, it is determined that the SWPPP is ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site. The SWPPP shall be modified as necessary to include additional or modified BMPs designed to correct problems

identified. Revisions to the SWPPP shall be completed within seven (7) days following the inspection.

3.2 Site Specific BMPs

Site specific BMPs are shown on the TESC Plan Sheets and Details in Appendix A. These site specific plan sheets will be updated annually.

4.0 Construction Phasing and BMP Implementation

The BMP implementation schedule will be driven by the construction schedule. The following provides a sequential list of the proposed construction schedule milestones and the corresponding BMP implementation schedule. The list contains key milestones such as wet season construction.

The BMP implementation schedule listed below is keyed to proposed phases of the construction project, and reflects differences in BMP installations and inspections that relate to wet season construction. The project site is located west of the Cascade Mountain Crest. As such, the dry season is considered to be from May 1 to September 30 and the wet season is considered to be from October 1 to April 30.

- Estimate of Construction start date:
- Estimate of Construction finish date:
- Mobilize equipment on site:
- Mobilize and store all ESC and soil stabilization products (store materials on hand BMP C150):
- Install ESC measures:
- Install stabilized construction entrance:
- Begin clearing and grubbing:
- Excavation for foundations:
- Soil stabilization on excavated sideslopes:
- Temporary erosion control measures:
- Site inspections reduced to monthly:
- Begin concrete pour and implement BMP C151:
- Begin implementing soil stabilization and sediment control BMPs throughout the site in preparation for wet season:
- **Wet Season starts:**
- Site inspections and monitoring conducted weekly and for applicable rain events as detailed in Section 6 of this SWPPP:
- Implement Element #12 BMPs and manage site to minimize soil disturbance during the wet season:
- **Dry Season starts:**
- Site grading begins:

- Site grading ends:
- Building construction complete:
- Final landscaping and planting begins:
- Permanent erosion control measures:

5.0 Pollution Prevention Team

5.1 Roles and Responsibilities

The pollution prevention team consists of personnel responsible for implementation of the SWPPP, including the following:

- Certified Erosion and Sediment Control Lead (CESCL) – primary contractor contact, responsible for site inspections (BMPs, visual monitoring, sampling, etc.); to be called upon in case of failure of any ESC measures.
- Senior Resident Engineer – For projects with engineered structures only (sediment ponds/traps, sand filters, etc.): site representative for the owner that is the project's supervising engineer responsible for inspections and issuing instructions and drawings to the contractor's site supervisor or representative
- Emergency US EPA Contact – individual to be contacted at the US EPA in case of emergency.
- Emergency Owner Contact – individual that is the site owner or representative of the site owner to be contacted in the case of an emergency.
- Non-Emergency US EPA Contact – individual that is the site owner or representative of the site owner than can be contacted if required.
- Monitoring Personnel – personnel responsible for conducting water quality monitoring; for most sites this person is also the Certified Erosion and Sediment Control Lead.

5.2 Team Members

Names and contact information for those identified as members of the pollution prevention team are provided in the following table.

Title	Name(s)	Phone Number
Certified Erosion and Sediment Control Lead (CESCL)	~	~
Senior Resident Engineer	~	~

Emergency US EPA Contact	~	~
Emergency Owner Contact	~	~
Non-Emergency US EPA Contact	~	~
Monitoring Personnel	~	~

6.0 Site Inspections and Monitoring

Monitoring includes visual inspection, monitoring for water quality parameters of concern, and documentation of the inspection and monitoring findings in a site log book. A site log book will be maintained for all on-site construction activities and will include:

- A record of the implementation of the SWPPP and other permit requirements;
- Site inspections; and,
- Stormwater quality monitoring.

For convenience, the inspection form and water quality monitoring forms included in this SWPPP include the required information for the site log book. This SWPPP may function as the site log book if desired, or the forms may be separated and included in a separate site log book. However, if separated, the site log book but must be maintained on-site or within reasonable access to the site and be made available upon request to US EPA or the local jurisdiction.

6.1 Site Inspection

All BMPs will be inspected, maintained, and repaired as needed to assure continued performance of their intended function. The inspector will be a Certified Erosion and Sediment Control Lead (CESCL) per BMP C160. The name and contact information for the CESCL is provided in Section 5 of this SWPPP.

Site inspection will occur in all areas disturbed by construction activities and at all stormwater discharge points. Stormwater will be examined for the presence of suspended sediment, turbidity, discoloration, and oily sheen. The site inspector will evaluate and document the effectiveness of the installed BMPs and determine if it is necessary to repair or replace any of the BMPs to improve the quality of stormwater discharges. All maintenance and repairs will be documented in the site log book or forms provided in this document. All new BMPs or design changes will be documented in the SWPPP as soon as possible.

6.1.1 Site Inspection Frequency

Site inspections will be conducted at least once a week and within 24 hours following any discharge from the site. For sites with temporary stabilization measures, the site inspection frequency can be reduced to once every month.

6.1.2 Site Inspection Documentation

The site inspector will record each site inspection using the site log inspection forms provided in Appendix E. The site inspection log forms may be separated from this SWPPP document, but will be maintained on-site or within reasonable access to the site and be made available upon request to US EPA or the local jurisdiction.

6.2 Stormwater Quality Monitoring

6.2.1 Turbidity Sampling

Monitoring requirements for the proposed project will include turbidity sampling to monitor site discharges for water quality compliance with the 2005 Construction Stormwater General Permit (Appendix D). Sampling will be conducted at all site discharge points at least once per calendar week.

Turbidity monitoring will follow the analytical methodologies described in Section S4 of the 2005 Construction Stormwater General Permit (Appendix D). The key benchmark values that require action include 25 NTU and 250 NTU for turbidity. If the 25 NTU benchmark for turbidity is exceeded, the following steps will be conducted:

1. Ensure all BMPs specified in this SWPPP are installed and functioning as intended.
2. Assess whether additional BMPs should be implemented and make revisions to the SWPPP as necessary.
3. Sample the discharge location daily until the analysis results are less than 25 NTU (turbidity) or 32 cm (transparency).

If the turbidity is greater than 25 NTU but less than 250 NTU for more than 3 days, additional treatment BMPs will be implemented within 24 hours of the third consecutive sample that exceeded the benchmark value. Additional treatment BMPs will include, but are not limited to, off-site treatment, infiltration, filtration and chemical treatment.

If the 250 NTU benchmark for turbidity is exceeded at any time, the following steps will be conducted:

1. Notify US EPA by phone within 24 hours of analysis.
2. Continue daily sampling until the turbidity is less than 25 NTU.

3. Initiate additional treatment BMPs such as off-site treatment, infiltration, filtration and chemical treatment within 24 hours of the first 250 NTU exceedance.
4. Implement additional treatment BMPs as soon as possible, but within 7 days of the first 250 NTU exceedance.
5. Describe inspection results and remedial actions that are taken in the site log book and in monthly discharge monitoring reports.

6.2.2 pH Sampling

Stormwater runoff will be monitored for pH starting on the first day of any activity that includes more than 40 yards of poured or recycled concrete, or after the application of “Engineered Soils” such as, Portland cement treated base, cement kiln dust, or fly ash. This does not include fertilizers. For concrete work, pH monitoring will start the first day concrete is poured and continue until 3 weeks after the last pour. For engineered soils, the pH monitoring period begins when engineered soils are first exposed to precipitation and continue until the area is fully stabilized.

Stormwater samples will be collected daily from all points of discharge from the site and measured for pH using a calibrated pH meter, pH test kit, or wide range pH indicator paper. If the measured pH is 8.5 or greater, the following steps will be conducted:

1. Prevent the high pH water from entering storm drains or surface water.
2. Adjust or neutralize the high pH water if necessary using appropriate technology such as CO₂ sparging (liquid or dry ice).
3. Contact US EPA if chemical treatment other than CO₂ sparging is planned.

7.0 Reporting and Recordkeeping

7.1 Recordkeeping

7.1.1 Site Log Book

A site log book will be maintained for all on-site construction activities and will include:

- A record of the implementation of the SWPPP and other permit requirements;
- Site inspections; and,
- Stormwater quality monitoring.

For convenience, the inspection form and water quality monitoring forms included in this SWPPP include the required information for the site log book.

7.1.2 Records Retention

Records of all monitoring information (site log book, inspection reports/checklists, etc.), this Stormwater Pollution Prevention Plan, and any other documentation of compliance with permit requirements will be retained during the life of the construction project and for a minimum of three years following the termination of permit coverage in accordance with permit condition S5.C.

7.1.3 Access to Plans and Records

The SWPPP, General Permit, Notice of Authorization letter, and Site Log Book will be retained on site or within reasonable access to the site and will be made immediately available upon request to US EPA or the local jurisdiction. A copy of this SWPPP will be provided to US EPA within 14 days of receipt of a written request for the SWPPP from US EPA. Any other information requested by the US EPA will be submitted within a reasonable time. A copy of the SWPPP or access to the SWPPP will be provided to the public when requested in writing in accordance with permit condition S5.G.

7.1.4 Updating the SWPPP

In accordance with Conditions S3, S4.B, and S9.B.3 of the General Permit, this SWPPP will be modified if the SWPPP is ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the site or there has been a change in design, construction, operation, or maintenance at the site that has a significant effect on the discharge, or potential for discharge,

of pollutants to the waters of the State. The SWPPP will be modified within seven days of determination based on inspection(s) that additional or modified BMPs are necessary to correct problems identified, and an updated timeline for BMP implementation will be prepared.

7.2 Reporting

7.2.1 Discharge Monitoring Reports

If cumulative soil disturbance is 5 acres or larger: Discharge Monitoring Reports (DMRs) will be submitted to the US EPA monthly. If there was no discharge during a given monitoring period, the Permittee shall submit the form as required, with the words “No discharge” entered in the place of monitoring results. The DMR due date is 15 days following the end of each month.

Water quality sampling results will be submitted to the US EPA monthly on Discharge Monitoring Report (DMR) forms in accordance with permit condition S5.B. If there was no discharge during a given monitoring period, the form will be submitted with the words “no discharge” entered in place of the monitoring results. If a benchmark was exceeded, a brief summary of inspection results and remedial actions taken will be included. If sampling could not be performed during a monitoring period, a DMR will be submitted with an explanation of why sampling could not be performed.

7.2.2 Notification of Noncompliance

If any of the terms and conditions of the permit are not met, and it causes a threat to human health or the environment, the following steps will be taken in accordance with permit section S5.F:

1. The US EPA will be immediately notified of the failure to comply.
2. Immediate action will be taken to control the noncompliance issue and to correct the problem. If applicable, sampling and analysis of any noncompliance will be repeated immediately and the results submitted to the US EPA within five (5) days of becoming aware of the violation.
3. A detailed written report describing the noncompliance will be submitted to the US EPA within five (5) days, unless requested earlier by the US EPA.

Any time turbidity sampling indicates turbidity is 250 nephelometric turbidity units (NTU) or greater or water transparency is 6 centimeters or less, the US EPA regional office will be notified by phone within 24 hours of analysis as required by permit condition S5.A (see Section 5.0 of this SWPPP for contact information).

In accordance with permit condition S4.F.6.b, the US EPA regional office will be notified if chemical treatment other than CO₂ sparging is planned for adjustment of high pH water (see Section 5.0 of this SWPPP for contact information).

In accordance with permit condition S2.A, a complete application form will be submitted to the US EPA and the appropriate local jurisdiction (if applicable) to be covered by the General Permit.

Appendix A – Site Plans

INSTRUCTIONS

- Prepare a vicinity map or general location map (e.g. USGS Quadrangle map, a portion of a county or city map, or other appropriate map) with enough detail to identify the location of the construction site and receiving waters within one mile of the site.
- Prepare a legible site map(s) or detailed site plan(s) and place into this appendix. The site plan or map should show the entire construction site with the following information:
 - the direction of north, property lines, and existing structures and roads;
 - cut and fill slopes indicating the top and bottom of slope catch lines;
 - approximate slopes, contours, and direction of stormwater flow before and after major grading activities;
 - areas of soil disturbance and areas that will not be disturbed;
 - locations of structural and nonstructural controls (BMPs) identified in the SWPPP;
 - locations of off-site material, stockpiles, waste storage, borrow areas, and vehicle/equipment storage areas;
 - locations of all surface water bodies, including wetlands;
 - locations where stormwater or non-stormwater discharges off-site and/or to a surface water body, including wetlands;
 - location of water quality sampling station(s), if sampling is required in the NPDES permit or by the local permitting authority; and
 - areas where final stabilization has been accomplished and no further construction permit requirements apply.

Appendix B – Construction BMPs

BMP C101: Preserving Natural Vegetation

Purpose

The purpose of preserving natural vegetation is to reduce erosion wherever practicable. Limiting site disturbance is the single most effective method for reducing erosion. For example, conifers can hold up to about 50 percent of all rain that falls during a storm. Up to 20-30 percent of this rain may never reach the ground but is taken up by the tree or evaporates. Another benefit is that the rain held in the tree can be released slowly to the ground after the storm.

Conditions of Use

- Natural vegetation should be preserved on steep slopes, near perennial and intermittent watercourses or swales, and on building sites in wooded areas.
- As required by local governments.

Design and Installation Specifications

Natural vegetation can be preserved in natural clumps or as individual trees, shrubs and vines. The preservation of individual plants is more difficult because heavy equipment is generally used to remove unwanted vegetation. The points to remember when attempting to save individual plants are:

- Is the plant worth saving? Consider the location, species, size, age, vigor, and the work involved. Local governments may also have ordinances to save natural vegetation and trees.
- Fence or clearly mark areas around trees that are to be saved. It is preferable to keep ground disturbance away from the trees at least as far out as the dripline.

Plants need protection from three kinds of injuries:

- *Construction Equipment* - This injury can be above or below the ground level. Damage results from scarring, cutting of roots, and compaction of the soil. Placing a fenced buffer zone around plants to be saved prior to construction can prevent construction equipment injuries.
- *Grade Changes* - Changing the natural ground level will alter grades, which affects the plant's ability to obtain the necessary air, water, and minerals. Minor fills usually do not cause problems although sensitivity between species does vary and should be checked. Trees can tolerate fill of 6 inches or less. For shrubs and other plants, the fill should be less. When there are major changes in grade, it may become necessary to supply air to the roots of plants. This can be done by placing a layer of gravel and a tile system over the roots before the fill is made. A tile system protects a tree from a raised grade. The tile system should be laid out on the original grade leading from a dry well around the tree trunk. The system should then be covered with small stones to allow air to circulate over the root area. Lowering the natural ground level can seriously damage trees and shrubs. The highest percentage of the plant roots are in the upper 12 inches of the soil and cuts of only 2-3 inches can cause serious injury. To protect the roots it may be necessary to terrace the immediate area around the plants to be saved. If roots are exposed, construction of retaining walls may be needed to keep the soil in place. Plants can also be preserved by leaving them on an undisturbed, gently sloping mound. To increase the chances for survival, it is best to limit grade changes and other soil disturbances to areas outside the dripline of the plant.

- *Excavations* - Protect trees and other plants when excavating for drain fields, power, water, and sewer lines. Where possible, the trenches should be routed around trees and large shrubs. When this is not possible, it is best to tunnel under them. This can be done with hand tools or with power augers. If it is not possible to route the trench around plants to be saved, then the following should be observed:
 - Cut as few roots as possible. When you have to cut, cut clean. Paint cut root ends with a wood dressing like asphalt base paint. Backfill the trench as soon as possible. Tunnel beneath root systems as close to the center of the main trunk to preserve most of the important feeder roots. Some problems that can be encountered with a few specific trees are:
 - Maple, Dogwood, Red alder, Western hemlock, Western red cedar, and Douglas fir do not readily adjust to changes in environment and special care should be taken to protect these trees.
 - The windthrow hazard of Pacific silver fir and Madonna is high, while that of Western hemlock is moderate. The danger of windthrow increases where dense stands have been thinned. Other species (unless they are on shallow, wet soils less than 20 inches deep) have a low windthrow hazard.
 - Cottonwoods, maples, and willows have water-seeking roots. These can cause trouble in sewer lines and infiltration fields. On the other hand, they thrive in high moisture conditions that other trees would not.
 - Thinning operations in pure or mixed stands of Grand fir, Pacific silver fir, Noble fir, Sitka spruce, Western red cedar, Western hemlock, Pacific dogwood, and Red alder can cause serious disease problems. Disease can become established through damaged limbs, trunks, roots, and freshly cut stumps. Diseased and weakened trees are also susceptible to insect attack.

Maintenance Standards

- Inspect flagged and/or fenced areas regularly to make sure flagging or fencing has not been removed or damaged. If the flagging or fencing has been damaged or visibility reduced, it shall be repaired or replaced immediately and visibility restored.
- If tree roots have been exposed or injured, “prune” cleanly with an appropriate pruning saw or loppers directly above the damaged roots and recover with native soils. Treatment of sap flowing trees (fir, hemlock, pine, soft maples) is not advised as sap forms a natural healing barrier.

BMP C103: High Visibility Plastic or Metal Fence

Purpose

Fencing is intended to:

- restrict clearing to approved limits;
- prevent disturbance of sensitive areas, their buffers, and other areas required to be left undisturbed;
- limit construction traffic to designated construction entrances or roads; and,
- protect areas where marking with survey tape may not provide adequate protection.

Conditions of Use

To establish clearing limits, plastic or metal fence may be used:

- At the boundary of sensitive areas, their buffers, and other areas required to be left uncleared.
- As necessary to control vehicle access to and on the site.

Design and Installation Specifications

- High visibility plastic fence shall be composed of a high-density polyethylene material and shall be at least four feet in height. Posts for the fencing shall be steel or wood and placed every 6 feet on center (maximum) or as needed to ensure rigidity. The fencing shall be fastened to the post every six inches with a polyethylene tie. On long continuous lengths of fencing, a tension wire or rope shall be used as a top stringer to prevent sagging between posts. The fence color shall be high visibility orange. The fence tensile strength shall be 360 lbs/ft. using the ASTM D4595 testing method.
- Metal fences shall be designed and installed according to the manufacturer's specifications.
- Metal fences shall be at least 3 feet high and must be highly visible.
- Fences shall not be wired or stapled to trees.

Maintenance Standards

- If the fence has been damaged or visibility reduced, it shall be repaired or replaced immediately and visibility restored.

BMP C104: Stake and Wire Fence

Purpose

Fencing is intended to:

- restrict clearing to approved limits;
- prevent disturbance of sensitive areas, their buffers, and other areas required to be left undisturbed;
- limit construction traffic to designated construction entrances or roads; and,
- protect any areas where marking with survey tape may not provide adequate protection.

Conditions of Use

To establish clearing limits, stake or wire fence may be used:

- At the boundary of sensitive areas, their buffers, and other areas required to be left uncleared.
- As necessary, to control vehicle access to and on the site.

Design and Installation Specifications

- See Figure 4.1 for details.
- More substantial fencing shall be used if the fence does not prevent encroachment into those areas that are not to be disturbed.

Maintenance Standards

- If the fence has been damaged or visibility reduced, it shall be repaired or replaced immediately and visibility restored.

BMP C105: Stabilized Construction Entrance

Purpose

Construction entrances are stabilized to reduce the amount of sediment transported onto paved roads by vehicles or equipment by constructing a stabilized pad of quarry spalls at entrances to construction sites.

Conditions of Use

Construction entrances shall be stabilized wherever traffic will be leaving a construction site and traveling on paved roads or other paved areas within 1,000 feet of the site. On large commercial, highway, and road projects, the designer should include enough extra materials in the contract to allow for additional stabilized entrances not shown in the initial Construction SWPPP. It is difficult to determine exactly where access to these projects will take place; additional materials will enable the contractor to install them where needed.

Design and Installation Specifications

- See Figure 4.2 for details. Note: the 100’ minimum length of the entrance shall be reduced to the maximum practicable size when the size or configuration of the site does not allow the full length (100’).
- A separation geotextile shall be placed under the spalls to prevent fine sediment from pumping up into the rock pad. The geotextile shall meet the following standards:

Grab Tensile Strength (ASTM D4751)	200 psi min.
Grab Tensile Elongation (ASTM D4632)	30% max
Mullen Burst Strength (ASTM D3786-80a)	400 psi min.
AOS (ASTM D4751)	20-45 US Standard sieve size)

- Consider early installation of the first lift of asphalt in areas that will paved; this can be used as a stabilized entrance. Also consider the installation of excess concrete as a stabilized entrance. During large concrete pours, excess concrete is often available for this purpose.
- Hog fuel (wood-based mulch) may be substituted for or combined with quarry spalls in areas that will not be used for permanent roads. Hog fuel is generally less effective at stabilizing construction entrances and should be used only at sites where the amount of traffic is very limited. Hog fuel is not recommended for entrance stabilization in urban areas. The effectiveness of hog fuel is highly variable and it generally requires more maintenance than quarry spalls. The inspector may at any time require the use of quarry spalls if the hog fuel is not preventing sediment from being tracked onto pavement or if the hog fuel is being carried onto pavement. Hog fuel is prohibited in permanent roadbeds because organics in the subgrade soils cause degradation of the subgrade support over time.
- Fencing (see BMPs C103 and C104) shall be installed as necessary to restrict traffic to the construction entrance.

- Whenever possible, the entrance shall be constructed on a firm, compacted subgrade. This can substantially increase the effectiveness of the pad and reduce the need for maintenance.

Maintenance Standards

- Quarry spalls (or hog fuel) shall be added if the pad is no longer in accordance with the specifications.
- If the entrance is not preventing sediment from being tracked onto pavement, then alternative measures to keep the streets free of sediment shall be used. This may include street sweeping, an increase in the dimensions of the entrance, or the installation of a wheel wash.
- Any sediment that is tracked onto pavement shall be removed by shoveling or street sweeping. The sediment collected by sweeping shall be removed or stabilized on site. The pavement shall not be cleaned by washing down the street, except when sweeping is ineffective and there is a threat to public safety. If it is necessary to wash the streets, the construction of a small sump shall be considered. The sediment would then be washed into the sump where it can be controlled.
- Any quarry spalls that are loosened from the pad, which end up on the roadway shall be removed immediately.
- If vehicles are entering or exiting the site at points other than the construction entrance(s), fencing (see BMPs C103 and C104) shall be installed to control traffic.
- Upon project completion and site stabilization, all construction accesses intended as permanent access for maintenance shall be permanently stabilized.

BMP C106: Wheel Wash

Purpose

Wheel washes reduce the amount of sediment transported onto paved roads by motor vehicles.

Conditions of Use

When a stabilized construction entrance (see BMP C105) is not preventing sediment from being tracked onto pavement.

- Wheel washing is generally an effective BMP when installed with careful attention to topography. For example, a wheel wash can be detrimental if installed at the top of a slope abutting a right-of-way where the water from the dripping truck can run unimpeded into the street.
- Pressure washing combined with an adequately sized and surfaced pad with direct drainage to a large 10-foot x 10-foot sump can be very effective.

Design and Installation Specifications

Suggested details are shown in Figure 4.3. The Local Permitting Authority may allow other designs. A minimum of 6 inches of asphalt treated base (ATB) over crushed base material or 8 inches over a good subgrade is recommended to pave the wheel wash. Use a low clearance truck to test the wheel wash before paving. Either a belly dump or lowboy will work well to test clearance. Keep the water level from 12 to 14 inches deep to avoid damage to truck hubs and filling the truck tongues with water. Midpoint spray nozzles are only needed in extremely muddy conditions. Wheel wash systems should be designed with a small grade change, 6 to 12 inches for a 10-foot-wide pond, to allow sediment to flow to the low side of pond to help prevent re-suspension of sediment. A drainpipe with a 2- to 3-foot riser should be installed on the low side of the pond to allow for easy cleaning and refilling. Polymers may be used to promote coagulation and flocculation in a closed-loop system. Polyacrylamide (PAM) added to the wheel wash water at a rate of 0.25 - 0.5 pounds per 1,000 gallons of water increases effectiveness and reduces cleanup time. If PAM is already being used for dust or erosion control and is being applied by a water truck, the same truck can be used to change the wash water.

Maintenance Standards

The wheel wash should start out the day with fresh water. The wash water should be changed a minimum of once per day. On large earthwork jobs where more than 10-20 trucks per hour are expected, the wash water will need to be changed more often. Wheel wash or tire bath wastewater shall be discharged to a separate onsite treatment system, such as closed-loop recirculation or land application, or to the sanitary sewer with proper local sewer district approval.

BMP C240: Sediment Trap

Purpose

A sediment trap is a small temporary ponding area with a gravel outlet used to collect and store sediment from sites cleared and/or graded during construction. Sediment traps, along with other perimeter controls, shall be installed before any land disturbance takes place in the drainage area.

Conditions of Use

Prior to leaving a construction site, stormwater runoff must pass through a sediment pond or trap or other appropriate sediment removal best management practice. Non-engineered sediment traps may be used on-site prior to an engineered sediment trap or sediment pond to provide additional sediment removal capacity. It is intended for use on sites where the tributary drainage area is less than 3 acres, with no unusual drainage features, and a projected build-out time of six months or less. The sediment trap is a temporary measure (with a design life of approximately 6 months) and shall be maintained until the site area is permanently protected against erosion by vegetation and/or structures. Sediment traps and ponds are only effective in removing sediment down to about the medium silt size fraction. Runoff with sediment of finer grades (fine silt and clay) will pass through untreated, emphasizing the need to control erosion to the maximum extent first. Whenever possible, sediment-laden water shall be discharged into onsite, relatively level, vegetated areas (see BMP C234 – Vegetated Strip). This is the only way to effectively remove fine particles from runoff unless chemical treatment or filtration is used. This can be particularly useful after initial treatment in a sediment trap or pond. The areas of release must be evaluated on a site-by-site basis in order to determine appropriate locations for and methods of releasing runoff. Vegetated wetlands shall not be used for this purpose. Frequently, it may be possible to pump water from the collection point at the downhill end of the site to an upslope vegetated area. Pumping shall only augment the treatment system, not replace it, because of the possibility of pump failure or runoff volume in excess of pump capacity. All projects that are constructing permanent facilities for runoff quantity control should use the rough-graded or final-graded permanent facilities for traps and ponds. This includes combined facilities and infiltration facilities. When permanent facilities are used as temporary sedimentation facilities, the surface area requirement of a sediment trap or pond must be met. If the surface area requirements are larger than the surface area of the permanent facility, then the trap or pond shall be enlarged to comply with the surface area requirement. The permanent pond shall also be divided into two cells as required for sediment ponds. Either a permanent control structure or the temporary control structure (described in BMP C241, Temporary Sediment Pond) can be used. If a permanent control structure is used, it may be advisable to partially restrict the lower orifice with gravel to increase residence time while still allowing dewatering of the pond. A shut-off valve may be added to the control structure to allow complete retention of stormwater in emergency situations. In this case, an emergency overflow weir must be added. A skimmer may be used for the sediment trap outlet if approved by the Local Permitting Authority.

Design and Installation Specifications

- If permanent runoff control facilities are part of the project, they should be used for sediment retention.

- To determine the sediment trap geometry, first calculate the design surface area (SA) of the trap, measured at the invert of the weir. Use the following equation:

$$SA = FS (Q_2/V_s)$$

where

Q_2 = Design inflow based on the peak discharge from the developed 2-year runoff event from the contributing drainage area as computed in the hydrologic analysis.

The 10-year peak flow shall be used if the project size, expected timing and duration of construction, or downstream conditions warrant a higher level of protection. If no hydrologic analysis is required, the Rational Method may be used.

V_s = the settling velocity of the soil particle of interest. The 0.02 mm (medium silt) particle with an assumed density of 2.65 g/cm³ has been selected as the particle of interest and has a settling velocity (V_s) of 0.00096 ft/sec.

FS = A safety factor of 2 to account for non-ideal settling.

Therefore, the equation for computing surface area becomes:

$$SA = 2 \times Q_2/0.00096 \text{ or } 2080 \text{ square feet per cfs of inflow}$$

Note: Even if permanent facilities are used, they must still have a surface area that is at least as large as that derived from the above formula. If they do not, the pond must be enlarged.

- To aid in determining sediment depth, all sediment traps shall have a staff gauge with a prominent mark 1-foot above the bottom of the trap.
- Sediment traps may not be feasible on utility projects due to the limited work space or the short-term nature of the work. Portable tanks may be used in place of sediment traps for utility projects.

Maintenance Standards

- Sediment shall be removed from the trap when it reaches 1-foot in depth.
- Any damage to the pond embankments or slopes shall be repaired.

BMP C241: Temporary Sediment Pond

Purpose

Sediment ponds remove sediment from runoff originating from disturbed areas of the site. Sediment ponds are typically designed to remove sediment no smaller than medium silt (0.02 mm). Consequently, they usually reduce turbidity only slightly.

Conditions of Use

Prior to leaving a construction site, stormwater runoff must pass through a sediment pond or other appropriate sediment removal best management practice. A sediment pond shall be used where the contributing drainage area is 3 acres or more. Ponds must be used in conjunction with erosion control practices to reduce the amount of sediment flowing into the basin.

Design and Installation Specifications

- Sediment basins must be installed only on sites where failure of the structure would not result in loss of life, damage to homes or buildings, or interruption of use or service of public roads or utilities. Also, sediment traps and ponds are attractive to children and can be very dangerous. Compliance with local ordinances regarding health and safety must be addressed. If fencing of the pond is required, the type of fence and its location shall be shown on the ESC plan.
- Structures having a maximum storage capacity at the top of the dam of 10 acre-ft (435,600 ft³) or more are subject to the Washington Dam Safety Regulations (Chapter 173-175 WAC).
- See Figure 4.24, Figure 4.25, and Figure 4.26 for details.
- If permanent runoff control facilities are part of the project, they should be used for sediment retention. The surface area requirements of the sediment basin must be met. This may require enlarging the permanent basin to comply with the surface area requirements. If a permanent control structure is used, it may be advisable to partially restrict the lower orifice with gravel to increase residence time while still allowing dewatering of the basin.
- Use of infiltration facilities for sedimentation basins during construction tends to clog the soils and reduce their capacity to infiltrate. If infiltration facilities are to be used, the sides and bottom of the facility must only be rough excavated to a minimum of 2 feet above final grade. Final grading of the infiltration facility shall occur only when all contributing drainage areas are fully stabilized. The infiltration pretreatment facility should be fully constructed and used with the sedimentation basin to help prevent clogging.
- Determining Pond Geometry Obtain the discharge from the hydrologic calculations of the peak flow for the 2-year runoff event (Q_2). The 10-year peak flow shall be used if the project size, expected timing and duration of construction, or downstream conditions warrant a higher level of protection. If no hydrologic analysis is required, the Rational Method may be used. Determine the required surface area at the top of the riser pipe with the equation:

$SA = 2 \times Q_2 / 0.00096$ or 2080 square feet per cfs of inflow See BMP C240 for more information on the derivation of the surface area calculation.

- The basic geometry of the pond can now be determined using the following design criteria:
 - Required surface area SA (from Step 2 above) at top of riser.
 - Minimum 3.5-foot depth from top of riser to bottom of pond.
 - Maximum 3:1 interior side slopes and maximum 2:1 exterior slopes. The interior slopes can be increased to a maximum of 2:1 if fencing is provided at or above the maximum water surface.
 - One foot of freeboard between the top of the riser and the crest of the emergency spillway.
 - Flat bottom.
 - Minimum 1-foot deep spillway.
 - Length-to-width ratio between 3:1 and 6:1.
 - Sizing of Discharge Mechanisms. The outlet for the basin consists of a combination of principal and emergency spillways. These outlets must pass the peak runoff expected from the contributing drainage area for a 100-year storm. If, due to site conditions and basin geometry, a separate emergency spill-way is not feasible, the principal spillway must pass the entire peak runoff expected from the 100-year storm. However, an attempt to provide a separate emergency spillway should always be made. The runoff calculations should be based on the site conditions during construction. The flow through the dewatering orifice cannot be utilized when calculating the 100-year storm elevation because of its potential to become clogged; therefore, available spillway storage must begin at the principal spillway riser crest. The principal spillway designed by the procedures contained in this standard will result in some reduction in the peak rate of runoff. However, the riser outlet design will not adequately control the basin discharge to the predevelopment discharge limitations as stated in Minimum Requirement #7: Flow Control. However, if the basin for a permanent stormwater detention pond is used for a temporary sedimentation basin, the control structure for the permanent pond can be used to maintain predevelopment discharge limitations. The size of the basin, the expected life of the construction project, the anticipated downstream effects and the anticipated weather conditions during construction, should be considered to determine the need of additional discharge control. See Figure 4.28 for riser inflow curves.

BMP C233: Silt Fence

Purpose

Use of a silt fence reduces the transport of coarse sediment from a construction site by providing a temporary physical barrier to sediment and reducing the runoff velocities of overland flow.

Conditions of Use

Silt fence may be used downslope of all disturbed areas.

- Silt fence is not intended to treat concentrated flows, nor is it intended to treat substantial amounts of overland flow. Any concentrated flows must be conveyed through the drainage system to a sediment pond. The only circumstance in which overland flow can be treated solely by a silt fence, rather than by a sediment pond, is when the area draining to the fence is one acre or less and flow rates are less than 0.5 cfs.
- Silt fences should not be constructed in streams or used in V-shaped ditches. They are not an adequate method of silt control for anything deeper than sheet or overland flow.

Design and Installation Specifications

- Drainage area of 1 acre or less or in combination with sediment basin in a larger site.
- Maximum slope steepness (normal (perpendicular) to fence line) 1:1.
- Maximum sheet or overland flow path length to the fence of 100 feet.
- No flows greater than 0.5 cfs.
- The geotextile used shall meet the following standards. All geotextile properties listed below are minimum average roll values (i.e., the test result for any sampled roll in a lot shall meet or exceed the values shown in Table 4.10):

Table 4.10 Geotextile Standards	
Polymeric Mesh AOS (ASTM D4751)	0.60 mm maximum for silt film wovens (#20 sieve). 0.30 mm maximum for all other geotextile types (#50 sieve). 0.15 mm minimum for all fabric types (#100 sieve).
Water Permittivity (ASTM D4491)	0.02 per second minimum
Grab Tensile Strength (ASTM D4632)	180 lbs. Minimum for extra strength fabric. 100 lbs minimum for standard strength fabric.
Grab Tensile Strength (ASTM D4632)	30% maximum
Ultraviolet Resistance (ASTM D4355)	70% minimum

- Standard strength fabrics shall be supported with wire mesh, chicken wire, 2-inch x 2-inch wire, safety fence, or jute mesh to increase the strength of the

fabric. Silt fence materials are available that have synthetic mesh backing attached.

- Filter fabric material shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six months of expected usable construction life at a temperature range of 0°F. to 120°F.
- 100 percent biodegradable silt fence is available that is strong, long lasting, and can be left in place after the project is completed, if permitted by local regulations.

The contractor shall install and maintain temporary silt fences at the locations shown in the Plans. The silt fences shall be constructed in the areas of clearing, grading, or drainage prior to starting those activities. A silt fence shall not be considered temporary if the silt fence must function beyond the life of the contract. The silt fence shall prevent soil carried by runoff water from going beneath, through, or over the top of the silt fence, but shall allow the water to pass through the fence.

The minimum height of the top of silt fence shall be 2 feet and the maximum height shall be 2½ feet above the original ground surface.

The geotextile shall be sewn together at the point of manufacture, or at an approved location as determined by the Engineer, to form geotextile lengths as required. All sewn seams shall be located at a support post. Alternatively, two sections of silt fence can be overlapped, provided the Contractor can demonstrate, to the satisfaction of the Engineer, that the overlap is long enough and that the adjacent fence sections are close enough together to prevent silt laden water from escaping through the fence at the overlap.

The geotextile shall be attached on the up-slope side of the posts and support system with staples, wire, or in accordance with the manufacturer's recommendations. The geotextile shall be attached to the posts in a manner that reduces the potential for geotextile tearing at the staples, wire, or other connection device. Silt fence back-up support for the geotextile in the form of a wire or plastic mesh is dependent on the properties of the geotextile selected for use. If wire or plastic back-up mesh is used, the mesh shall be fastened securely to the up-slope of the posts with the geotextile being up-slope of the mesh back-up support.

The geotextile at the bottom of the fence shall be buried in a trench to a minimum depth of 4 inches below the ground surface. The trench shall be backfilled and the soil tamped in place over the buried portion of the geotextile, such that no flow can pass beneath the fence and scouring cannot occur. When wire or polymeric back-up support mesh is used, the wire or polymeric mesh shall extend into the trench a minimum of 3 inches.

The fence posts shall be placed or driven a minimum of 18 inches. A

minimum depth of 12 inches is allowed if topsoil or other soft subgrade soil is not present and a minimum depth of 18 inches cannot be reached. Fence post depths shall be increased by 6 inches if the fence is located on slopes of 3:1 or steeper and the slope is perpendicular to the fence. If required post depths cannot be obtained, the posts shall be adequately secured by bracing or guying to prevent overturning of the fence due to sediment loading. Silt fences shall be located on contour as much as possible, except at the ends of the fence, where the fence shall be turned uphill such that the silt fence captures the runoff water and prevents water from flowing around the end of the fence. If the fence must cross contours, with the exception of the ends of the fence, gravel check dams placed perpendicular to the back of the fence shall be used to minimize concentrated flow and erosion along the back of the fence. The gravel check dams shall be approximately 1-foot deep at the back of the fence. It shall be continued perpendicular to the fence at the same elevation until the top of the check dam intercepts the ground surface behind the fence. The gravel check dams shall consist of crushed surfacing base course, gravel backfill for walls, or shoulder ballast. The gravel check dams shall be located every 10 feet along the fence where the fence must cross contours. The slope of the fence line where contours must be crossed shall not be steeper than 3:1. Wood, steel or equivalent posts shall be used. Wood posts shall have minimum dimensions of 2 inches by 2 inches by 3 feet minimum length, and shall be free of defects such as knots, splits, or gouges.

Steel posts shall consist of either size No. 6 rebar or larger, ASTM A 120 steel pipe with a minimum diameter of 1-inch, U, T, L, or C shape steel posts with a minimum weight of 1.35 lbs./ft. or other steel posts having equivalent strength and bending resistance to the post sizes listed. The spacing of the support posts shall be a maximum of 6 feet. Fence back-up support, if used, shall consist of steel wire with a maximum mesh spacing of 2 inches, or a prefabricated polymeric mesh. The strength of the wire or polymeric mesh shall be equivalent to or greater than 180 lbs. grab tensile strength. The polymeric mesh must be as resistant to ultraviolet radiation as the geotextile it supports.

Silt fence installation using the slicing method specification details follow. Refer to Figure 4.20 for slicing method details.

The base of both end posts must be at least 2 to 4 inches above the top of the silt fence fabric on the middle posts for ditch checks to drain properly. Use a hand level or string level, if necessary, to mark base points before installation.

Install posts 3 to 4 feet apart in critical retention areas and 6 to 7 feet apart in standard applications.

Install posts 24 inches deep on the downstream side of the silt fence, and as close as possible to the fabric, enabling posts to support the fabric from upstream water pressure.

Install posts with the nipples facing away from the silt fence fabric.

Attach the fabric to each post with three ties, all spaced within the top 8 inches of the fabric. Attach each tie diagonally 45 degrees through the fabric, with each puncture at least 1 inch vertically apart. In addition, each tie should be positioned to hang on a post nipple when tightening to prevent sagging. Wrap approximately 6 inches of fabric around the end posts and secure with 3 ties. No more than 24 inches of a 36-inch fabric is allowed above ground level. The rope lock system must be used in all ditch check applications. The installation should be checked and corrected for any deviation before compaction. Use a flat-bladed shovel to tuck fabric deeper into the ground if necessary.

Compaction is vitally important for effective results. Compact the soil immediately next to the silt fence fabric with the front wheel of the tractor, skid steer, or roller exerting at least 60 pounds per square inch. Compact the upstream side first and then each side twice for a total of four trips.

- Any damage shall be repaired immediately.

Maintenance Standards

- If concentrated flows are evident uphill of the fence, they must be intercepted and conveyed to a sediment pond.
- It is important to check the uphill side of the fence for signs of the fence clogging and acting as a barrier to flow and then causing channelization of flows parallel to the fence. If this occurs, replace the fence or remove the trapped sediment.
- Sediment deposits shall either be removed when the deposit reaches approximately one-third the height of the silt fence, or a second silt fence shall be installed.
- If the filter fabric (geotextile) has deteriorated due to ultraviolet breakdown, it shall be replaced.

BMP C240: Sediment Trap

Purpose

A sediment trap is a small temporary ponding area with a gravel outlet used to collect and store sediment from sites cleared and/or graded during construction. Sediment traps, along with other perimeter controls, shall be installed before any land disturbance takes place in the drainage area.

Conditions of Use

Prior to leaving a construction site, stormwater runoff must pass through a sediment pond or trap or other appropriate sediment removal best management practice. Non-engineered sediment traps may be used on-site prior to an engineered sediment trap or sediment pond to provide additional sediment removal capacity.

It is intended for use on sites where the tributary drainage area is less than 3 acres, with no unusual drainage features, and a projected build-out time of six months or less. The sediment trap is a temporary measure (with a design life of approximately 6 months) and shall be maintained until the site area is permanently protected against erosion by vegetation and/or structures.

Sediment traps and ponds are only effective in removing sediment down to about the medium silt size fraction. Runoff with sediment of finer grades (fine silt and clay) will pass through untreated, emphasizing the need to control erosion to the maximum extent first.

Whenever possible, sediment-laden water shall be discharged into onsite, relatively level, vegetated areas (see BMP C234 – Vegetated Strip). This is the only way to effectively remove fine particles from runoff unless chemical treatment or filtration is used. This can be particularly useful after initial treatment in a sediment trap or pond. The areas of release must be evaluated on a site-by-site basis in order to determine appropriate locations for and methods of releasing runoff. Vegetated wetlands shall not be used for this purpose. Frequently, it may be possible to pump water from the collection point at the downhill end of the site to an upslope vegetated area. Pumping shall only augment the treatment system, not replace it, because of the possibility of pump failure or runoff volume in excess of pump capacity.

All projects that are constructing permanent facilities for runoff quantity control should use the rough-graded or final-graded permanent facilities for traps and ponds. This includes combined facilities and infiltration facilities. When permanent facilities are used as temporary sedimentation facilities, the surface area requirement of a sediment trap or pond must be met. If the surface area requirements are larger than the surface area of the permanent facility, then the trap or pond shall be enlarged to comply with the surface area requirement. The permanent pond shall also be divided into two cells as required for sediment ponds.

Either a permanent control structure or the temporary control structure (described in BMP C241, Temporary Sediment Pond) can be used. If a permanent control structure is used, it may be advisable to partially restrict the lower orifice with gravel to increase residence time while still allowing dewatering of the pond. A shut-off valve may be added to the control structure to allow complete retention of stormwater in emergency situations. In this case, an emergency overflow

weir must be added. A skimmer may be used for the sediment trap outlet if approved by the Local Permitting Authority.

Design and Installation Specifications

- If permanent runoff control facilities are part of the project, they should be used for sediment retention.
- To determine the sediment trap geometry, first calculate the design surface area (*SA*) of the trap, measured at the invert of the weir. Use the following equation:

$$SA = FS (Q_2/V_s)$$

where

Q_2 = Design inflow based on the peak discharge from the developed 2-year runoff event from the contributing drainage area as computed in the hydrologic analysis. The 10-year peak flow shall be used if the project size, expected timing and duration of construction, or downstream conditions warrant a higher level of protection. If no hydrologic analysis is required, the Rational Method may be used.

V_s = The settling velocity of the soil particle of interest. The 0.02 mm (medium silt) particle with an assumed density of 2.65 g/cm³ has been selected as the particle of interest and has a settling velocity (V_s) of 0.00096 ft/sec.

FS = A safety factor of 2 to account for non-ideal settling. Therefore, the equation for computing surface area becomes:

$$SA = 2 \times Q_2/0.00096 \text{ or } 2080 \text{ square feet per cfs of inflow}$$

Note: Even if permanent facilities are used, they must still have a surface area that is at least as large as that derived from the above formula. If they do not, the pond must be enlarged.

- To aid in determining sediment depth, all sediment traps shall have a staff gauge with a prominent mark 1-foot above the bottom of the trap.
- Sediment traps may not be feasible on utility projects due to the limited work space or the short-term nature of the work. Portable tanks may be used in place of sediment traps for utility projects.

Maintenance Standards

- Sediment shall be removed from the trap when it reaches 1-foot in depth.
- Any damage to the pond embankments or slopes shall be repaired.

BMP C220: Storm Drain Inlet Protection

Purpose

To prevent coarse sediment from entering drainage systems prior to permanent stabilization of the disturbed area.

Conditions of Use

Where storm drain inlets are to be made operational before permanent stabilization of the disturbed drainage area. Protection should be provided for all storm drain inlets downslope and within 500 feet of a disturbed or construction area, unless the runoff that enters the catch basin will be conveyed to a sediment pond or trap. Inlet protection may be used anywhere to protect the drainage system. It is likely that the drainage system will still require cleaning. All of the methods for storm drain inlet protection are prone to plugging and require a high frequency of maintenance. Drainage areas should be limited to 1 acre or less. Emergency overflows may be required where stormwater ponding would cause a hazard. If an emergency overflow is provided, additional end-of-pipe treatment may be required.

Design and Installation Specifications

Catchbasin Filters

Inserts should be designed by the manufacturer for use at construction sites. The limited sediment storage capacity increases the amount of inspection and maintenance required, which may be daily for heavy sediment loads. The maintenance requirements can be reduced by combining a catchbasin filter with another type of inlet protection. This type of inlet protection provides flow bypass without overflow and therefore may be a better method for inlets located along active rights-of-way.

- 5 cubic feet of storage.
- Dewatering provisions.
- High-flow bypass that will not clog under normal use at a construction site.
- The catchbasin filter is inserted in the catchbasin just below the grating.

Maintenance Standards

- Catch basin filters should be inspected frequently, especially after storm events. If the insert becomes clogged, it should be cleaned or replaced.

Portable Water Storage Tanks (e.g., Baker Tank) for Sedimentation.

BMP C251: Construction Stormwater Filtration

Purpose

Filtration removes sediment from runoff originating from disturbed areas of the site.

Conditions of Use

Traditional BMPs used to control soil erosion and sediment loss from sites under development may not be adequate to ensure compliance with the water quality standard for turbidity in the receiving water. Filtration may be used in conjunction with gravity settling to remove sediment as small as fine silt (0.5 μm). The reduction in turbidity will be dependent on the particle size distribution of the sediment in the stormwater. In some circumstances, sedimentation and filtration may achieve compliance with the water quality standard for turbidity. Unlike chemical treatment, the use of construction stormwater filtration does not require approval from the US EPA. Filtration may also be used in conjunction with polymer treatment in a portable system to assure capture of the flocculated solids.

Design and Installation Specifications

Background Information

Filtration with sand media has been used for over a century to treat water and wastewater. The use of sand filtration for treatment of stormwater has developed recently, generally to treat runoff from streets, parking lots, and residential areas. The application of filtration to construction stormwater treatment is currently under development.

Two types of filtration systems may be applied to construction stormwater treatment: rapid and slow. Rapid sand filters are the typical system used for water and wastewater treatment. They can achieve relatively high hydraulic flow rates, on the order of 2 to 20 gpm/sf, because they have automatic backwash systems to remove accumulated solids. In contrast, slow sand filters have very low hydraulic rates, on the order of 0.02 gpm/sf, because they do not have backwash systems. To date, slow sand filtration has generally been used to treat stormwater. Slow sand filtration is mechanically simple in comparison to rapid sand filtration but requires a much larger filter area.

Filtration Equipment. Sand media filters are available with automatic backwashing features that can filter to 50 μm particle size. Screen or bag filters can filter down to 5 μm . Fiber wound filters can remove particles down to 0.5 μm . Filters should be sequenced from the largest to the smallest pore opening. Sediment removal efficiency will be related to particle size distribution in the stormwater.

Treatment Process Description. Stormwater is collected at interception point(s) on the site and is diverted to a sediment pond or tank for removal of large sediment and storage of the stormwater before it is treated by the filtration system. The stormwater is pumped from the trap, pond, or tank through the filtration system in a rapid sand filtration system. Slow sand filtration systems are designed as flow through systems using gravity. If large volumes of concrete are being poured, pH adjustment may be necessary.

Maintenance Standards

Rapid sand filters typically have automatic backwash systems that are triggered by a pre-set pressure drop across the filter. If the backwash water volume is not large or substantially more turbid than the stormwater stored in the holding pond or tank, backwash return to the pond or tank may be appropriate. However, land application or another means of treatment and disposal may be necessary.

- Screen, bag, and fiber filters must be cleaned and/or replaced when they become clogged.
- Sediment shall be removed from the storage and/or treatment ponds as necessary. Typically, sediment removal is required once or twice during a wet season and at the decommissioning of the ponds.

BMP C122: Nets and Blankets

Purpose

Erosion control nets and blankets are intended to prevent erosion and hold seed and mulch in place on steep slopes and in channels so that vegetation can become well established. In addition, some nets and blankets can be used to permanently reinforce turf to protect drainage ways during high flows. Nets (commonly called matting) are strands of material woven into an open, but high-tensile strength net (for example, coconut fiber matting). Blankets are strands of material that are not tightly woven, but instead form a layer of interlocking fibers, typically held together by a biodegradable or photodegradable netting (for example, excelsior or straw blankets). They generally have lower tensile strength than nets, but cover the ground more completely. Coir (coconut fiber) fabric comes as both nets and blankets.

Conditions of Use

Erosion control nets and blankets should be used:

- To aid permanent vegetated stabilization of slopes 2H:1V or greater and with more than 10 feet of vertical relief.
- For drainage ditches and swales (highly recommended). The application of appropriate netting or blanket to drainage ditches and swales can protect bare soil from channelized runoff while vegetation is established. Nets and blankets also can capture a great deal of sediment due to their open, porous structure. Synthetic nets and blankets can be used to permanently stabilize channels and may provide a cost-effective, environmentally preferable alternative to riprap. 100 percent synthetic blankets manufactured for use in ditches may be easily reused as temporary ditch liners.

Disadvantages of blankets include:

- Surface preparation required;
- On slopes steeper than 2.5:1, blanket installers may need to be roped and harnessed for safety;
- They cost at least \$4,000-6,000 per acre installed.

Advantages of blankets include:

- Can be installed without mobilizing special equipment;
- Can be installed by anyone with minimal training;
- Can be installed in stages or phases as the project progresses;
- Seed and fertilizer can be hand-placed by the installers as they progress down the slope;
- Can be installed in any weather;
- There are numerous types of blankets that can be designed with various parameters in mind. Those parameters include: fiber blend, mesh strength, longevity, biodegradability, cost, and availability.

Design and Installation Specifications

- Note: all blankets must be installed per manufacturer's installation instructions.
- Installation is critical to the effectiveness of these products. If good ground contact is not achieved, runoff can concentrate under the product, resulting in significant erosion.

- Installation of Blankets on Slopes:
 1. Complete final grade and track walk up and down the slope.
 2. Install hydromulch with seed and fertilizer.
 3. Dig a small trench, approximately 12 inches wide by 6 inches deep along the top of the slope.
 4. Install the leading edge of the blanket into the small trench and staple approximately every 18 inches. NOTE: Staples are metal, U-shaped, and a minimum of 6 inches long. Longer staples are used in sandy soils. Biodegradable stakes are also available.
 5. Roll the blanket slowly down the slope as installer walks backwards. NOTE: The blanket rests against the installer's legs. Staples are installed as the blanket is unrolled. It is critical that the proper staple pattern is used for the blanket being installed. The blanket is not to be allowed to roll down the slope on its own as this stretches the blanket making it impossible to maintain soil contact. In addition, no one is allowed to walk on the blanket after it is in place.
 6. If the blanket is not long enough to cover the entire slope length, the trailing edge of the upper blanket should overlap the leading edge of the lower blanket and be stapled. On steeper slopes, this overlap should be installed in a small trench, stapled, and covered with soil.
- With the variety of products available, it is impossible to cover all the details of appropriate use and installation. Therefore, it is critical that the design engineer consults the manufacturer's information and that a site visit takes place in order to insure that the product specified is appropriate. Information is also available at the following web site:
 1. WSDOT: <http://www.wsdot.wa.gov/eesc/environmental/>
 2. Texas Transportation Institute:
<http://www.dot.state.tx.us/insdtdot/orgchart/cmd/erosion/contents.htm>
- Jute matting must be used in conjunction with mulch (BMP C121). Excelsior, woven straw blankets and coir (coconut fiber) blankets may be installed without mulch. There are many other types of erosion control nets and blankets on the market that may be appropriate in certain circumstances.
- In general, most nets (e.g., jute matting) require mulch in order to prevent erosion because they have a fairly open structure. Blankets typically do not require mulch because they usually provide complete protection of the surface.
- Extremely steep, unstable, wet, or rocky slopes are often appropriate candidates for use of synthetic blankets, as are riverbanks, beaches and other high-energy environments. If synthetic blankets are used, the soil should be hydromulched first.
- 100 percent biodegradable blankets are available for use in sensitive areas. These organic blankets are usually held together with a paper or fiber mesh and stitching which may last up to a year.

- Most netting used with blankets is photodegradable, meaning they break down under sunlight (not UV stabilized). However, this process can take months or years even under bright sun. Once vegetation is established, sunlight does not reach the mesh. It is not uncommon to find non-degraded netting still in place several years after installation. This can be a problem if maintenance requires the use of mowers or ditch cleaning equipment. In addition, birds and small animals can become trapped in the netting.

Maintenance Standards

- Good contact with the ground must be maintained, and erosion must not occur beneath the net or blanket.
- Any areas of the net or blanket that are damaged or not in close contact with the ground shall be repaired and stapled.
- If erosion occurs due to poorly controlled drainage, the problem shall be fixed and the eroded area protected.

BMP C124: Sodding

Purpose

The purpose of sodding is to establish permanent turf for immediate erosion protection and to stabilize drainage ways where concentrated overland flow will occur.

Conditions of Use

Sodding may be used in the following areas:

- Disturbed areas that require short-term or long-term cover.
- Disturbed areas that require immediate vegetative cover.
- All waterways that require vegetative lining. Waterways may also be seeded rather than sodded, and protected with a net or blanket.

Design and Installation Specifications

Sod shall be free of weeds, of uniform thickness (approximately 1-inch thick), and shall have a dense root mat for mechanical strength. The following steps are recommended for sod installation:

- Shape and smooth the surface to final grade in accordance with the approved grading plan. The swale needs to be overexcavated 4 to 6 inches below design elevation to allow room for placing soil amendment and sod.
- Amend 4 inches (minimum) of compost into the top 8 inches of the soil if the organic content of the soil is less than ten percent or the permeability is less than 0.6 inches per hour. Compost used should meet Ecology publication 94-038 specifications for Grade A quality compost.
- Fertilize according to the supplier's recommendations.
- Work lime and fertilizer 1 to 2 inches into the soil, and smooth the surface.
- Lay strips of sod beginning at the lowest area to be sodded and perpendicular to the direction of water flow. Wedge strips securely into place. Square the ends of each strip to provide for a close, tight fit. Stagger joints at least 12 inches. Staple on slopes steeper than 3H:1V. Staple the upstream edge of each sod strip.
- Roll the sodded area and irrigate.
- When sodding is carried out in alternating strips or other patterns, seed the areas between the sod immediately after sodding.

Maintenance Standards

If the grass is unhealthy, the cause shall be determined and appropriate action taken to reestablish a healthy groundcover. If it is impossible to establish a healthy groundcover due to frequent saturation, instability, or some other cause, the sod shall be removed, the area seeded with an appropriate mix, and protected with a net or blanket.

BMP C200: Interceptor Dike and Swale

Purpose

Provide a ridge of compacted soil, or a ridge with an upslope swale, at the top or base of a disturbed slope or along the perimeter of a disturbed construction area to convey stormwater. Use the dike and/or swale to intercept the runoff from unprotected areas and direct it to areas where erosion can be controlled. This can prevent storm runoff from entering the work area or sediment-laden runoff from leaving the construction site.

Conditions of Use

Where the runoff from an exposed site or disturbed slope must be conveyed to an erosion control facility which can safely convey the stormwater.

- Locate upslope of a construction site to prevent runoff from entering disturbed area.
- When placed horizontally across a disturbed slope, it reduces the amount and velocity of runoff flowing down the slope.
- Locate downslope to collect runoff from a disturbed area and direct it to a sediment basin.

Design and Installation Specifications

- Dike and/or swale and channel must be stabilized with temporary or permanent vegetation or other channel protection during construction.
- Channel requires a positive grade for drainage; steeper grades require channel protection and check dams.
- Review construction for areas where overtopping may occur.
- Can be used at top of new fill before vegetation is established.
- May be used as a permanent diversion channel to carry the runoff.
- Sub-basin tributary area should be one acre or less.
- Design capacity for the peak flow from a 10-year, 24-hour storm, assuming a Type 1A rainfall distribution, for temporary facilities. Alternatively, use 1.6 times the 10-year, 1-hour flow indicated by an approved continuous runoff model. For facilities that will also serve on a permanent basis, consult the local government's drainage requirements.

Interceptor swales shall meet the following criteria:

- Bottom Width 2 feet minimum; the bottom shall be level.
- Depth 1-foot minimum.
- Side Slope 2:1 or flatter.
- Grade: Maximum 5 percent, with positive drainage to a suitable outlet (such as a sediment pond).
- Stabilization: Seed as per *BMP C120, Temporary and Permanent Seeding*, or *BMP C202, Channel Lining*, 12 inches thick of riprap pressed into the bank and extending at least 8 inches vertical from the bottom.
- Inspect diversion dikes and interceptor swales once a week and after every rainfall. Immediately remove sediment from the flow area.
- Damage caused by construction traffic or other activity must be repaired before the end of each working day.

Check outlets and make timely repairs as needed to avoid gully formation. When the area below the temporary diversion dike is permanently stabilized, remove the dike and fill and stabilize the channel to blend with the natural surface.

BMP C202: Channel Lining

Purpose

To protect erodible channels by providing a channel liner using either blankets or riprap.

Conditions of Use

When natural soils or vegetated stabilized soils in a channel are not adequate to prevent channel erosion.

- When a permanent ditch or pipe system is to be installed and a temporary measure is needed.
- In almost all cases, synthetic and organic coconut blankets are more effective than riprap for protecting channels from erosion. Blankets can be used with and without vegetation. Blanketed channels can be designed to handle any expected flow and longevity requirement. Some synthetic blankets have a predicted life span of 50 years or more, even in sunlight.
- Other reasons why blankets are better than rock include the availability of blankets over rock. In many areas of the state, rock is not easily obtainable or is very expensive to haul to a site. Blankets can be delivered anywhere. Rock requires the use of dump trucks to haul and heavy equipment to place. Blankets usually only require laborers with hand tools, and sometimes a backhoe.
- The Federal Highway Administration recommends not using flexible liners whenever the slope exceeds 10 percent or the shear stress exceeds 8 lbs/ft².

Design and Installation Specifications

See BMP C122 for information on blankets.

Since riprap is used where erosion potential is high, construction must be sequenced so that the riprap is put in place with the minimum possible delay.

- Disturbance of areas where riprap is to be placed should be undertaken only when final preparation and placement of the riprap can follow immediately behind the initial disturbance. Where riprap is used for outlet protection, the riprap should be placed before or in conjunction with the construction of the pipe or channel so that it is in place when the pipe or channel begins to operate.
- The designer, after determining the riprap size that will be stable under the flow conditions, shall consider that size to be a minimum size and then, based on riprap gradations actually available in the area, select the size or sizes that equal or exceed the minimum size. The possibility of drainage structure damage by children shall be considered in selecting a riprap size, especially if there is nearby water or a gully in which to toss the stones.
- Stone for riprap shall consist of field stone or quarry stone of approximately rectangular shape. The stone shall be hard and angular and of such quality that it will not disintegrate on exposure to water or weathering and it shall be suitable in all respects for the purpose intended.
- Rubble concrete may be used provided it has a density of at least 150 pounds per cubic foot, and otherwise meets the requirement of this standard and specification.

- A lining of engineering filter fabric (geotextile) shall be placed between the riprap and the underlying soil surface to prevent soil movement into or through the riprap. The geotextile should be keyed in at the top of the bank.
- Filter fabric shall not be used on slopes greater than 1-1/2:1 as slippage may occur. It should be used in conjunction with a layer of coarse aggregate (granular filter blanket) when the riprap to be placed is 12 inches and larger.

BMP C207: Check Dams

Purpose

Construction of small dams across a swale or ditch reduces the velocity of concentrated flow and dissipates energy at the check dam.

Conditions of Use

Where temporary channels or permanent channels are not yet vegetated, channel lining is infeasible, and velocity checks are required.

- Check dams may not be placed in streams unless approved by the State Department of Fish and Wildlife. Check dams may not be placed in wetlands without approval from a permitting agency.
- Check dams shall not be placed below the expected backwater from any salmonid bearing water between October 1 and May 31 to ensure that there is no loss of high flow refuge habitat for overwintering juvenile salmonids and emergent salmonid fry.

Design and Installation Specifications

Whatever material is used, the dam should form a triangle when viewed from the side. This prevents undercutting as water flows over the face of the dam rather than falling directly onto the ditch bottom. Check dams in association with sumps work more effectively at slowing flow and retaining sediment than just a check dam alone. A deep sump should be provided immediately upstream of the check dam.

- In some cases, if carefully located and designed, check dams can remain as permanent installations with very minor regrading. They may be left as either spillways, in which case accumulated sediment would be graded and seeded, or as check dams to prevent further sediment from leaving the site.
- Check dams can be constructed of either rock or pea-gravel filled bags. Numerous new products are also available for this purpose. They tend to be re-usable, quick and easy to install, effective, and cost efficient.
- Check dams should be placed perpendicular to the flow of water.
- The maximum spacing between the dams shall be such that the toe of the upstream dam is at the same elevation as the top of the downstream dam.
- Keep the maximum height at 2 feet at the center of the dam.
- Keep the center of the check dam at least 12 inches lower than the outer edges at natural ground elevation.
- Keep the side slopes of the check dam at 2:1 or flatter.
- Key the stone into the ditch banks and extend it beyond the abutments a minimum of 18 inches to avoid washouts from overflow around the dam.
- Use filter fabric foundation under a rock or sand bag check dam. If a blanket ditch liner is used, this is not necessary. A piece of organic or synthetic blanket cut to fit will also work for this purpose.
- Rock check dams shall be constructed of appropriately sized rock. The rock must be placed by hand or by mechanical means (no dumping of rock to form dam) to achieve complete coverage of the ditch or swale and to ensure that

the center of the dam is lower than the edges. The rock used must be large enough to stay in place given the expected design flow through the channel.

- In the case of grass-lined ditches and swales, all check dams and accumulated sediment shall be removed when the grass has matured sufficiently to protect the ditch or swale - unless the slope of the swale is greater than 4 percent. The area beneath the check dams shall be seeded and mulched immediately after dam removal.
- Ensure that channel appurtenances, such as culvert entrances below check dams, are not subject to damage or blockage from displaced stones.

Maintenance Standards

Check dams shall be monitored for performance and sediment accumulation during and after each runoff producing rainfall. Sediment shall be removed when it reaches one half the sump depth.

- Anticipate submergence and deposition above the check dam and erosion from high flows around the edges of the dam.
- If significant erosion occurs between dams, install a protective riprap liner in that portion of the channel.

BMP C209: Outlet Protection

Purpose

Outlet protection prevents scour at conveyance outlets and minimizes the potential for downstream erosion by reducing the velocity of concentrated stormwater flows.

Conditions of use

Outlet protection is required at the outlets of all ponds, pipes, ditches, or other conveyances, and where runoff is conveyed to a natural or manmade drainage feature such as a stream, wetland, lake, or ditch.

Design and Installation Specifications

The receiving channel at the outlet of a culvert shall be protected from erosion by rock lining a minimum of 6 feet downstream and extending up the channel sides a minimum of 1-foot above the maximum tail water elevation or 1-foot above the crown, whichever is higher. For large pipes (more than 18 inches in diameter), the outlet protection lining of the channel is lengthened to four times the diameter of the culvert.

- Standard wingwalls, and tapered outlets and paved channels should also be considered when appropriate for permanent culvert outlet protection. (See WSDOT Hydraulic Manual, available through WSDOT Engineering Publications).
- Organic or synthetic erosion blankets, with or without vegetation, are usually more effective than rock, cheaper, and easier to install. Materials can be chosen using manufacturer product specifications. ASTM test results are available for most products and the designer can choose the correct material for the expected flow.
- With low flows, vegetation (including sod) can be effective.
- The following guidelines shall be used for riprap outlet protection:
 1. If the discharge velocity at the outlet is less than 5 fps (pipe slope less than 1 percent), use 2-inch to 8-inch riprap. Minimum thickness is 1-foot.
 2. For 5 to 10 fps discharge velocity at the outlet (pipe slope less than 3 percent), use 24-inch to 4-foot riprap. Minimum thickness is 2 feet.
 3. For outlets at the base of steep slope pipes (pipe slope greater than 10 percent), an engineered energy dissipater shall be used.
- Filter fabric or erosion control blankets should always be used under riprap to prevent scour and channel erosion.
- New pipe outfalls can provide an opportunity for low-cost fish habitat improvements. For example, an alcove of low-velocity water can be created by constructing the pipe outfall and associated energy dissipater back from the stream edge and digging a channel, over widened to the upstream side, from the outfall. Overwintering juvenile and migrating adult salmonids may use the alcove as shelter during high flows. Bank stabilization, bioengineering, and habitat features may be required for disturbed areas. See Volume V for more information on outfall system design.

Appendix C – Alternative BMPs

The following includes a list of possible alternative BMPs for each of the 12 elements not described in the main SWPPP text. This list can be referenced in the event a BMP for a specific element is not functioning as designed and an alternative BMP needs to be implemented.

Element #1 - Mark Clearing Limits

BMP C102: Buffer Zones

BMP C232: Gravel Filter Berm

Element #2 - Establish Construction Access

BMP C107: Construction Road/Parking Area Stabilization

Element #3 - Control Flow Rates

BMP C120: Temporary and Permanent Seeding

BMP C130: Surface Roughening

BMP C131: Gradient Terraces

BMP C230: Straw Bale Barrier

BMP C234: Vegetated Strip

BMP C235: Straw Wattles

Element #4 - Install Sediment Controls

BMP C140: Dust Control

BMP C150: Materials On Hand

BMP C151: Concrete Handling

BMP C152: Sawcutting and Surfacing Pollution Prevention

BMP C153: Material Delivery, Storage and Containment

BMP C208: Triangular Silt Dike (Geotextile-Encased Check Dam)

BMP C231: Brush Barrier

BMP C232: Gravel Filter Berm

BMP C234: Vegetated Strip

BMP C235: Straw Wattles

BMP C250: Construction Stormwater Chemical Treatment

Element #5 - Stabilize Soils

BMP C121: Mulching

BMP C125: Topsoiling

BMP C126: Polyacrylamide for Soil Erosion Protection

BMP C130: Surface Roughening

BMP C204: Pipe Slope Drains

Element #6 - Protect Slopes

BMP C120: Temporary and Permanent Seeding
BMP C121: Mulching
BMP C123: Plastic Covering

Element #8 - Stabilize Channels and Outlets

BMP C120: Temporary and Permanent Seeding
BMP C121: Mulching
BMP C123: Plastic Covering
BMP C131: Gradient Terraces
BMP C201: Grass-Lined Channels
BMP C204: Pipe Slope Drains
BMP C208: Triangular Silt Dike (Geotextile-Encased Check Dam)

Element #10 - Control Dewatering

BMP C203: Water Bars
BMP C205: Subsurface Drains
BMP C206: Level Spreader

Element #11 – Maintain BMPs

BMP C150: Materials On Hand

Element #12 – Manage the Project

BMP C160: Certified Erosion and Sediment Control Lead
BMP C161: Payment of Erosion Control Work
BMP C162: Scheduling

Appendix D – General Permit

INSTRUCTIONS

- Insert the completed general permit into this appendix.

NPDES General Permit for Stormwater Discharges From Construction Activities

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**National Pollutant Discharge Elimination System
General Permit for Discharges from
Large and Small Construction Activities**

In compliance with the provisions of the Clean Water Act, 33 U.S.C. §1251 *et. seq.*, (hereafter CWA or the Act), as amended by the Water Quality Act of 1987, P.L. 100-4, operators of large and small construction activities that are described in Part 1.3 of this National Pollutant Discharge Elimination System (NPDES) general permit, except for those activities excluded from authorization of discharge in Part 1.3.C of this permit are authorized to discharge pollutants to waters of the United States in accordance with the conditions and requirements set forth herein. Permit coverage is required from the “commencement of construction activities” until “final stabilization” as defined in Appendix A.

This permit shall become effective on June 30, 2008.

This permit and the authorization to discharge shall expire at midnight, February 15, 2012.

Signed:

Curt Spalding, Regional Administrator
EPA Region 1

Barbara A. Finazzo, Director, Division of Environmental Planning and Protection
EPA Region 2

Carl-Axel P. Soderberg, Division Director, Caribbean Environmental Protection Division
EPA Region 2

Jon M. Capacasa, Director, Water Protection Division
EPA Region 3

Timothy C. Henry, Associate Director, Water Division
EPA Region 5

Miguel I. Flores, Director, Water Quality Protection Division
EPA Region 6

William A. Spratlin, Director, Water, Wetlands and Pesticides Division
EPA Region 7

Stephen S. Tuber, Assistant Regional Administrator, Office of Partnerships & Regulatory Assistance
EPA Region 8

Alexis Strauss, Director, Water Division
EPA Region 9

Michael Bussell, Director, Office of Water and Watersheds
EPA Region 10

The signatures are for the permit conditions in Parts 1 through 10 and Appendices A through G, and for any additional conditions which apply to facilities located in the corresponding state, Indian country, or other area.

PART 1: COVERAGE UNDER THIS PERMIT

1.1 Introduction

This Construction General Permit (CGP) authorizes stormwater discharges from large and small construction activities that result in a total land disturbance of equal to or greater than one acre, where those discharges enter surface waters of the United States or a municipal separate storm sewer system (MS4) leading to surface waters of the United States subject to the conditions set forth in this permit. This permit also authorizes stormwater discharges from any other construction activity designated by EPA where EPA makes that designation based on the potential for contribution to an excursion of a water quality standard or for significant contribution of pollutants to waters of the United States. This permit replaces the permit issued in 2003 (68 FR 39087, July 1, 2003), including the modification made to that permit in 2004 (69 FR 76743, December 22, 2004).

This permit is presented in a reader-friendly, plain language format. This permit uses the terms “you” and “your” to identify the person(s) who owns or operates a “facility” or “activity” as defined in Appendix A and who must comply with the conditions of this permit. This format should allow you, the permittee and operator of a large or small construction activity, to easily locate and understand applicable requirements.

The goal of this permit is to minimize the discharge of stormwater pollutants from construction activity.

1.2 Permit Area

If your large or small construction activity is located within the areas listed in Appendix B, you may be eligible to obtain coverage under this permit. Permit coverage is actually provided by legally separate and distinctly numbered permits covering each of the areas listed in Appendix B.

1.3 Eligibility

Permit eligibility is limited to discharges from “large” and “small” construction activity, and to “new projects” and “unpermitted ongoing projects,” as defined in Appendix A or as otherwise designated by EPA. This general permit contains eligibility restrictions, as well as permit conditions and requirements. You may have to take certain actions to be eligible for coverage under this permit. In such cases, you must continue to satisfy those eligibility provisions to maintain permit authorization. If you do not meet the requirements that are a pre-condition to eligibility, then resulting discharges constitute unpermitted discharges. By contrast, if you eligible for coverage under this permit and do not comply with the requirements of the general permit, you may be in violation of the general permit for your otherwise eligible discharges.

A. Allowable Stormwater Discharges

Subject to compliance with the terms and conditions of this permit, you are authorized to discharge pollutants in:

1. Stormwater discharges associated with large and small construction activity from “new projects” and “unpermitted ongoing projects” as defined in Appendix A;
2. Stormwater discharges designated by EPA as needing a stormwater permit under 40 CFR §122.26(a)(1)(v) or §122.26(b)(15)(ii);
3. Discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, borrow areas) provided:
 - a. The support activity is directly related to the construction site required to have NPDES permit coverage for discharges of stormwater associated with construction activity;
 - b. The support activity is not a commercial operation serving multiple unrelated construction projects by different operators, and does not operate beyond the completion of the construction activity at the last construction project it supports; and
 - c. Pollutant discharges from support activity areas are minimized in compliance with Part 3.1.G; and
4. Discharges composed of allowable discharges listed in 1.3.A and 1.3.B commingled with a discharge authorized by a different NPDES permit and/or a discharge that does not require NPDES permit authorization.

B. Allowable Non-Stormwater Discharges

You are authorized for the following non-stormwater discharges, provided the non-stormwater component of the discharge is in compliance with Part 5.4 (Non-Stormwater Discharges):

1. Discharges from fire-fighting activities;
2. Fire hydrant flushings;
3. Waters used to wash vehicles where detergents are not used;
4. Water used to control dust in accordance with Part 3.1.B;
5. Potable water including uncontaminated water line flushings;
6. Routine external building wash down that does not use detergents;
7. Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used;
8. Uncontaminated air conditioning or compressor condensate;
9. Uncontaminated ground water or spring water;
10. Foundation or footing drains where flows are not contaminated with process materials such as solvents;
11. Uncontaminated excavation dewatering;
12. Landscape irrigation.

C. Limitations on Coverage

1. This permit does not authorize post-construction discharges that originate from the site after construction activities have been completed and the site has achieved final stabilization, including any temporary support activity. Post-construction stormwater discharges from industrial sites may need to be covered by a separate NPDES permit.
2. This permit does not authorize discharges mixed with non-stormwater. This exclusion does not apply to discharges identified in Part 1.3.B, provided the discharges are in compliance with Part 5.4 (Non-Stormwater Discharges).
3. This permit does not authorize stormwater discharges associated with construction activity that have been covered under an individual permit or required to obtain coverage under an alternative general permit in accordance with Part 2.6.
4. This permit does not authorize discharges that EPA, prior to authorization under this permit, determines will cause, have the reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. Where such a determination is made prior to authorization, EPA may notify you that an individual permit application is necessary in accordance with Part 2.6. However, EPA may authorize your coverage under this permit after you have included appropriate controls and implementation procedures in your permit designed to bring your discharge into compliance with water quality standards.
5. *Discharging into Receiving Waters With an Approved or Established Total Maximum Daily Load Analysis*
 - a. You are not eligible for coverage under this permit for discharges of pollutants of concern to waters for which there is a total maximum daily load (TMDL) established or approved by EPA unless implement measures or controls that are consistent with the assumptions and requirements of such TMDL. To be eligible for coverage under this general permit, you must implement conditions applicable to your discharges necessary for consistency with the assumptions and requirements of such TMDL. If a specific wasteload allocation has been established that would apply to your discharge, you must implement necessary steps to meet that allocation.
 - b. In a situation where an EPA-approved or established TMDL has specified a general wasteload allocation applicable to construction stormwater discharges, but no specific requirements for construction sites have been identified in the TMDL, you should consult with the State or Federal TMDL authority to confirm that meeting the effluent limits in Part 3 of this permit will be consistent with the approved TMDL. Where an EPA-approved or established TMDL has not specified a wasteload allocation applicable to construction stormwater discharges, but has not specifically excluded these discharges, compliance with the effluent limits in Part 3 of this permit will generally be assumed to be consistent with the approved TMDL. If the EPA-approved or established TMDL specifically precludes such discharges, the operator is not eligible for coverage under the CGP.
6. *Endangered and Threatened Species and Critical Habitat Protection*
 - a. Coverage under this permit is available only if your stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related

activities, as defined in Appendix A, are not likely to jeopardize the continued existence of any species that are federally-listed as endangered or threatened (“listed”) under the Endangered Species Act (ESA) or result in the adverse modification or destruction of habitat that is federally-designated as critical under the ESA (“critical habitat”).

- b. You are not eligible to discharge if the stormwater discharges, allowable non-stormwater discharges, or stormwater discharge-related activities would cause a prohibited “take” of federally-listed endangered or threatened species (as defined under section 3 of the ESA and 50 CFR 17.3), unless such takes are authorized under sections 7 or 10 of the ESA.
- c. Determining Eligibility: You must use the process in Appendix C (ESA Review Procedures) to determine eligibility *PRIOR* to submittal of the Notice of Intent (NOI). You must meet one or more of the following six criteria (A-F) for the entire term of coverage under the permit:
 - Criterion A. No federally-listed threatened or endangered species or their designated critical habitat are in the project area as defined in Appendix C; or
 - Criterion B. Formal consultation with the Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the ESA has been concluded and that consultation:
 - i. Addressed the effects of the project’s stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat, and
 - ii. The consultation resulted in either:
 - a. Biological opinion finding no jeopardy to federally-listed species or destruction/adverse modification of federally-designated critical habitat, or
 - b. Written concurrence from the Service(s) with a finding that the stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities are not likely to adversely affect federally-listed species or federally-designated critical habitat; or
 - Criterion C. Informal consultation with the Fish and Wildlife Service and/or the National Marine Fisheries Service under section 7 of the ESA has been concluded and that consultation:
 - i. Addressed the effects of the project’s stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities on federally-listed threatened or endangered species and federally-designated critical habitat, and
 - ii. The consultation resulted in either:
 - a. Biological opinion finding no jeopardy to federally-listed species or destruction/adverse modification of federally-designated critical habitat, or

- b. Written concurrence from the Service(s) with a finding that the stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities are not likely to adversely affect federally-listed species or federally-designated critical habitat; or
- Criterion D. The construction activities are authorized through the issuance of a permit under section 10 of the ESA, and that authorization addresses the effects of the stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities on federally-listed species and federally-designated critical habitat; or
- Criterion E. Stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities are not likely to adversely affect any federally-listed threatened or endangered species or result in the destruction or adverse modification of federally-designated critical habitat; or
- Criterion F. The project's stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities were already addressed in another operator's valid certification of eligibility under Criteria A-E which included your construction activities and there is no reason to believe that federally-listed species or federally-designated critical habitat not considered in the prior certification may be present or located in the project area. By certifying eligibility under this criterion, you agree to comply with any measures or controls upon which the other operator's certification was based.

You must comply with any applicable terms, conditions, or other requirements developed in the process of meeting the eligibility requirements of the criteria in this section to remain eligible for coverage under this permit.

7. *Historic Properties*
[Reserved]

You are reminded that you must comply with applicable state, tribal and local laws concerning the protection of historic properties and places.

1.4 Waivers for Certain Small Construction Activities

Three scenarios exist under which small construction activities (see definition in Appendix A) may be waived from the NPDES permitting requirements detailed in this general permit. These exemptions are predicated on certain criteria being met and proper notification procedures being followed. Details of the waiver options and procedures for requesting a waiver are provided in Appendix D.

PART 2: AUTHORIZATION FOR DISCHARGES OF STORMWATER FROM CONSTRUCTION ACTIVITY

2.1 How to Obtain Authorization

To obtain coverage under this general permit, you, the operator, must prepare and submit a complete and accurate Notice of Intent (NOI), as described in this Part. Discharges are not authorized if your NOI is incomplete or inaccurate or if you were never eligible for permit coverage.

2.2 How to Submit Your NOI

You must either use EPA's electronic NOI system (accessible at www.epa.gov/npdes/eNOI) or use a paper form (included in Appendix E) and then submit that paper form to:

For Regular U.S. Mail Delivery:

EPA Stormwater Notice Processing
Center
Mail Code 4203M
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

For Overnight/Express Mail Delivery:

EPA Stormwater Notice Processing
Center
Room 7420
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

2.3 Authorization to Discharge Date

You are authorized to discharge stormwater from construction activities under the terms and conditions of this permit seven (7) calendar days after acknowledgment of receipt of your complete NOI is posted on EPA's NPDES website <http://www.epa.gov/npdes/stormwater/cgp>. The exception to this 7-day timeframe is if EPA delays your authorization based on eligibility considerations of Part 1.3 (e.g., ESA concerns). Under this circumstance, you are not authorized for coverage under this permit until you receive notice from EPA of your eligibility.

2.4 Submission Deadlines

- A. *New Projects:* To obtain coverage under this permit, you must submit a complete and accurate NOI and be authorized consistent with Part 2.3 prior to your commencement of construction activities.
- B. *Permitted Ongoing Projects:* Permitted ongoing projects are not eligible for coverage under this permit. If you previously received authorization to discharge for your project under the 2003 CGP, your authorization will be automatically continued under that permit until the expiration of this permit and the issuance of a new CGP, or the termination of coverage by you under the 2003 CGP, whichever is earlier. Note: If you are an operator of a permitted ongoing project and you transfer ownership of the project, or a portion thereof, to a different operator, that operator will be required to submit a complete and accurate NOI for a new project in accordance with Part 2.2.

- C. *Unpermitted Ongoing Projects*: If you previously did not receive authorization to discharge for your project under the 2003 CGP and you wish to obtain coverage under this permit, you must submit an NOI within 90 days of the issuance date of this permit.
- D. *Late Notifications*: Operators are not prohibited from submitting NOIs after initiating clearing, grading, excavation activities, or other construction activities. When a late NOI is submitted, authorization for discharges occurs consistent with Part 2.3. The Agency reserves the right to take enforcement action for any unpermitted discharges that occur between the commencement of construction and discharge authorization.

2.5 Continuation of the Expired General Permit

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedure Act and remain in force and effect. If you were granted permit coverage prior to the expiration date, you will automatically remain covered by the continued permit until the earliest of:

- A. Reissuance or replacement of this permit, at which time you must comply with the conditions of the new permit to maintain authorization to discharge; or
- B. Your submittal of a Notice of Termination; or
- C. Issuance of an individual permit for the project's discharges; or
- D. A formal permit decision by EPA to not reissue this general permit, at which time you must seek coverage under an alternative general permit or an individual permit.

2.6 Requiring Coverage Under an Individual Permit or an Alternative General Permit

- A. EPA may require you to apply for and/or obtain either an individual NPDES permit or coverage under an alternative NPDES general permit. Any interested person may petition EPA to take action under this paragraph. If EPA requires you to apply for an individual NPDES permit, EPA will notify you in writing that a permit application is required. This notification will include a brief statement of the reasons for this decision and an application form. In addition, if you are an existing permittee covered under this permit, the notice will set a deadline to file the application, and will include a statement that on the effective date of issuance or denial of the individual NPDES permit or the coverage or denial of coverage under the alternative general permit as it applies to you, coverage under this general permit will automatically terminate. Applications must be submitted to EPA at the applicable EPA Regional offices listed in Appendix B of this permit. EPA may grant additional time to submit the application upon your request. If you are covered under this permit and you fail to submit in a timely manner an individual NPDES permit application as required by EPA, then the applicability of this permit to you is automatically terminated at the end of the day specified by EPA as the deadline for application submittal.

- B. You may request to be excluded from coverage under this general permit by applying for an individual permit. In such a case, you must submit an individual application in accordance with the requirements of 40 CFR §122.26(c)(1)(ii), with reasons supporting the request, to EPA at the applicable EPA Regional office listed in Appendix B of this permit. The request may be granted by issuance of an individual permit or coverage under an alternative general permit if your reasons are adequate to support the request.
- C. When an individual NPDES permit is issued to you (as an entity that is otherwise subject to this permit), or you are authorized to discharge under an alternative NPDES general permit, the applicability of this permit to you is automatically terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. If you (as an entity that is otherwise subject to this permit) are denied an individual NPDES permit or an alternative NPDES general permit, the applicability of this permit to you is automatically terminated on the date of such denial, unless otherwise specified by EPA.

PART 3: EFFLUENT LIMITS

This section includes technology-based and water quality-based effluent limits that apply to all dischargers, unless otherwise specified. You must select, install, and maintain control measures (e.g., Best Management Practices (“BMPs”), controls, practices, etc.) for each major construction activity, identified in your Part 5 project description, to meet these effluent limits. All control measures must be properly selected, installed, and maintained in accordance with any relevant manufacturer specifications and good engineering practices. You must implement the control measures from commencement of construction activity until final stabilization is complete.

The term “minimize” as used in Part 3 means reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice.

3.1 Effluent Limits to Reduce Pollutants in Stormwater Discharges

You must implement control measures to minimize pollutants in stormwater discharges.

- A. ***Sediment Controls:*** You must implement the following, where applicable:
1. **Sediment Basins:** For common drainage locations that serve an area with 10 or more acres disturbed at one time, a temporary (or permanent) sediment basin that provides storage for a calculated volume of runoff from the drainage area from a 2-year, 24-hour storm, or equivalent control measures, must be provided where attainable until final stabilization of the site. Where no such calculation has been performed, a temporary (or permanent) sediment basin providing 3,600 cubic feet of storage per acre drained, or equivalent control measures, must be provided where attainable until final stabilization of the site. When computing the number

- of acres draining into a common location, it is not necessary to include flows from offsite areas and flows from on-site areas that are either undisturbed or have undergone final stabilization where such flows are diverted around both the disturbed area and the sediment basin. In determining whether installing a sediment basin is attainable, the operator may consider factors such as site soils, slope, available area on-site, etc. In any event, the operator must consider public safety, especially as it relates to children, as a design factor for the sediment basin, and alternative sediment controls must be used where site limitations would preclude a safe design.
2. For drainage locations which serve 10 or more disturbed acres at one time and where a temporary sediment basin or equivalent controls is not attainable, smaller sediment basins and/or sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions).
 3. For drainage locations serving less than 10 acres, smaller sediment basins and/or sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the construction area unless a sediment basin providing storage for a calculated volume of runoff from a 2-year, 24-hour storm or 3,600 cubic feet of storage per acre drained is provided.
- B. ***Off-Site Sediment Tracking and Dust Control:*** You must minimize off-site vehicle tracking of sediments onto paved surfaces and the generation of dust. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize off-site impacts.
- C. ***Runoff Management:*** You must divert flows from exposed soils, retain/detain flows or otherwise minimize runoff and the discharge of pollutants from exposed areas of the site. You must avoid placement of structural practices in floodplains to the degree technologically and economically practicable and achievable.
- D. ***Erosive Velocity Control:*** You must place velocity dissipation devices at discharge locations and along the length of any outfall channel to provide a non-erosive flow velocity from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., no significant changes in the hydrological regime of the receiving water).
- E. ***Post-Construction Stormwater Management:*** You must comply with any applicable federal, local, state, or tribal requirements regarding the design and installation of post-construction stormwater controls. Structural measures should be placed on upland soils to the degree practicable and achievable.

- F. **Construction and Waste Materials:** You must:
1. Prevent the discharge of solid materials, including building materials, to waters of the United States, except as authorized by a permit issued under section 404 of the CWA;
 2. Minimize exposure of construction and waste materials to stormwater, and the occurrence of spills, through the use of storage practices, prevention and response practices, and other controls;
 3. Prevent litter, construction debris, and construction chemicals (e.g., diesel fuel, hydraulic fluids, and other petroleum products) that could be exposed to stormwater from becoming a pollutant source in stormwater discharges.
- G. **Non-Construction Wastes:** You must minimize pollutant discharges from areas other than construction (including stormwater discharges from dedicated asphalt plants and dedicated concrete plants).
- H. **Erosion Control and Stabilization:**
1. **General Requirements:** You must stabilize the site. You must ensure that existing vegetation is preserved where possible and that disturbed portions of the site are stabilized. You should avoid using impervious surfaces for stabilization.
 2. **Initiation Deadlines:** You must initiate stabilization measures, except as provided below, as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.
 - i. Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions, stabilization measures must be initiated as soon as practicable.
 - ii. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 14 days, temporary stabilization measures do not have to be initiated on that portion of the site.
 - iii. In arid, semiarid, and drought-stricken areas where initiating perennial vegetative stabilization measures is not possible within 14 days after construction activity has temporarily or permanently ceased, final vegetative stabilization measures must be initiated as soon as practicable.
- I. **Spills / Releases in Excess of Reportable Quantities:** You are not authorized to discharge hazardous substances or oil resulting from an on-site spill. This permit does not relieve you of the federal reporting requirements of 40 CFR Part 110, 40 CFR Part 117 and 40 CFR Part 302 relating to spills or other releases of oils or hazardous substances.

Where a release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117 or 40 CFR Part 302, occurs during a 24-hour period:

- you must provide notice to the National Response Center (NRC) (800–424–8802; in the Washington, DC, metropolitan area call 202–267–2675) in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117 and 40 CFR Part 302 as soon as site staff have knowledge of the discharge; and
- you must, within 7 calendar days of knowledge of the release, provide a description of the release, the circumstances leading to the release, and the date of the release. You must also implement measures to prevent the reoccurrence of such releases and to respond to such releases.

3.2 Effluent Limits to Reduce Pollutants in Non-Stormwater Discharges

You must minimize any non-stormwater discharges authorized by this permit.

3.3 Effluent Limits Related to Endangered Species

You must protect federally-listed endangered or threatened species, or federally-designated critical habitat to maintain eligibility under Part 1.3.C.6.

3.4 Attainment of Water Quality Standards

- A. You must select, install, implement and maintain control measures at your construction site that minimize pollutants in the discharge as necessary to meet applicable water quality standards. In general, except in situations explained in Part 3.4.B below, your stormwater controls developed, implemented, and updated consistent with the other provisions of Part 3 are considered as stringent as necessary to ensure that your discharges do not cause or contribute to an excursion above any applicable water quality standard.
- B. At any time after authorization, EPA may determine that your stormwater discharges may cause, have reasonable potential to cause, or contribute to an excursion above any applicable water quality standard. If such a determination is made, EPA will require you to:
- i. Modify your stormwater controls in accordance with Part 3.6 to address adequately the identified water quality concerns;
 - ii. Submit valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining water quality standards; or
 - iii. Cease discharges of pollutants from construction activity and submit an individual permit application according to Part 2.6.

All written responses required under this part must include a signed certification consistent with Appendix G, Section 11.

3.5 Consistency with Total Maximum Daily Loads

If you are discharging into a water with an EPA established or approved TMDL, you must implement measures to ensure that your discharge of pollutants from the site is consistent with the assumptions and requirements of the EPA-established or approved TMDL, including any specific wasteload allocation that has been established that would

apply to your discharge. See Part 1.3.C.5 for further information on determining permit eligibility related to TMDLs.

3.6 Maintenance of Control Measures

- A. You must maintain all control measures and other protective measures in effective operating condition. If site inspections required by Part 4 identify BMPs that are not operating effectively, you must perform maintenance as soon as possible and before the next storm event whenever practicable to maintain the continued effectiveness of stormwater controls.
- B. If existing BMPs need to be modified or if additional BMPs are necessary for any reason, you must complete implementation before the next storm event whenever practicable. If implementation before the next storm event is impracticable, you must implement alternative BMPs as soon as possible.
- C. You must remove sediment from sediment traps or sedimentation ponds when design capacity has been reduced by 50 percent.
- D. You must remove trapped sediment from a silt fence before the deposit reaches 50 percent of the above-ground fence height (or before it reaches a lower height based on manufacturer's specifications).

3.7 Training of Employees

You must train employees and subcontractors as necessary to make them aware of the applicable control measures implemented at the site so that they follow applicable procedures.

3.8 Applicable State, Tribal, or Local Programs

You must ensure that the stormwater controls implemented at your site are consistent with all applicable federal, state, tribal, or local requirements for soil and erosion control and stormwater management.

PART 4: INSPECTIONS

- A. **Inspection Frequency:** You must conduct inspections in accordance with one of the two schedules listed below. You must specify in your SWPPP which schedule you will be following.
 - 1. At least once every 7 calendar days, OR
 - 2. At least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.
- B. **Case-by-Case Reductions in Inspection Frequency:** You may reduce your inspection frequency to at least once every month if:
 - 1. The entire site is temporarily stabilized,
 - 2. Runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or the ground is frozen), or

3. Construction is occurring during seasonal arid periods in arid areas and semi-arid areas.
- C. **Inspection Waiver for Frozen Conditions:** A waiver of the inspection requirements is available until one month before thawing conditions are expected to result in a discharge if all of the following requirements are met:
1. The project is located in an area where frozen conditions are anticipated to continue for extended periods of time (i.e., more than one month);
 2. Land disturbance activities have been suspended; and
 3. The beginning and ending dates of the waiver period are documented in the SWPPP.
- D. **Qualified Personnel:** Inspections must be conducted by qualified personnel (provided by the operator or cooperatively by multiple operators). “Qualified personnel” means a person knowledgeable in the principles and practice of erosion and sediment controls who possesses the skills to assess conditions at the construction site that could impact stormwater quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of stormwater discharges from the construction activity.
- E. **Scope of Inspections:** Inspections must include all areas of the site disturbed by construction activity and areas used for storage of materials that are exposed to precipitation. Inspectors must look for evidence of, or the potential for, pollutants entering the stormwater conveyance system. Sedimentation and erosion control measures must be observed to ensure proper operation. Discharge locations must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to waters of the United States, where accessible. Where discharge locations are inaccessible, nearby downstream locations must be inspected to the extent that such inspections are practicable. Locations where vehicles enter or exit the site must be inspected for evidence of off-site sediment tracking.
- F. **Reductions in Scope of Inspections for Stabilized Areas:** Once a definable area has been finally stabilized, no further inspection requirements apply to that portion of the site (e.g., earth-disturbing activities around one of three buildings in a complex are done and the area is finally stabilized, one mile of a roadway or pipeline project is done and finally stabilized, etc).
- G. **Utility Line Inspections:** Utility line installation, pipeline construction, and other examples of long, narrow, linear construction activities may limit the access of inspection personnel to the areas described in Part 4.E above. Inspection of these areas could require that vehicles compromise temporarily or even permanently stabilized areas, cause additional disturbance of soils, and increase the potential for erosion. In these circumstances, controls must be inspected on the same frequencies as other construction projects, but representative inspections may be performed. For representative inspections, personnel must inspect controls along the construction site for 0.25 mile above and below each access point where a roadway, undisturbed right-

of-way, or other similar feature intersects the construction site and allows access to the areas described above. The conditions of the controls along each inspected 0.25 mile segment may be considered as representative of the condition of controls along that reach extending from the end of the 0.25 mile segment to either the end of the next 0.25 mile inspected segment, or to the end of the project, whichever occurs first.

- H. **Inspection Report:** For each inspection required above, you must complete an inspection report. At a minimum, the inspection report must include:
1. The inspection date;
 2. Names, titles, and qualifications of personnel making the inspection;
 3. Weather information for the period since the last inspection (or since commencement of construction activity if the first inspection) including a best estimate of the beginning of each storm event, duration of each storm event, approximate amount of rainfall for each storm event (in inches), and whether any discharges occurred;
 4. Weather information and a description of any discharges occurring at the time of the inspection;
 5. Location(s) of discharges of sediment or other pollutants from the site;
 6. Location(s) of BMPs that need to be maintained;
 7. Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location;
 8. Location(s) where additional BMPs are needed that did not exist at the time of inspection; and
 9. Corrective action required including implementation dates.

The inspection report must be signed in accordance with Appendix G, Section 11 of this permit.

PART 5: STORMWATER POLLUTION PREVENTION PLANS (SWPPPs)

5.1 Stormwater Pollution Prevention Plan Framework

You must prepare a SWPPP before submitting your Notice of Intent (NOI) for permit coverage. At least one SWPPP must be developed for each construction project covered by this permit and the stormwater controls implemented at your site must be documented in the SWPPP. If you prepared a SWPPP for coverage under a previous NPDES permit, you must review and update the SWPPP prior to submitting your NOI.

The SWPPP does not contain effluent limitations; the technology and water quality-based effluent limitations are contained in Part 3 of this permit. The SWPPP is intended to document the selection, design, installation, and implementation of control measures that are being used to comply with the effluent limitations set forth in Part 3.

The SWPPP must:

1. Identify all potential sources of pollutants that may reasonably be expected to affect the quality of stormwater discharges from the construction site; and
2. Describe control measures to be used to meet the effluent limits set forth in Part 3.

5.2 SWPPP Contents: Site and Activity Description

- A. **Construction Site Operators:** The SWPPP must identify all operators for the project site, and the areas of the site over which each operator has control.
- B. **Nature of Construction Activity:** The SWPPP briefly must describe the nature of the construction activity, including:
1. The function of the project (e.g., low density residential, shopping mall, highway, etc.);
 2. The intended sequence and timing of activities that disturb soils at the site;
 3. Estimates of the total area expected to be disturbed by excavation, grading, or other construction activities, including dedicated off-site borrow and fill areas; and
 4. A general location map (e.g., USGS quadrangle map, a portion of a city or county map, or other map) with enough detail to identify the location of the construction site and waters of the United States within one mile of the site.
- C. **Site Map:** The SWPPP must contain a legible site map, showing the entire site, identifying:
1. Direction(s) of stormwater flow and approximate slopes anticipated after grading activities;
 2. Areas of soil disturbance and areas that will not be disturbed (or a statement that all areas of the site will be disturbed unless otherwise noted);
 3. Locations of major structural and nonstructural BMPs identified in the SWPPP;
 4. Locations where stabilization practices are expected to occur;
 5. Locations of off-site material, waste, borrow or equipment storage areas;
 6. Locations of all waters of the United States (including wetlands);
 7. Locations where stormwater discharges to a surface water; and
 8. Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.
- D. **Construction and Waste Materials:** The SWPPP must include a description of construction and waste materials expected to be stored on-site with updates as appropriate.
- E. **Locations of Other Industrial Stormwater Discharges:** The SWPPP must describe and identify the location and description of any stormwater discharge associated with industrial activity other than construction at the site. This includes stormwater discharges from dedicated asphalt plants and dedicated concrete plants that are covered by this permit.

5.3 Description of Control Measures to Reduce Pollutant Discharges

- A. **Control Measures:** The SWPPP must include a description of all control measures that will be implemented to meet the effluent limits in Part 3. For each major activity identified in the project description the SWPPP must clearly document appropriate control measures, the general sequence during the construction process in which the

measures will be implemented, and which operator is responsible for the control measure's implementation.

- B. **Stabilization:** The SWPPP must include a description of interim and permanent stabilization practices for the site, including a schedule of when the practices will be implemented.
- C. **Post-Authorization Records:** The following records must be maintained with the SWPPP following authorization under this permit:
 - 1. Dates when grading activities occur;
 - 2. Dates when construction activities temporarily or permanently cease on a portion of the site; and
 - 3. Dates when stabilization measures are initiated.

5.4 Non-Stormwater Discharges

The SWPPP must identify all allowable sources of non-stormwater discharges listed in Part 1.3.B of this permit, except for flows from fire fighting activities that are combined with stormwater discharges associated with construction activity at the site. The SWPPP must also describe the pollution prevention measures used to eliminate or reduce non-stormwater discharges consistent with Part 3.2.

5.5 Documentation of Permit Eligibility Related to Endangered Species

The SWPPP must include documentation supporting a determination of permit eligibility with regard to Endangered Species, including:

- A. Information on whether federally-listed endangered or threatened species, or federally-designated critical habitat may be in the project area;
- B. Whether such species or critical habitat may be adversely affected by stormwater discharges or stormwater discharge-related activities from the project;
- C. Results of the Appendix C listed species and critical habitat screening determinations;
- D. Confirmation of delivery of NOI to EPA or to EPA's electronic NOI system. This may include an overnight, express or registered mail receipt acknowledgment; or electronic acknowledgment from EPA's electronic NOI system;
- E. Any correspondence for any stage of project planning between the U.S. Fish and Wildlife Service (FWS), EPA, the U.S. National Marine Fisheries Service (NMFS), or others and you regarding listed species and critical habitat, including any notification that delays your authorization to discharge under this permit; and
- F. A description of measures necessary to protect federally-listed endangered or threatened species, or federally-designated critical habitat.

5.6 Documentation of Permit Eligibility Related to Total Maximum Daily Loads

The SWPPP must include documentation supporting a determination of permit eligibility with regard to waters that have an EPA-established or approved TMDL, including:

- A. Identification of whether your discharge is identified, either specifically or generally, in an EPA-established or approved TMDL and any associated allocations, requirements, and assumptions identified for your discharge;
- B. Summaries of consultation with State or Federal TMDL authorities on consistency of SWPPP conditions with the approved TMDL, and
- C. Measures taken by you to ensure that your discharge of pollutants from the site is consistent with the assumptions and requirements of the EPA-established or approved TMDL, including any specific wasteload allocation that has been established that would apply to your discharge.

See Part 1.3.C.5 for further information on determining permit eligibility related to TMDLs.

5.7 Copy of Permit Requirements

Copies of this permit and of the signed and certified NOI form that was submitted to EPA must be included in the SWPPP. Also, upon receipt, a copy of the letter from the EPA Stormwater Notice Processing Center notifying you of their receipt of your administratively complete NOI must also be included as a component of the SWPPP.

5.8 Applicable State, Tribal, or Local Programs

The SWPPP must be updated as necessary to reflect any revisions to applicable federal, state, tribal, or local requirements that affect the stormwater controls you implement at your site.

5.9 Inspections

A record of each inspection and of any actions taken in accordance with Part 4 must be retained with the SWPPP for at least three years from the date that permit coverage expires or is terminated. The inspection reports must identify any incidents of non-compliance with the permit conditions. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the construction project or site is in compliance with this permit.

5.10 Maintaining an Updated Plan

The SWPPP must be modified:

- A. To reflect modifications to stormwater control measures made in response to a change in design, construction, operation, or maintenance at the construction site that has or could have a significant effect on the discharge of pollutants to the waters of the United States that has not been previously addressed in the SWPPP.

- B. If during inspections or investigations by site staff, or by local, state, tribal or federal officials, it is determined that the existing stormwater controls are ineffective in eliminating or significantly minimizing pollutants in stormwater discharges from the construction site.
- C. Based on the results of an inspection, as necessary to properly document additional or modified BMPs designed to correct problems identified. Revisions to the SWPPP must be completed within seven (7) calendar days following the inspection.

5.11 Signature, Plan Review and Making Plans Available

- A. **Retention of SWPPP:** A copy of the SWPPP (including a copy of the permit), NOI, and acknowledgement letter from EPA must be retained at the construction site (or other location easily accessible during normal business hours to EPA, a state, tribal or local agency approving sediment and erosion plans, grading plans, or stormwater management plans; local government officials; the operator of a municipal separate storm sewer receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service or the National Marine Fisheries Service) from the date of commencement of construction activities to the date of final stabilization. If you have day-to-day operational control over SWPPP implementation, you must have a copy of the SWPPP available at a central location on-site for the use of all those identified as having responsibilities under the SWPPP whenever they are on the construction site. If an on-site location is unavailable to store the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance at the construction site.
- B. **Main Entrance Signage:** A sign or other notice must be posted conspicuously near the main entrance of the construction site. If displaying near the main entrance is infeasible, the notice can be posted in a local public building such as the town hall or public library. The sign or other notice must contain the following information:
 - 1. A copy of the completed Notice of Intent as submitted to the EPA Stormwater Notice Processing Center; and
 - 2. If the location of the SWPPP or the name and telephone number of the contact person for scheduling SWPPP viewing times has changed (i.e., is different than that submitted to EPA in the NOI), the current location of the SWPPP and name and telephone number of a contact person for scheduling viewing times.For linear projects, the sign or other notice must be posted at a publicly accessible location near the active part of the construction project (e.g., where a pipeline project crosses a public road).
- C. **Availability of SWPPP:** SWPPPs must be made available upon request by EPA; a state, tribal or local agency approving sediment and erosion plans, grading plans, or stormwater management plans; local government officials; the operator of a municipal separate storm sewer receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service or the National Marine Fisheries Service to the requestor. The copy of the SWPPP that is required to be kept on-site or

locally available must be made available, in its entirety, to the EPA staff for review and copying at the time of an on-site inspection.

- D. **Signature and Certification:** All SWPPPs must be signed and certified in accordance with Appendix G, Section 11.

5.12 Requirements for Different Types of Operators

You may meet one or both of the operational control components in the definition of operator found in Appendix A. Part 5.12.C applies to all permittees having control over only a portion of a construction site.

- A. If you have operational control over construction plans and specifications, you must ensure that:
1. The project specifications meet the minimum requirements of this Part and all other applicable permit conditions;
 2. The SWPPP indicates the areas of the project where the operator has operational control over project specifications, including the ability to make modifications in specifications;
 3. All other permittees implementing portions of the SWPPP (or their own SWPPP) who may be impacted by a change to the construction plan are notified of such changes in a timely manner; and
 4. The SWPPP indicates the name of the party(ies) with day-to-day operational control of those activities necessary to ensure compliance with the SWPPP or other permit conditions.
- B. If you have operational control over day-to-day activities, you must ensure that:
1. The SWPPP meets the minimum requirements of this Part and identifies the parties responsible for implementation of control measures identified in the plan;
 2. The SWPPP indicates areas of the project where you have operational control over day-to-day activities;
 3. The SWPPP indicates the name of the party(ies) with operational control over project specifications (including the ability to make modifications in specifications).
- C. If you have operational control over only a portion of a larger project (e.g., one of four homebuilders in a subdivision), you are responsible for compliance with all applicable effluent limits, terms, and conditions of this permit as it relates to your activities on your portion of the construction site, including protection of endangered species, critical habitat, and historic properties, and implementation of control measures described in the SWPPP. You must ensure either directly or through coordination with other permittees, that your activities do not render another party's pollutant discharge controls ineffective. You must either implement your portion of a common SWPPP or develop and implement your own SWPPP. For more effective coordination of BMPs and opportunities for cost sharing, a cooperative effort by the different operators at a site to prepare and participate in a comprehensive SWPPP is encouraged. Individual operators at a site may, but are not

required to, develop separate SWPPPs that cover only their portion of the project provided reference is made to other operators at the site. In instances where there is more than one SWPPP for a site, cooperation between the permittees is encouraged to ensure the stormwater discharge control measures are consistent with one another (e.g., provisions to protect listed species and critical habitat).

PART 6: TERMINATION OF COVERAGE

6.1 Submitting a Notice of Termination

Submit a complete and accurate Notice of Termination (NOT) either electronically (strongly encouraged) at www.epa.gov/npdes/eNOI or by completing the paper Notice of Termination form included in Appendix F of this permit and submitting that form to the address listed in Part 2.2.

6.2 When to Submit a Notice of Termination

You may only submit a Notice of Termination (NOT) after one or more of the following conditions have been met:

- A. Final stabilization has been achieved on all portions of the site for which you are responsible;
- B. Another operator has assumed control according to Appendix G, Section 11.C over all areas of the site that have not been finally stabilized;
- C. Coverage under an individual or alternative general NPDES permit has been obtained; or
- D. For residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner.

The NOT must be submitted within 30 days of one of the above conditions being met. Authorization to discharge terminates at midnight of the day the NOT is signed.

PART 7: RETENTION OF RECORDS

Copies of the SWPPP and all documentation required by this permit, including records of all data used to complete the NOI to be covered by this permit, must be retained for at least three years from the date that permit coverage expires or is terminated. This period may be extended by request of EPA at any time.

PART 8: REOPENER CLAUSE

8.1 Procedures for Modification or Revocation

Permit modification or revocation will be conducted according to 40 CFR §122.62, §122.63, §122.64 and §124.5.

8.2 Water Quality Protection

If there is evidence indicating that the stormwater discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, you may be required to obtain an individual permit in accordance with Part 2.6 of this permit, or the permit may be modified to include different limitations and/or requirements.

8.3 Timing of Permit Modification

EPA may elect to modify the permit prior to its expiration (rather than waiting for the new permit cycle) to comply with any new statutory or regulatory requirements, such as for effluent limitation guidelines that may be promulgated in the course of the current permit cycle.

PART 9: STANDARD PERMIT CONDITIONS

The federal regulations require that the Standard Conditions provisioned at 40 CFR §122.41 be applied to all NPDES permits. You are required to comply with those Standard Conditions, details of which are provided in Appendix G.

PART 10: PERMIT CONDITIONS APPLICABLE TO SPECIFIC STATES, INDIAN COUNTRY, OR TERRITORIES

The provisions of this Part provide modifications or additions to the applicable conditions of this permit to reflect specific additional conditions required as part of the state or tribal CWA Section 401 certification process, or the Coastal Zone Management Act (CZMA) certification process, or as otherwise established by the permitting authority. The specific additional revisions and requirements only apply to activities in those specific states, Indian country, and federal facilities. States, Indian country, and federal facilities not included in this Part do not have any modifications or additions to the applicable conditions of this permit.

A. Region 1

1. MAR100000: Commonwealth of Massachusetts, except Indian country
 - a. State Water Quality Statutes, Regulations, and Policies:
 - i. You must comply with the Massachusetts Clean Waters Act (Ch. 21, ss. 26-53).
 - ii. You must comply with the conditions in 314 CMR 4.00 - Surface Water Quality Standards.
 - iii. You must comply with the conditions in 314 CMR 3.00 - Surface Water Discharge Permit Program.
 - iv. You must comply with the Wetlands Protection Act, Ch. 131, s. 40 and its regulations, 310 CMR 10.00 and any order of Conditions issued by a Conservation Commission or a Superseding Order of Conditions issued by the Massachusetts Department of Environmental Protection.
 - b. Department of Environmental Protection Storm Water Management Policy:

- i. You must comply with the Massachusetts Storm Water Management Policy, and applicable Storm Water Performance Standards, as prescribed by state regulations promulgated under the authority of the Massachusetts Clean Waters Act, MGL Ch. 21, ss. 26-53 and the Wetlands Protection Act Ch. 131, s. 40.
- c. Other State Environmental Laws, Regulations, Policies:
 - i. You must comply with the Massachusetts Endangered Species Act [MESA] (MGL Ch. 313A and regulations at 321 CMR 10.00) and any actions undertaken to comply with this storm water permit, shall not result in non-compliance with the MESA.
 - ii. You must not conduct activities under this permit that will interfere with implementation of mosquito control work conducted in accordance with Chapter 252 including, s. 5A thereunder and MassDEP Guideline Number BRP G01-02, West Nile Virus Application of Pesticides to Wetland Resource Areas and Buffer Zones, and Public Water Systems.
- d. Other Department Directives:
 - i. The Department may require you to perform water quality monitoring during the permit term if monitoring is necessary for the protection of public health or the environment as designated under the authority at 314 CMR 3.00.
 - ii. The Department may require you to provide measurable verification of the effectiveness of BMPs and other control measures in your management program, including water quality monitoring.
 - iii. The Department has determined that compliance with this permit does not protect you from enforcement actions deemed necessary by the Department under its associated regulations to address an imminent threat to the public health or a significant adverse environmental impact which results in a violation of the Massachusetts Clean Waters Act, Ch. 21, ss. 26-53.
 - iv. The Department reserves the right to modify the 401 Water Quality Certification if any changes, modifications or deletions are made to the general permit. In addition, the Department reserves the right to add and/or alter the terms and conditions of its 401 Water Quality Certification to carry out its responsibilities during the term of this permit with respect to water quality, including any revisions to 314 CMR 4.00, Surface Water Quality Standards.
- e. Permit Compliance
 - i. Should any violation of the Massachusetts Surface Water Quality Standards (314 CMR 4.00) or the conditions of this certification occur, the Department will direct you to correct the violations(s). The Department has the right to take any action as authorized by the General Laws of the Commonwealth to address the violation of this permit or the MA Clean Waters Act and the regulations promulgated thereunder. Substantial civil and criminal penalties are authorized under MGL Ch. 21, s. 42 for discharging into Massachusetts' waters in violation of an order or permit issued by this Department. This

certification does not relieve you of the duty to comply with other applicable Massachusetts statutes and regulations.

1. NHR100000: State of New Hampshire
 - a. If you disturb 100,000 square feet or more of contiguous area, you must also apply for a “Significant Alteration of the Terrain Permit from DES pursuant to RSA 485-A:17 and Env-Ws 415. This requirement applies to the disturbances of only 50,000 square feet when construction occurs within the protected shoreline (see RSA 483-B and Env-Ws 1400).
 - b. You must determine that any excavation dewatering discharges are not contaminated before they will be authorized as an allowable non-storm water discharge under this permit (see Subpart 1.3.B). The water is considered uncontaminated if there is no groundwater contamination within 1,000 feet of the discharge. Information on groundwater contamination can be generated over the Internet via the NHDES web site <http://www.des.state.nh.us> (One Stop Data Retrieval, Onestop Master Site Table). The web site also provides E-mail access to an NHDES Site Remediation Contact to answer questions about using the Web site.
 - c. You must treat any uncontaminated excavation dewatering discharges as necessary to remove suspended solids and turbidity. The discharges must be sampled at a location prior to mixing with storm water at least once per week during weeks when discharges occur. The samples must be analyzed for total suspended solids (TSS) and must meet monthly average and maximum daily TSS limitations of 50 milligrams per liter (mg/L) and 100 mg/L, respectively. TSS (a.k.a. Residue, Nonfilterable) analysis and sampling must be performed in accordance with Tables IB (parameter, units and method) and II (required containers, preservation techniques and holding times) in 40 CFR 136.3 (see: http://www.access.gpo.gov/nara/cfr/waisidx_02/40cfr136_02.html). Records of any sampling and analysis must be maintained and kept with the SWPPP for at least three years after final site stabilization.
 - d. During site design and preparation of the storm water pollution prevention plan (SWPPP), you must consider opportunities for groundwater recharge using on-site infiltration. The SWPPP must include a description of any on-site infiltration that will be installed as a post construction storm water management measure (see Subpart 3.4.E) or reasons for not employing such measures. For design considerations for infiltration measures see the September 2001 DES publication titled “Managing Storm Water as a Valuable Resource” which is available online at: <http://www.des.state.nh.us/StormWater/construction.htm>. Loss of annual recharge to groundwater should be minimized through the use of infiltration measures wherever feasible.
- B. Region 2
 1. NYR10000I: Indian country within the State of New York
 - a. St. Regis Mohawk Territory at Akwesasne
 - i. NOIs shall also be submitted to the St. Regis Mohawk Tribe, Environment Division, at the same time they are submitted to EPA, at the following address:

St. Regis Mohawk Tribe, Environment Division
412 State Route 37
Akwesasne, NY 13655
Attn: Water Resources Program Manager

- ii. In addition, Storm Water Pollution Prevention Plans (and any updates or amendments thereto) must be submitted to the Environment Division and to the Tribal Historic Preservation Officer at least thirty (30) days in advance of corresponding Notices of Intent. This will allow the Environment Division and the THPO to make an informed determination as to whether any proposed discharges might adversely impact the quality of its surface or groundwater, or disturb sites of historic or cultural significance to the Tribe that may be listed, or eligible to be listed, on the National Register of Historic Places.
- C. Region 3 – No additional requirements (District of Columbia, Federal Facilities Only in the State of Delaware)
- D. Region 5
1. MNR100000: Indian Country within the State of Minnesota
 - a. *Fond du Lac Band of Lake Superior Chippewa*
 - i. A copy of the Storm Water Pollution Prevention Plan must be submitted to the following office at least thirty (30) days in advance of sending the Notice of Intent (NOI) to EPA:

Fond du Lac Reservation
Office of Water Protection
1720 Big Lake Road
Cloquet, MN 55720
 - CGP applicants are encouraged to work with the FDL Office of Water Protection in the identification of all proposed receiving waters.
 - ii. Copies of the NOI and the Notice of Termination (NOT) must be sent to the Fond du Lac Office of Water Protection at the same time they are submitted to EPA.
 - iii. This certification does not pertain to any new discharge to Outstanding Reservation Resource Waters (ORRW) as described in §105 b.3 of the Fond du Lac Water Quality Standards (Ordinance #12/98). Although additional waters may be designated in the future, currently Perch Lake, Rice Portage Lake, Miller Lake, Deadfish Lake and Jaskari Lake are designated as ORRWs. New dischargers wishing to discharge to an ORRW must obtain an individual permit for stormwater discharges from large and small construction activities.
 - iv. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in the Water Quality Standards of the Fond du Lac Reservation, Ordinance 12/98 as amended. This includes, but is not limited to, the prevention of any discharge that causes a condition in which visible

solids, bottom deposits, or turbidity impairs the usefulness of water of the Fond du Lac Reservation for any of the uses designated in the Water Quality Standards of the Fond du Lac Reservation. These uses include wildlife, aquatic life, warm and cold water fisheries, subsistence fishing (netting), primary contact recreation, cultural, wild rice areas, aesthetic waters, agriculture, navigation and commercial.

- v. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the Fond du Lac Reservation. All spills must be reported to the appropriate emergency management agency, and measures shall be taken immediately to prevent the pollution of waters of the Fond du Lac reservation, including groundwater.
- vi. This certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for such listing.

b. *Grand Portage Band of Lake Superior Chippewa*

- i. The CGP authorization is for construction activities that may occur within the exterior boundaries of the Grand Portage Reservation in accordance to the Grand Portage Land Use Ordinance. The CGP regulates storm-water discharges associated with construction sites of one acre or more in size. Only those activities specifically authorized by the CGP are authorized by this certification (the “Certification”). This Certification does not authorize impacts to cultural, historical, or archeological features or sites, or properties that may be eligible for listing as such.
- ii. All construction storm water discharges authorized by the CGP must comply with the Water Quality Standards and Water Resources Ordinance, as well as Applicable Federal Standards (as defined in the Water Resources Ordinance). As such, appropriate steps must be taken to ensure that petroleum products or other chemical pollutants are prevented from entering the Waters of the Reservation (as defined in the Water Resources Ordinance). All spills must be reported to the appropriate emergency-management agency, and measures must be taken to prevent the pollution of the Waters of the Reservation, including groundwater.
- iii. A copy of the Storm Water Pollution Prevention Plan (the “Plan”) required by the CGP must be submitted to the Board at least 30 days in advance of sending the requisite Notice of Intent to EPA. The Board may require monitoring of storm-water discharges as determined on a case-by-case basis. If the Board determines that a monitoring plan is necessary, the monitoring plan must be prepared and incorporated into the Plan before the Notice of Intent is submitted to the EPA. The Plan should be sent to:

Grand Portage Environmental Resources Board
P.O. Box 428
Grand Portage, MN 55605

Copies of the Notice of Intent and Notice of Termination required under the General Permit must be submitted to the Board at the address above at the same time they are submitted to the EPA.

- iv. If requested by the Grand Portage Environmental Department, the permittee must provide additional information necessary for a case-by-case eligibility determination to assure compliance with the Water Quality Standards and any Applicable Federal Standards.
 - v. Discharges that the Board has determined to be or that may reasonably be expected to be contributing to a violation of Water Quality Standards or Applicable Federal Standards are not authorized by this Certification.
 - vi. The Board retains full authority provided by the Water Resources Ordinance to ensure compliance with and to enforce the provisions of the Water Resource Ordinance and Water Quality Standards, Applicable Federal Standards, and these Certification conditions.
 - vii. Appeals related to Board actions taken in accordance with any of the preceding conditions may be heard by the Grand Portage Tribal Court.
2. WIR100000: Indian Country within the State of Wisconsin, except the Sokaogon Chippewa Community.
- a. *Bad River Band of Lake Superior Tribe of Chippewa Indians*
 - i. Only those activities specifically authorized by the CGP are authorized by this Certification. This Certification does not authorize impacts to cultural properties, or historical sites, or properties that may be eligible for listing as such.
 - ii. An operator of a project, which is eligible for coverage under the CGP, that would result in an allowable discharge under the CGP occurring within the exterior boundaries of the Bad River Reservation must notify the Tribe prior to discharge. The operator must submit a copy of the Notice of Intent (NOI) to the Tribe's Natural Resources Department and the Tribal Historic Preservation Office at the same time the NOI is submitted to the U.S. EPA. The operator must also submit a copy of the Notice of Termination to the Tribe at the same time it is submitted to the U.S. EPA. Notification forms applicable to the CGP can be obtained from the EPA's webpage: <http://cfpub.epa.gov/npdes>. Notifications shall be sent to the following address:
 - Bad River Tribe's Natural Resources Department
P.O. Box 39
Odanah, WI 54861

 - Bad River's Tribal Historic Preservation Office
P.O. Box 39
Odanah, WI 54861
 - iii. An operator of a project, which is eligible for coverage under the CGP, that would result in an allowable discharge under the CGP occurring within the exterior boundaries of the Bad River Reservation must provide the Tribe with a copy of the Stormwater Pollution Prevention Plan (SWPPP). The operator must submit a copy of the SWPPP to the following addresses prior to the discharge:
 - Bad River Tribe's Natural Resources Department

P.O. Box 39
Odanah, WI 54861

- iv. All projects which are eligible for coverage under the CGP and are located within the exterior boundaries of the Bad River Reservation shall be implemented in such a manner that is consistent with Chapter 323 of the Bad River Tribal Ordinances, which is the “Bad River Reservation Wetland and Watercourse Protection Ordinance.” Questions regarding Chapter 323 can be directed to the Tribe’s Natural Resources Department at (715) 682-7123.
- v. The Tribe’s CWA 401 Certification for the 2008 NPDES CGP will be reviewed and revised upon federal approval of the Tribe’s water quality standards to ensure the activity authorized by the CGP will not violate Tribal water quality standards.

Note: Facilities within the Sokaogon Chippewa Community are not eligible for stormwater discharge coverage under this permit. Contact the Region 5 office for an individual permit application.

E. Region 6

1. NMR100000: The State of New Mexico, except Indian country
 - a. In addition to all other provisions of this permit, operators who intend to obtain authorization under this permit for all new stormwater discharges must satisfy the conditions in Part 10.C.1.b., unless a TMDL has been established for the receiving stream which specifies a waste load allocation (WLA) for construction stormwater discharges or the receiving stream is a Tier 3 water, in which case Part 10.C.1.c. applies.
 - b. The SWPPP must include site-specific interim and permanent stabilization, managerial, and structural solids, erosion, and sediment control best management practices (BMPs) and/or other controls that are designed to prevent to the maximum extent practicable an increase in the sediment yield and flow velocity from pre-construction, pre-development conditions to assure that applicable standards in 20.6.4 NMAC, including the antidegradation policy, or WLAs are met. This requirement applies to discharges both during construction and after construction operations have been completed. The SWPPP must identify, and document the rationale for selecting these BMPs and/or other controls. The SWPPP must also describe design specifications, construction specifications, maintenance schedules (including a long term maintenance plan), criteria for inspections, as well as expected performance and longevity of these BMPs. BMP selection must be made based on the use of appropriate soil loss prediction models (such as SEDCAD 4.0, RUSLE, SEDIMOT II, MULTISED, etc.), or equivalent, generally accepted (by professional erosion control specialists), soil loss prediction tools. The operator(s) must demonstrate, and include documentation in the SWPPP, that implementation of the site-specific practices will assure that the applicable standards or WLAs are met, and will result in sediment yields and flow velocities that, to the maximum extent practicable, will not be greater than the sediment yield levels and flow velocities from pre-

- construction, pre-development conditions. The SWPPP must be prepared in accordance with good engineering practices by qualified (e.g., CPESC certified, engineers with appropriate training, etc.) erosion control specialists familiar with the use of soil loss prediction models and design of erosion and sediment control systems based on these models (or equivalent soil loss prediction tools). The operator(s) must design, implement, and maintain BMPs in the manner specified in the SWPPP.
- c. Operators are not eligible to obtain authorization under this permit for all new stormwater discharges to outstanding national resource waters (ONRWs) (also referred to as “Tier 3: waters). According to the Antidegradation Policy at Paragraph 3 of Subsection A of 20.6.4.8 NMAC, in part, “ONRWs may include, but are not limited to, surface waters of the state within national and state monuments, parks, wildlife refuges, waters of exceptional recreational or ecological significance, and waters identified under the Wild and Scenic Rivers Act.” No ONRWs exist at the time this permit is being finalized; however, during the term of the permit, if a receiving water is designated as an ONRW, the operator must obtain an individual permit for stormwater discharges from large and small construction activities.
 - d. Stormwater discharges associated with construction activity that the State has determined to be or may reasonably be expected to be contributing to a violation of an applicable standard, including the antidegradation policy, are not authorized by this permit. *Note: Upon receipt of this determination, NMED anticipates that, within a reasonable period of time, EPA will notify the general permittee to apply for and obtain an individual NPDES permit for these discharges per 40 CFR Part 122.28(b)(3).*
 - e. Inspections required under Part 4 must be conducted at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. The option for inspections at least once per 7 calendar days is not available. The Inspection Waivers provided in Part 4.B and C still apply.
 - f. Permittees can use temporary erosion controls as described in item 3 of the Appendix A definition of “Final Stabilization” as a method for final stabilization under the permit only under the following conditions:

If this option is selected, you must notify SWQB at the address listed in item g. below at the time the NOT is submitted to EPA. The information to be submitted includes:

- A copy of the NOT;
- Contact information, including individual name or title, address, and phone number for the qualified (see CGP Part 4.10.D) party responsible for implementing the final stabilization measures; and
- The date that the temporary erosion control practice was implemented (this is always prior to, and sometimes significantly prior to, submission of an NOT) and the projected timeframe that the 70% native vegetative cover requirements are expected to be met. (Note that if more than three years is required to establish 70 percent of the natural vegetative cover, this technique cannot be used or cited for

fulfillment of the final stabilization requirement – you remain responsible for establishment of final stabilization)

SWQB also requires that you periodically (minimum once/year) inspect and properly maintain the area until the criteria for final stabilization, as defined in Appendix A, item 3 of the CGP, have been met. You must prepare an inspection report documenting the findings of these inspections and signed in accordance with Appendix G, Section 11 of the CGP. This inspection record must be retained along with the SWPPP for three years after the NOT is submitted for the site and additionally submitted to SWQB at the address listed in item g. below. The inspections must at a minimum include the following:

- Observations of all areas of the site disturbed by construction activity;
- Best Management Practices (BMPs)/post-construction storm water controls must be observed to ensure they are effective;
- An assessment of the status of vegetative re-establishment; and
- Corrective actions required to ensure vegetative success within three years, and control of pollutants in storm water runoff from the site, including implementation dates.

Signed copies of discharge monitoring reports, individual permit applications, and all other reports required by the permit to be submitted, shall also be sent to:

Program Manager
Point Source Regulation Section
Surface Water Quality Bureau
New Mexico Environment Department
P.O. Box 26110
Santa Fe, NM 87502

2. NMR10000I: Indian country within the State of New Mexico, except Navajo Reservation Lands that are covered under Arizona permit AZR10000I and Ute Mountain Reservation Lands that are covered under Colorado permit COR10000I
 - a. *Pueblo of Acoma*. The following conditions apply only to facilities on or bordering the Pueblo of Acoma with discharges into or flowing into waters of the Pueblo.
 - i. A copy of the Notice of Intent and Notice of Termination must be submitted to the Haaku Water Office at the address below at the same time they are submitted to EPA. A copy of the storm water pollution prevention plan must be provided to the Haaku Water Office upon request.
 - ii. HAAKU WATER OFFICE
PO Box 309
Pueblo of Acoma, NM 87034
 - b. *Pueblo of Isleta*. The following conditions apply only to discharges on the Pueblo of Isleta.
 - i. Subpart 1.3.C.4, (Eligibility, Limitations on Coverage) first sentence, is revised to read: “This permit does not authorize discharges that EPA or the Pueblo of Isleta, prior to authorization under this permit, determines will cause, have the reasonable potential to cause, or contribute to an excursion

above any applicable water quality standard or impairment of a designated use of receiving waters.”

- ii. Subpart 2.2. (How to Submit) is amended to require: Copies of all Notices of Intent submitted to EPA must also be sent concurrently to the Pueblo of Isleta at the following address. Discharges are not authorized by this permit unless an accurate and complete Notice of Intent has been submitted to the Pueblo of Isleta.

Regular U.S. Mail Delivery

Natural Resources Department
Pueblo of Isleta
P.O. Box 1270
Isleta, NM 87022

Overnight/Express Mail Delivery

Natural Resources Department
Building L
11000 Broadway, SE
Albuquerque, NM 87105

- iii. Part 2 (Authorizations for Discharges of Storm Water from Construction Activity), second sentence, is amended to read: “Discharges are not authorized if your NOI is incomplete or inaccurate, if you failed to submit a copy of the NOI to the Pueblo of Isleta, or if you were never eligible for permit coverage.
- iv. Subpart 5.3 (Description of Control Measures to Reduce Pollutant Discharges), section A, last sentence, is amended to read: “For each major activity identified in the project description the SWPPP must clearly describe appropriate control measures, the general sequence during the construction process in which the measures will be implemented, and which operator is responsible for the control measure’s implementation and maintenance.”
- v. Subpart 5.7 (Copy of Permit Requirements), first sentence, is revised to read “Copies of this permit and of the signed and certified NOI form that was submitted to the Pueblo of Isleta and EPA must be included in the SWPPP.”
- vi. Subpart 4. (Inspections), section A is revised to read “Inspections must be conducted at least once every 7 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.”
- vii. Subpart 4. (Inspections), section H, last paragraph, is amended to add: “Copies of inspection reports that identify incidents of noncompliance shall be sent to Pueblo of Isleta at the address listed in Subpart 2.2.” (See above)
- viii. Subpart 5.11. (Signature, Plan Review and Making Plans Available), section A, first sentence is amended to read:
“A copy of the SWPPP (including a copy of the permit), NOI, and acknowledgement letter from EPA must be retained at the construction site (or other location easily accessible during normal business hours to

- the Pueblo of Isleta’s Natural Resources Department, EPA, a state, tribal or local agency approving sediment and erosion plans, grading plans, or storm water management plans; local government officials; the operator of a municipal separate storm sewer receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service or the National Marine Fisheries Service) from the date of commencement of construction activities to the date of final stabilization.”
- ix. Subpart 5.11. (Signature, Plan Review and Making Plans Available), section C. is amended to read: “SWPPPs must be made available upon request by EPA; representatives of the Pueblo of Isleta Natural Resources Department, a state, tribal or local agency approving sediment and erosion plans, grading plans, or storm water management plans; local government officials; the operator of a municipal separate storm sewer receiving discharges from the site; and representatives of the U.S. Fish and Wildlife Service or the National Marine Fisheries Service to the requestor. The copy of the SWPPP that is required to be kept on-site or locally available must be made available, in its entirety, to the EPA staff and the Pueblo of Isleta’s Natural Resources Department staff for review and copying at the time of an on-site inspection.
 - x. Subpart 3.1.A (Sediment Controls), is amended to add: “Erosion and sediment controls shall be designed to retain sediment on-site.”
 - xi. Subpart 3.1.I (Spills/Releases in Excess of Reportable Quantities), first bullet is amended to read: “you must provide notice to the Pueblo of Isleta Natural Resources Department (505-869-5748) and the National Response Center (NRC) (800-424-8802; in the Washington, DC, metropolitan area call 202-426-2675) in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117 and 40 CFR Part 302 as soon as site staff have knowledge of the discharge; and”
 - xii. Subpart 3.4.B (Attainment of Water Quality Standards After Authorization), is amended to add: “You must provide the Pueblo of Isleta, at the address listed in Subpart 2.2, with a copy of the EPA notification, modifications to your storm water controls, data and certification required by EPA.”
 - xiii. Subpart 6.1. (Submitting a Notice of Termination) is amended to add: Copies of all Notices of Termination submitted to EPA must also be sent concurrently to the Pueblo of Isleta at the following address in Subpart 2.2.
 - xiv. Any correspondence, other than NOIs and NOTs, with the Pueblo of Isleta concerning storm water discharges authorized by this permit shall be sent to one of the addresses in Subpart 2.2.
 - xv. Appendix G, Section 9, first sentence is amended to read: “You must allow the Pueblo of Isleta’s Natural Resources Department, EPA, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:...”
 - xvi. Appendix G, Section 12, subsections A- H are amended to require that when you must notify EPA of an event (e.g., planned changes, anticipated

noncompliance, transfers, required reporting due to potential adverse effects or environmental impacts or other noncompliance matters), the Pueblo of Isleta must also be notified.

- xvii. Parties wishing to apply for an Equivalent Analysis Waiver (see Appendix D, Section C) must provide a copy of the waiver analysis to the Pueblo of Isleta at the address specified in Subpart 2.2 at the time it is submitted to EPA.
- c. *Ohkay Owingeh (San Juan Pueblo)*. The following conditions apply only to discharges on Ohkay Owinegeh.
 - i. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Pueblo at the time it is provided to the Environmental Protection Agency, at the following address. A copy of the Storm Water Pollution Prevention Plan must be provided to the Pueblo upon request.

Office of Environmental Affairs
P.O. Box 717
Ohkay Owingeh, NM 87566

- ii. Appendix G, Section 10 (Monitoring and records), item D is amended to add: “All monitoring must be conducted in accordance with the Pueblo of San Juan’s Quality Assurance Project Plan.”
- d. *Pueblo of Nambé*. The following conditions apply only to discharges on the Pueblo of Nambé.
 - i. Copies of the Notice of Intent (NOI), Notice of Termination (NOT), and any analytical data must be provided to the Nambé Pueblo Department of Environment and Natural Resources (DENR) at the time it is provided to the Environmental Protection Agency, at the following address. A copy of the Storm Water Pollution Prevention Plan must be provided to the Pueblo upon request.
 - ii. All correspondence shall be sent to:
 - Pueblo of Nambé
 - Department of Environment and Natural Resources
 - Rt. 1 Box 117-BB
 - Santa Fe, NM 87506
 - 505-455-2036 ext. 120 fax: 505-455-8873

- e. *Pueblo of Picuris*. The following conditions apply only to discharges on the Pueblo of Picuris.
 - i. Copies of the Notice of Intent (NOI), Notice of Termination (NOT), and any analytical data (e.g. Discharge Monitoring Reports, etc.) or any other reports must be provided to the Pueblo at the time it is provided to the Environmental Protection Agency. A copy of the Storm Water Pollution Prevention Plan must be provided to the Pueblo upon request.
 - ii. All correspondence shall be sent to:

Cordell Arellano
Director, Environment Department

Pueblo of Picuris
PO Box 158
Penasco, NM 87553

- f. *Pueblo of Pojoaque*. The following conditions apply only to discharges on the Pueblo of Pojoaque.
- i. Copies of the Notice of Intent (NOI), Notice of Termination (NOT), and any analytical data (e.g. Discharge Monitoring Reports, etc.) or any other reports must be provided to the Pueblo at the time it is provided to the Environmental Protection Agency. A copy of documents related to the Storm Water Pollution Prevention Plan must be provided to the Pueblo upon request.
 - ii. All correspondence shall be sent to:

Luke Mario Duran
Director, Environment Department
Pueblo of Pojoaque
5 West Gutierrez, Suite 2b
Santa Fe, NM 87506

- g. *Pueblo of Taos*. The following conditions apply only to discharges on the Pueblo of Taos.
- i. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Taos Pueblo Governor's Office and the Taos Pueblo Environmental Office at the same time as or prior to submission to the Environmental Protection Agency. A copy of the Storm Water Pollution Prevention Plan must be made available to Pueblo environmental personnel upon request.
 - ii. All correspondence for both the Taos Pueblo Governor's Office and the Taos Pueblo Environmental Office (same address) shall be sent to:

Governor (*or as applicable*)
Program Manager, Taos Pueblo Environmental Office
Taos Pueblo
PO Box 1846
Taos, NM 87571

- h. *Pueblo of Sandia*. The following conditions apply only to discharges on the Pueblo of Sandia.
- i. A copy of the Notice of Intent (NOI) must be provided to the Pueblo at the same, (or prior to) the time it is submitted to the Environmental Protection Agency.
 - ii. The Pueblo of Sandia objects to use of Low Rainfall Erosivity Waivers (see Appendix D, Part A) for any small construction activities on the Pueblo, so this waiver will not be available for construction projects on the Pueblo. Permittees wishing to apply for all other waivers (see Appendix D) must provide a copy of the waiver certification or analysis to the Pueblo of Sandia Environment Department.

- iii. The Storm Water Pollution Prevention Plan (SWPPP) must be available to the Pueblo of Sandia either electronically or hard copy upon request for review. The SWPPP must be made available at least fourteen (14) days before construction begins. The fourteen (14) day period will give Tribal staff time to become familiar with the project site, prepare for construction inspections, and determine compliance with the Pueblo of Sandia Water Quality Standards. Failure to provide a SWPPP to the Pueblo of Sandia may result in denial of the discharge or construction delay.
- iv. Discharges are not authorized by this permit unless and until:
 - a. An accurate and complete NOI has been submitted to the Pueblo;
AND
 - b. An “Authorization to Proceed Letter” with any site specific mitigation requirements has been received from the Pueblo of Sandia following their review of the NOI and SWPPP and the permittee complies with all applicable requirements therein.
- v. Before submitting a Notice of Termination (NOT), permittees must clearly demonstrate to the Pueblo of Sandia Environment Department through a site visit or documentation that requirements for site stabilization have been met and any temporary erosion control structures have been removed (or operational control is being passed to another operator). A short letter concurring that conditions for submittal of an NOT have met will be sent to the permittee by the Pueblo. Upon receipt of this letter, and provided the all other applicable requirements of the permit are met, the permittee will be eligible to submit and NOT.
- vi. You must telephone the Pueblo of Sandia Environment Department at (505) 867-4533 of any noncompliance that may endanger human health or the environment within ten (10) hours of becoming aware of the circumstance.
- vii. All correspondence shall be sent to:

Scott Bulgrin, Water Quality Manager
Pueblo of Sandia
481 Sandia Loop
Bernalillo, NM 87004

- i. *Santa Clara Pueblo*. The following conditions apply only to discharges on the Santa Clara Pueblo.
 - i. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Pueblo of Santa Clara Office of Environmental Affairs when they are submitted to the Environmental Protection Agency.
 - ii. A copy of the storm water pollution prevention plan must be made available to the Pueblo of Santa Clara Office of Environmental Affairs upon request.
 - iii. Construction site operators must notify the Pueblo of Santa Clara Office of Environmental Affairs by telephone at (505) 753-7326 of any non-compliance discharges that may endanger human health or the environment within twenty-four (24) hours of becoming aware of the discharge.
 - iv. All correspondence shall be sent to:

Santa Clara Office of Environmental Affairs
One Kee Street
PO Box 580
Española, NM 87532
505-753-7326 Tel
505-747-2728 Fax

- j. *Pueblo of Tesuque*. The following conditions apply only to discharges on the Pueblo of Tesuque.
- i. Copies of the Notice of Intent (NOI), Notice of Termination (NOT), and any analytical data (e.g. Discharge Monitoring Reports, etc.) or any other reports must be provided to the Pueblo at the time it is provided to the Environmental Protection Agency.
 - ii. A copy of documents related to the Storm Water Pollution Prevention Plan must be provided to the Pueblo upon request.
 - iii. All correspondence shall be sent to:

Ryan Swazo-Hinds
Sr. Environmental Technician
Pueblo of Tesuque
Environment Department
Rt. 42, Box 360-T
Santa Fe, NM 87506

3. OKR10000F: Discharges in the State of Oklahoma that are not under the authority of the Oklahoma Department of Environmental Quality, including activities associated with oil and gas exploration, drilling, operations, and pipelines (includes SIC Groups 13 and 46, and SIC codes 492 and 5171), and point source discharges associated with agricultural production, services, and silviculture (includes SIC Groups 01, 02, 07, 08, 09).
- a. In accordance with Oklahoma’s Water Quality Standards (OAC 785:45-5-25), Subpart 1.3.C. (Limitations on Coverage) is modified to add paragraphs 8 and 9 as follows:

“8. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Big Lee Creek or any water or watershed designated “ORW” (Outstanding Resource Water) in Oklahoma’s Water Quality Standards, this permit may only be used to authorize discharges from temporary construction activities. Discharges from any on-going activities such as sand and gravel mining or any other mineral mining are not authorized.

9. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Big Lee Creek or any water or watershed designated “ORW” (Outstanding Resource Water) in Oklahoma’s Water Quality Standards, this permit may not be used to authorize discharges from support activities,

including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, or borrow areas.”

4. OKR10000I: Indian country within the State of Oklahoma.
- a. In order to protect downstream waters subject to the state of Oklahoma’s Water Quality Standards (OAC 785:45-5-25) where receiving waters flow from Indian Country to State waters, Subpart 1.3.C. (Limitations on Coverage) is modified to add paragraphs 8 and 9 as follows:

“8. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Big Lee Creek or any water or watershed designated “ORW” (Outstanding Resource Water) in Oklahoma’s Water Quality Standards, this permit may only be used to authorize discharges from temporary construction activities. Discharges from any on-going activities such as sand and gravel mining or any other mineral mining are not authorized.

9. For activities located within the watershed of any Oklahoma Scenic River, including the Illinois River, Flint Creek, Barren Fork Creek, Upper Mountain Fork, Little Lee Creek, and Big Lee Creek or any water or watershed designated “ORW” (Outstanding Resource Water) in Oklahoma’s Water Quality Standards, this permit may not be used to authorize discharges from support activities, including concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas, or borrow areas.”

- b. *Pawnee Nation of Oklahoma*. The following conditions apply only to discharges on the Pawnee Nation of Oklahoma.
- i. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Pawnee Nation at the same time they are submitted to the Environmental Protection Agency.
 - ii. A copy of the storm water pollution prevention plan must be made available to Pawnee Nation Department of Environmental Conservation and Safety upon request.
 - iii. Construction site operators must notify the Pawnee Nation Department of Environmental Conservation and Safety by telephone at (918) 762-3655 immediately of any non-compliance with any provision of the permit conditions.
 - iv. All correspondence shall be sent to:

Pawnee Nation
Department of Environmental Conservation and Safety
PO Box 470
Pawnee, OK 74058

5. TXR10000F: Discharges in the State of Texas that are not under the authority of the Texas Commission on Environmental Quality, including activities associated with the exploration, development, or production of oil or gas or geothermal resources, including transportation of crude oil or natural gas by pipeline.

NOTE: This permit does not create an obligation to obtain a permit where such obligation does not already exist under federal statute or regulation. For more information on the Clean Water Act §§ 402(l)(2) permitting exemption for uncontaminated discharges of storm water from oil and gas exploration, production, processing, or treatment operations or transmission facilities, visit: <http://cfpub.epa.gov/npdes/stormwater/oilgas.cfm>

F. Region 7 – No additional requirements.

G. Region 8

1. MTR10000I:

- a. Confederated Salish and Kootenai Tribes. The following conditions only apply for projects on the Flathead Indian Reservation:
 - i. Permittees must send a Stormwater Pollution Prevention Plan (SWPPP) to the Tribe at least 30 days before construction starts;
 - ii. Before submitting a Notice of Termination (NOT), permittees must clearly demonstrate to an appointed tribal staff person during an on-site inspection that requirements for site stabilization have been met;
 - iii. Permittees submitting electronic Notices of Intents (eNOI's) to USEPA must cc a copy to NRD-EPD@cskt.org; and
 - iv. Written NOIs, SWPPPs, and NOTs shall be mailed to:

Confederated Salish and Kootenai Tribes
National Resources Department
Department Head
P.O. Box 278
Pablo, MT 59855

Permittees may also submit their SWPPP and NOT to
NRD-EPD@cskt.org

- b. Fort Peck Tribes. The following conditions only apply for projects on the Fort Peck Indian Reservation:
 - i. The permittee must send a copy of the Notice of Intent (NOI) and the Notice of Termination (NOT) to the Tribes at the same time that the NOI and NOT is submitted to EPA. Copies of the NOI and NOT shall be accepted either electronically or hard copy format and should be sent to:

Deb Madison
Environmental Programs Manager
Fort Peck Assiniboine & Sioux Tribes
P.O. Box 1027
Poplar, MT 59255
Tel: 406.768.2389 Fax: 406.768.5606
E-mail: 2horses@nemont.net

- ii. A copy of the proposed SWPPP at the time of NOI/NOT submissions

must be sent to the Tribes to ensure that upon closure of the site and/or activities all environmental commitments have been met.

- c. Northern Cheyenne Reservation. The following conditions only apply for projects on the Northern Cheyenne Indian Reservation:
 - i. Permittees must contact the Northern Cheyenne Environmental Protection Department at (406) 477-6506 prior to authorization to discharge under the general permit;
 - ii. The Tribe shall review and approve SWPPPs prior to approval; and
 - iii. The Tribe shall review and improve BMPs on site to ensure that Tribal water quality standards are protected.

H. Region 9

- 1. ASR100000: The Island of American Samoa
 - a. Discharges authorized by the general permit shall meet all applicable American Samoa water quality standards.
 - b. Permittees discharging under the general permit shall comply with all conditions of the permit.
- 2. AZR10000I: Indian country lands within the State of Arizona, including Navajo Reservation lands in New Mexico and Utah
 - a. White Mountain Apache Tribe. The following condition applies only for projects on the White Mountain Apache Reservation:
 - i. All NOIs for proposed stormwater discharge coverage shall be provided to the following address:

Tribal Environmental Planning Office
P.O. Box 2109
Whiteriver, AZ 85941
 - b. Hualapai Tribe. The following conditions apply only for projects on the Hualapai Reservation:
 - i. All notices of intent for proposed stormwater discharges under the CGP and all pollution prevention plans for stormwater discharges on Hualapai Tribal lands shall be submitted to the Water Resource Program through the Tribal Chairman for review and approval, P.O. Box 179, Peach Springs, AZ 86434.
 - c. Navajo Nation. The following conditions apply only for projects on the Navajo Nation:
 - i. Copies of notices of intent and stormwater pollution prevention plans shall be made available to Navajo EPA for facilities located on Navajo lands;
 - ii. Copies of all monitoring reports must be provided to Navajo EPA for facilities located on Navajo lands; and

- iii. Facilities located on Navajo lands and covered by the CGP will be subject to compliance inspections by Navajo EPA staff with active Federal Inspector Credentials under the authority of the Clean Water Act.
3. CAR10000I: Indian Country lands within the State of California:
- a. Hoopa Valley Tribe. The following conditions apply only for projects on the Hoopa Valley Reservation:
 - i. All notices of intent submitted for stormwater discharges under the general permit in Hoopa Valley Indian Reservation (HVIR) shall be submitted to the Tribal Environmental Protection Agency (TEPA); and
 - ii. All pollution prevention plans for stormwater discharge in HVIR shall be submitted to TEPA for review and approval.
 - b. 29 Palms Band of Mission Indians. The following conditions apply only for projects on the 29 Palms Band of Mission Indians Reservation:
 - i. The 29 Palms Tribal EPA is informed of any future changes made to the proposed CGP;
 - ii. For each permitted activity, the U.S. EPA will ensure that all terms and conditions of the proposed CGP are complied with;
 - iii. Notices of intent must be submitted to the 29 Palms Tribal EPA for review, comment and tracking;
 - iv. Copies of stormwater pollution prevention plans (SWPPPs) and supporting Best Management Practices (BMPs) must be submitted to the 29 Palms Tribal EPA for review and compliance;
 - v. Copies of all monitoring reports must be provided to the 29 Palms Tribal EPA;
 - vi. Depending on the permitted activity, the 29 Palms Tribal EPA reserves the right to stipulate additional monitoring requirements; and
 - vii. In order to meet the requirements of Tribal law, including water quality standards, each of the conditions cited in the proposed CGP and the Twenty-Nine Palms Band of Mission Indians certification shall not be made any less stringent.
 - c. Bishop Paiute Tribe. The following conditions apply only for projects on the Bishop Paiute Reservation:
 - i. Copies of notices of intent for proposed CGP activities must be submitted to the Bishop Paiute Tribe's Environmental Management Office for review and comment; and
 - ii. Any substantive change in the NPDES permit that may affect water quality shall require notification of the Bishop Paiute Tribe Environmental Management Office.
 - d. Big Pine Paiute Tribe of the Owens Valley. The following conditions apply only for projects on the Big Pine Paiute Tribe of the Owens Valley Reservation:

- iv. copies of all monitoring reports must be provided to the Pyramid Lake Paiute Tribe.
- I. Region 10
1. IDR100000: The State of Idaho, except Indian country
- a. *303(d)-listed Water Bodies with Approved TMDLs.*
Discharges of storm water will be consistent with load allocations established by the applicable TMDL.
 - b. *303(d)-listed Water Bodies without Approved TMDLs (High Priority)*
If a TMDL has not been established for a high priority 303(d)-listed water body, then discharges of storm water may not cause an increase in the total load of listed pollutant(s) in the receiving water body.
 - c. *303(d)-listed Water Bodies without Approved TMDLs (Medium or Low Priority)*
If a TMDL has not been established for a medium or low priority 303(d)-listed water body, then best management practices shall be employed as necessary to prohibit further impairment of the designated or existing beneficial uses in the receiving water body.
 - d. *Best Management Practices (BMPs)*
BMPs must be designed, implemented, and maintained by the permittee to fully protect and maintain the beneficial uses of the receiving water body. The permittee should select appropriate BMPs that are either authorized by the appropriate designated agency as defined in Idaho Water Quality Standards (IDAPA 58.01.02), recommended in IDEQ's *Catalog of Stormwater BMPs for Idaho Cities and Counties*, or recommended by other local government entities or guidance documents.
 - e. *Equivalent Analysis Waiver* - Use of the "Equivalent Analysis Waiver" in Appendix D of the permit is not authorized.
 - f. Operators may contact the Idaho Department of Environmental Quality regional office nearest the construction activity for more information about impaired waterways:
 - Boise Regional Office:
1445 N. Orchard
Boise ID 83706-2239
Tel: (208)373-0550
Fax: (208)373-0287

 - Grangeville Satellite Office:
300 W. Main
Grangeville ID 83530
Tel: (208)983-0808
Fax: (208)983-2873

 - Pocatello Regional Office:
444 Hospital Way #300
Pocatello ID 83201
Tel: (208)236-6160

Fax: (208)236-6168

McCall Satellite Office:

502 N. 3rd Street #9A

P.O. Box 4654

McCall, ID 83638

Tel: (208)634-4900

Fax: (208)634-9405

Idaho Falls Regional Office:

900 N. Skyline, Suite B

Idaho Falls, ID 83402

Tel: (208)528-2650

Fax: (208)528-2695

Twin Falls Regional Office:

1363 Fillmore

Twin Falls, ID 83301

Tel: (208)736-2190

Fax: (208)736-2194

Coeur d'Alene Regional Office:

2110 Ironwood Parkway

Coeur d'Alene ID 83814

Tel: (208)769-1422

Fax: (208)769-1404

Lewiston Regional Office:

1118 "F" Street

Lewiston, ID 83501

Tel: (208)799-4370

Toll Free: 1-877-541-3304

Fax: (208)799-3451

2. ORR10000I: Indian country within the State of Oregon, except Fort McDermitt Reservation lands (see Region 9):

a. Confederated Tribes of the Umatilla Indian Reservation.

The following conditions apply only for projects within the exterior boundaries of the Umatilla Indian Reservation:

- i. The operator shall be responsible for achieving compliance with the Confederated Tribes of the Umatilla Indian Reservation's (CTUIR) Water Quality Standards.
- ii. The operator shall submit a copy of the Notice of Intent (NOI) to be covered by this general permit to the CTUIR Water Resources Program at the address below, at the same time it is submitted to EPA.
- iii. The operator shall be responsible for submitting all Storm Water Pollution Prevention Plans required under this general permit to the CTUIR Water Resources Program for review and determination that the SWPPP is sufficient to meet Tribal

Water Quality Standards prior to the beginning of any discharge activities taking place.

- iv. The operator shall be responsible for reporting an exceedance of Tribal Water Quality Standards to the CTUIR Water Resources Program at the same time it is reported to EPA.

Confederated Tribes of the Umatilla Indian Reservation
Water Resources Program
46411 Timine Way
Pendleton, OR 97801
(541) 429-7200

- v. At least 45 days prior to beginning any discharge activities, the operator must submit a copy of the Notice of Intent to be covered under this general permit and an assessment of whether the undertaking has the potential to affect historic properties to CTUIR Tribal Historic Preservation Office (THPO) at the address below. If the project has potential to affect historic properties, the operator's assessment must define the area of potential effect (APE). The operator must provide the THPO at least 30 days to comment on the APE as defined in the assessment.

- vi. If the project is an undertaking, the operator must conduct a cultural resource investigation. All fieldwork must be conducted by qualified personnel (as outlined by the Secretary of the Interior's Standards and Guidelines found at http://www.nps.gov/history/local-law/arch_stnds_0.htm). All fieldwork must be documented using Oregon Reporting Standards (as outlined at http://egov.oregon.gov/OPRD/HCD/ARCH/arch_pubsandlinks.shtml). The resulting report must be submitted to the THPO and the THPO must concur with the findings and recommendations before any ground disturbing work can occur. The operator must provide the THPO at least 30 days to review and respond to all reports.

The operator must obtain THPO concurrence in writing. If historic properties are present, this written concurrence will outline measures to be taken to prevent or mitigate effects to historic properties.

Confederated Tribes of the Umatilla Indian Reservation
Cultural Resources Protection Program
Tribal Historic Preservation Office
46411 Timine Way
Pendleton, OR 97801
(541) 429-7200

- b. Confederated Tribes of Warm Springs.

The following conditions apply only for projects on the Warm Springs Indian Reservation:

- i. All activities covered by this NPDES general permit occurring within a designated riparian buffer zone as established in Ordinance 74 (Integrated Resource Management Plan or IRMP) must be reviewed, approved and permitted through the Tribe's Hydraulic Permit Application process, including payment of any applicable fees.
- ii. All activities covered by this NPDES general permit must follow all applicable land management and resource conservation requirements specified in the IRMP.

- iii. Operators of activities covered by this NPDES general permit must submit a Storm Water Pollution Prevention Plan to the Tribe's Water Control Board at the following address for approval at least 30 days prior to beginning construction activity:

Chair, Warm Springs Water Control Board
P.O. Box C
Warm Springs, Oregon 97761

3. WAR10000F: Federal Facilities in the State of Washington, except those located on Indian Country

- a. Discharges shall not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), ground water quality standards (Chapter 173-200 WAC), sediment management standards (Chapter 173-204 WAC), and human health-based criteria in the National Toxics Rule (40 CFR Part 131.36). Discharges that are not in compliance with these standards are not authorized.
- b. Prior to the discharge of stormwater and non-stormwater to waters of the state, the Permittee shall apply all known, available, and reasonable methods of prevention, control, and treatment (AKART). This includes the preparation and implementation of an adequate Stormwater Pollution Prevention Plan (SWPPP), with all appropriate best management practices (BMPs) installed and maintained in accordance with the SWPPP and the terms and conditions of this permit.
- c. Sampling & Numeric Effluent Limitations – For Sites Discharging to Certain Waterbodies on the 303(d) List or with an Applicable TMDL
 - i. Permittees that discharge to water bodies listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act for turbidity, fine sediment, high pH or phosphorus, shall conduct water quality sampling according to the requirements of this section.
 - (1) The operator must retain all monitoring results required by this section as part of the SWPPP. All data and related monitoring records must be provided to EPA or the Washington Department of Ecology upon request.
 - (2) The operator must notify EPA when the discharge turbidity or discharge pH exceeds the water quality standards as defined in Parts 10.F.4.d.ii and e.ii below, in accordance with the reporting requirements of Part G.12.F of this permit. All reports must be submitted to EPA at the following address:
U.S EPA Region 10
NPDES Compliance Unit - Attn: Federal Facilities Compliance Officer
1200 6th Avenue, Suite 900
OCE-133
Seattle, WA 98101
(206) 553-1846
 - ii. All references and requirements associated with Section 303(d) of the Clean Water Act mean the most current listing by Ecology of impaired waters that exists on November 16, 2005, or the date when the operator's complete NOI is received by EPA, whichever is later.

Parameter identified in 303(d) listing	Parameter/Units	Analytical Method	Sampling Frequency	Water Quality Standard
Turbidity Fine Sediment Phosphorus	Turbidity/NTU	SM2130 or EPA180.1	Weekly, if discharging	If background is 50 NTU or less: 5 NTU over background; or If background is more than 50 NTU: 10% over background
High pH	pH/Standard Units	pH meter	Weekly, if discharging	In the range of 6.5 – 8.5

- d. Discharges to waterbodies on the 303(d) list for turbidity, fine sediment, or phosphorus
- i. Permittees which discharge to waterbodies on the 303(d) list for turbidity, fine sediment, or phosphorus shall conduct turbidity sampling at the following locations to evaluate compliance with the water quality standard for turbidity:
 - (1) Background turbidity shall be measured in the 303(d) listed receiving water immediately upstream (upgradient) or outside the area of influence of the discharge; and
 - (2) Discharge turbidity shall be measured at the point of discharge into the 303(d) listed receiving waterbody, inside the area of influence of the discharge; **or**
Alternatively, discharge turbidity may be measured at the point where the discharge leaves the construction site, rather than in the receiving waterbody.
 - ii. Based on sampling, if the discharge turbidity ever exceeds the water quality standard for turbidity (more than 5 NTU over background turbidity when the background turbidity is 50 NTU or less, or more than a 10% increase in turbidity when the background turbidity is more than 50 NTU), all future discharges shall comply with a numeric effluent limit which is equal to the water quality standard for turbidity. If a future discharge exceeds the water quality standard for turbidity, the permittee shall:
 - (1) Review the SWPPP for compliance with the permit and make appropriate revisions within 7 days of the discharge that exceeded the standard;
 - (2) Fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, but no later than 10 days of the discharge that exceeded the standard;
 - (3) Document BMP implementation and maintenance in the site log book;
 - (4) Continue to sample daily until discharge turbidity meets the water quality standard for turbidity.

- e. Discharges to waterbodies on the 303(d) list for High pH
 - i. Permittees which discharge to waterbodies on the 303(d) list for high pH shall conduct sampling at one of the following locations to evaluate compliance with the water quality standard for pH (in the range of 6.5 – 8.5):
 - (1) pH shall be measured at the point of discharge into the 303(d) listed waterbody, inside the area of influence of the discharge; or
 - (2) Alternatively, pH may be measured at the point where the discharge leaves the construction site, rather than in the receiving water.
 - ii. Based on the sampling set forth above, if the pH ever exceeds the water quality standard for pH (in the range of 6.5 – 8.5), all future discharges shall comply with a numeric effluent limit which is equal to the water quality standard for pH. If a future discharge exceeds the water quality standard for pH, the permittee shall:
 - (1) Review the SWPPP for compliance with the permit and make appropriate revisions within 7 days of the discharge;
 - (2) Fully implement and maintain appropriate source control and/or treatment BMPs as soon as possible, but no later than 10 days of the discharge that exceeded the standards;
 - (3) Document BMP implementation and maintenance in the site log book;
 - (4) Continue to sample daily until discharge meets the water quality standard for pH (in the range of 6.5 – 8.5).
- f. Sampling & Limitations – For Sites Discharging to TMDLs
 - i. Discharges to waterbodies subject to an applicable Total Maximum Daily Load (TMDL) for turbidity, fine sediment, high pH, or phosphorus, shall be consistent with the assumptions and requirements of the TMDL.
 - (1) Where an applicable TMDL sets specific waste load allocations or requirements for discharges covered by this permit, discharges shall be consistent with any specific waste load allocations or requirements established by the applicable TMDL.
 - a. Discharges shall be sampled weekly, or as otherwise specified by the TMDL, to evaluate compliance with the specific waste load allocations or requirements.
 - b. Analytical methods used to meet the monitoring requirements shall conform to the latest revision of the Guidelines Establishing Test Procedures for the Analysis of Pollutants contained in 40 CFR Part 136.
 - (2) Where an applicable TMDL has established a general waste load allocation for construction stormwater discharges, but no specific requirements have been identified, compliance with this permit will be assumed to be consistent with the approved TMDL.
 - (3) Where an applicable TMDL has not specified a waste load allocation for construction stormwater discharges, but has not

excluded these discharges, compliance with this permit will be assumed to be consistent with the approved TMDL.

- (4) Where an applicable TMDL specifically precludes or prohibits discharges from construction activity, the operator is not eligible for coverage under this permit.
- ii. Applicable TMDL means a TMDL for turbidity, fine sediment, high pH, or phosphorus, which has been completed and approved by EPA prior to November 16, 2005, or prior to the date the operator's complete NOI is received by EPA, whichever is later.
Information on impaired waterways is available from the Department of Ecology website at:
<http://www.ecy.wa.gov/programs/wq/stormwater/construction/impaired.html> or by phone: 360-407-6460.

4. WAR10000I: Indian country within the State of Washington

a. Kalispel Tribe.

The following conditions apply only for projects on the Kalispel Reservation:

- i. The permittee shall be responsible for achieving compliance with the Kalispel Tribe's Water Quality Standards.
- ii. The permittee shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to the Kalispel Tribe Natural Resources Department at the same time as it submitted to the U.S. EPA
- iii. The permittee shall submit all Storm Water Prevention Plans (SWPP) to the Kalispel Tribe Natural Resources Department thirty (30) days prior to beginning any discharge activities for review.
- iv. Prior to any land disturbing activities on the Kalispel Indian Reservation and its dependent communities, the permittee shall obtain a cultural resource clearance letter from the Kalispel Natural Resource Department.
- v. All tribal correspondence pertaining to the general permit for discharges of construction stormwater shall be sent to:

Kalispel Tribe Natural Resources Department
PO Box 39
Usk, WA 99180

b. Lummi Nation

The following conditions apply only for projects on the Lummi Reservation:

- i. Pursuant to Lummi Code of Laws (LCL) 17.05.020(a), the operator must obtain a land use permit from the Lummi Planning Department as provided in Title 15 of the Lummi Code of Laws and regulations adopted thereunder.
- ii. Pursuant to LCL 17.05.020(a), each operator shall develop and submit a Storm Water Pollution Prevention Plan to the Lummi Water Resources Division for review and approval by the Water Resources Manager prior to beginning any discharge activities.
- iii. Pursuant to LCL Title 17, each operator shall be responsible for achieving compliance with the Water Quality Standards for Surface Waters of the Lummi Indian Reservation (Lummi Administrative Regulations [LAR] 17 LAR 07.010 through 17 LAR 07.210).

- iv. Each operator shall submit a copy of the Notice of Intent to the Lummi Water Resources Division at the same time it is submitted to the Environmental Protection Agency (EPA).
 - v. Storm Water Pollution Prevention Plans and Notices of Intent shall be submitted to:
 - Lummi Natural Resources Department
 - ATTN: Water Resources Manager
 - 2616 Kwina Road
 - Bellingham, WA 98226
 - vi. Refer to the Lummi Nation website at <http://www.lummi-nsn.gov> to review a copy of Title 17 of the Lummi Code of Laws and the references upon which the conditions identified above are based.
- c. Makah Tribe
- The following conditions apply only for projects on the Makah Reservation:
- i. The operator shall be responsible for achieving compliance with the Makah Tribe's Water Quality Standards.
 - ii. The operator shall submit a Storm Water Pollution Prevention Plan to the Makah Tribe Water Quality Program and Makah Fisheries Habitat Division for review and approval at least thirty (30) days prior to beginning any discharge activities.
 - iii. The operator shall submit a copy of the Notice of Intent to the Makah Tribe Water Quality Program and Makah Fisheries Habitat Division at the same time it is submitted to EPA.
 - iv. Storm Water Pollution Prevention Plans and Notices of Intent shall be submitted to:
 - Makah Fisheries Water Quality and Habitat Division
 - PO Box 115
 - Neah Bay, WA 98357
- d. Puyallup Tribe of Indians.
- The following conditions apply only to stormwater discharges from large and small construction activities that result in a total land disturbance of equal to or greater than one acre, where those discharges enter surface waters of the Puyallup Tribe:
- i. Each permittee shall be responsible for achieving compliance with the Puyallup Tribe's Water Quality Standards, including antidegradation provisions. The Puyallup Natural Resources Department will conduct an antidegradation review for permitted activities that have the potential to affect water quality. The antidegradation review will be consistent with the Tribe's Antidegradation Implementation Procedures.
 - ii. The permittee shall be responsible for meeting any additional permit requirements imposed by EPA necessary to comply with the Puyallup Tribe's antidegradation policies if the discharge point is located within 1 linear mile upstream of waters designated by the Tribe.
 - iii. Each permittee shall submit a copy of the Notice of Intent (NOI) to be covered by the general permit to the Puyallup Tribal Natural Resources

Department at the address listed below at the same time it is submitted to EPA.

Puyallup Tribe of Indians
3009 E. Portland Avenue
Tacoma, WA 98404
ATTN: Natural Resources Department

- iv. All supporting documentation and certifications in the NOI related to coverage under the general permit for Endangered Species Act purposes shall be submitted to the Puyallup Tribal Natural Resources Department for review.
- v. If EPA requires coverage under an individual or alternative permit, the permittee shall submit a copy of the permit to the Puyallup Tribal Natural Resources Department at the address listed above.
- vi. The permittee shall submit all stormwater pollution prevention plans to the Puyallup Tribal Natural Resources Department for review and approval prior to beginning any activities resulting in a discharge to tribal waters.

Appendix A - Definitions and Acronyms

Definitions

“Arid Areas” means areas with an average annual rainfall of 0 to 10 inches.

“Best Management Practices” (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practice to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

“Commencement of Construction Activities” means the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction-related activities (e.g., stockpiling of fill material).

“Control Measure” as used in this permit, refers to any BMP or other method used to prevent or reduce the discharge of pollutants to waters of the United States.

“CWA” means the Clean Water Act or the Federal Water Pollution Control Act, 33 U.S.C. section 1251 et seq.

“Discharge” when used without qualification means the “discharge of a pollutant.”

“Discharge of Stormwater Associated with Construction Activity” as used in this permit, refers to a discharge of pollutants in stormwater from areas where soil disturbing activities (e.g., clearing, grading, or excavation), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck chute washdown, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located.

“Eligible” means qualified for authorization to discharge stormwater under this general permit.

“Facility” or “Activity” means any “point source” or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

“Federal Facility” means any buildings, installations, structures, land, public works, equipment, aircraft, vessels, and other vehicles and property, owned by, or constructed or manufactured for the purpose of leasing to, the Federal government.

“Final Stabilization” means that:

1. All soil disturbing activities at the site have been completed and either of the two following criteria are met:
 - a. a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the native background

- vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or
- b. equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.
2. When background native vegetation will cover less than 100 percent of the ground (e.g., arid areas, beaches), the 70 percent coverage criteria is adjusted as follows: if the native vegetation covers 50 percent of the ground, 70 percent of 50 percent ($0.70 \times 0.50 = 0.35$) would require 35 percent total cover for final stabilization. On a beach with no natural vegetation, no stabilization is required.
 3. In arid and semi-arid areas only, all soil disturbing activities at the site have been completed and both of the following criteria have been met:
 - a. Temporary erosion control measures (e.g., degradable rolled erosion control product) are selected, designed, and installed along with an appropriate seed base to provide erosion control for at least three years without active maintenance by you,
 - b. The temporary erosion control measures are selected, designed, and installed to achieve 70 percent vegetative coverage within three years.
 4. For individual lots in residential construction, final stabilization means that either:
 - a. The homebuilder has completed final stabilization as specified above, or
 - b. The homebuilder has established temporary stabilization including perimeter controls for an individual lot prior to occupation of the home by the homeowner and informing the homeowner of the need for, and benefits of, final stabilization.
 5. For construction projects on land used for agricultural purposes (e.g., pipelines across crop or range land, staging areas for highway construction, etc.), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to “water of the United States,” and areas which are not being returned to their preconstruction agricultural use must meet the final stabilization criteria (1) or (2) or (3) above.

“Indian country” is defined at 40 CFR §122.2 to mean:

1. All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation;
2. All dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and
3. All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-ways running through the same.

“Large Construction Activity” is defined at 40 CFR §122.26(b)(14)(x) and incorporated here by reference. A large construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than five acres of land or will disturb less than five acres of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than five acres. Large

construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site.

“Municipal Separate Storm Sewer System” or “MS4” is defined at 40 CFR §122.26(b)(8) to mean a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

1. Owned and operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
2. Designed or used for collecting or conveying stormwater;
3. Which is not a combined sewer; and
4. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

“New Project” means the “commencement of construction activities” occurs after the effective date of this permit.

“Ongoing Project” means the “commencement of construction activities” occurs before the effective date of this permit.

“Operator” for the purpose of this permit and in the context of stormwater associated with construction activity, means any party associated with a construction project that meets either of the following two criteria:

1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
2. The party has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the SWPPP or comply with other permit conditions). This definition is provided to inform permittees of EPA’s interpretation of how the regulatory definitions of “owner or operator” and “facility or activity” are applied to discharges of stormwater associated with construction activity.

“Owner or operator” means the owner or operator of any “facility or activity” subject to regulation under the NPDES program.

“Permitting Authority” means the United States Environmental Protection Agency, EPA, a Regional Administrator of the Environmental Protection Agency or an authorized representative.

“Point Source” means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

“Pollutant” is defined at 40 CFR §122.2. A partial listing from this definition includes: dredged spoil, solid waste, sewage, garbage, sewage sludge, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial or municipal waste.

“Project Area” means:

- The areas on the construction site where stormwater discharges originate and flow toward the point of discharge into the receiving waters (including areas where excavation, site development, or other ground disturbance activities occur) and the immediate vicinity. (Example: 1. Where bald eagles nest in a tree that is on or bordering a construction site and could be disturbed by the construction activity or where grading causes stormwater to flow into a small wetland or other habitat that is on the site that contains listed species.)
- The areas where stormwater discharges flow from the construction site to the point of discharge into receiving waters. (Example: Where stormwater flows into a ditch, swale, or gully that leads to receiving waters and where listed species (such as amphibians) are found in the ditch, swale, or gully.)
- The areas where stormwater from construction activities discharge into receiving waters and the areas in the immediate vicinity of the point of discharge. (Example: Where stormwater from construction activities discharges into a stream segment that is known to harbor listed aquatic species.)
- The areas where stormwater BMPs will be constructed and operated, including any areas where stormwater flows to and from BMPs. (Example: Where a stormwater retention pond would be built.)
- The areas upstream and /or downstream from construction activities discharges into a stream segment that may be affected by the said discharges. (Example: Where sediment discharged to a receiving stream settles downstream and impacts a breeding area of a listed aquatic species.)

“Receiving water” means the “Water of the United States” as defined in 40 CFR §122.2 into which the regulated stormwater discharges.

“Runoff coefficient” means the fraction of total rainfall that will appear at the conveyance as runoff.

“Semi-Arid Areas” means areas with an average annual rainfall of 10 to 20 inches.

“Site” means the land or water area where any “facility or activity” is physically located or conducted, including adjacent land used in connection with the facility or activity.

“Small Construction Activity” is defined at 40 CFR §122.26(b)(15) and incorporated here by reference. A small construction activity includes clearing, grading, and excavating resulting in a land disturbance that will disturb equal to or greater than one (1) acre and less than five (5) acres of land or will disturb less than one (1) acre of total land area but is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one (1) acre and less than five (5) acres. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site.

“Stormwater” means stormwater runoff, snow melt runoff, and surface runoff and drainage.

“Stormwater Discharge-Related Activities” as used in this permit, include: activities that cause, contribute to, or result in stormwater point source pollutant discharges, including but not limited to: excavation, site development, grading and other surface disturbance activities; and measures to control stormwater including the siting, construction and operation of BMPs to control, reduce or prevent stormwater pollution.

“Total Maximum Daily Load” or “TMDL” means the sum of the individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure.

“Waters of the United States” is as defined at 40 CFR §122.2.

“Wetland” means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

ACRONYMS

BMP - Best Management Practices
CGP - Construction General Permit
CFR - Code of Federal Regulations
CWA - Clean Water Act
EPA - United States Environmental Protection Agency
ESA - Endangered Species Act
FWS - United States Fish and Wildlife Service
MS4 - Municipal Separate Storm Sewer System
MSGP - Multi-Sector General Permit
NHPA - National Historic Preservation Act
NMFS - United States National Marine Fisheries Service
NOI - Notice of Intent

NOT - Notice of Termination

NPDES - National Pollutant Discharge Elimination System

POTW - Publicly Owned Treatment Works

SHPO - State Historic Preservation Officer

SWPPP - Stormwater Pollution Prevention Plan

THPO - Tribal Historic Preservation Officer

TMDL - Total Maximum Daily Load

WQS - Water Quality Standard

Appendix B - Permit Areas Eligible for Coverage

Permit coverage for stormwater discharges from construction activity occurring within the following areas is provided by legally separate and distinctly numbered permits:

1. EPA Region 1: CT, MA, ME, NH, RI, VT

US EPA, Region 01
 Office of Ecosystem Protection
 NPDES Stormwater Program
 1 Congress St, Suite 1100 (CMU)
 Boston, MA 02114-2023

The States of Connecticut, Maine, Rhode Island, and Vermont are the NPDES Permitting Authority for the majority of discharges within their respective states.

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
MAR100000	Commonwealth of Massachusetts (except Indian country)
MAR10000I	Indian country within the State of Massachusetts
CTR10000I	Indian country within the State of Connecticut
NHR100000	State of New Hampshire
RIR10000I	Indian country within the State of Rhode Island
VTR10000F	Federal Facilities in the State of Vermont

2. EPA Region 2: NJ, NY, PR, VI

For NJ, NY, and VI:

US EPA, Region 02
 NPDES Stormwater Program
 290 Broadway, 24th Floor
 New York, NY 10007-1866

For PR:

US EPA, Region 02
 Caribbean Environmental Protection Division
 NPDES Stormwater Program
 1492 Ponce de Leon Ave
 Central Europa Building, Suite 417
 San Juan, PR 00907-4127

The State of New York is the NPDES Permitting Authority for the majority of discharges within its state. The State of New Jersey and the Virgin Islands are the NPDES Permitting Authority for all discharges within their respective states.

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
NYR10000I	Indian country within the State of New York

PRR100000

The Commonwealth of Puerto Rico

3. EPA Region 3: DE, DC, MD, PA, VA, WV

US EPA, Region 03
 NPDES Stormwater Program
 1650 Arch St
 Philadelphia, PA 19103

The State of Delaware is the NPDES Permitting Authority for the majority of discharges within its state. Maryland, Pennsylvania, Virginia, and West Virginia are the NPDES Permitting Authority for all discharges within their respective states.

<u>Permit No.</u>	<u>Areas of Coverage/Where EPA is Permitting Authority</u>
DCR100000	The District of Columbia
DER10000F	Federal Facilities in the State of Delaware

4. EPA Region 4: AL, FL, GA, KY, MS, NC, SC, TN

US EPA, Region 04
 Water Management Division
 NPDES Stormwater Program
 61 Forsyth St SW
 Atlanta, GA 30303-3104

Coverage Not Available. Construction activities in Region 4 must obtain permit coverage under an alternative permit.

5. EPA Region 5: IL, IN, MI, MN, OH, WI

US EPA, Region 05
 NPDES & Technical Support
 NPDES Stormwater Program
 77 W Jackson Blvd
 (WN-16J)
 Chicago, IL 60604-3507

The States of Michigan, Minnesota, and Wisconsin are the NPDES Permitting Authority for the majority of discharges within their respective states. The States of Illinois, Indiana, and Ohio are the NPDES Permitting Authorities for all discharges within their respective states.

<u>Permit No.</u>	<u>Areas of coverage/where EPA is Permitting Authority</u>
MIR10000I	Indian country within the State of Michigan

MNR10000I	Indian country within the State of Minnesota, except the Grand Portage Band of Chippewa
WIR10000I	Indian country within the State of Wisconsin, except the Sokaogon Chippewa (Mole Lake) Community.

6. EPA Region 6: AR, LA, OK, TX, NM (except see Region 9 for Navajo lands, and see Region 8 for Ute Mountain Reservation lands)

US EPA, Region 06
 NPDES Stormwater Program
 1445 Ross Ave, Suite 1200
 Dallas, TX 75202-2733

The States of Louisiana, Oklahoma, and Texas are the NPDES Permitting Authority for the majority of discharges within their respective state. The State of Arkansas is the NPDES Permitting Authority for all discharges within its respective state.

<u>Permit No.</u>	<u>Areas of coverage/where EPA is Permitting Authority</u>
LAR10000I	Indian country within the State of Louisiana
NMR100000	The State of New Mexico, except Indian country
NMR10000I	Indian country within the State of New Mexico, except Navajo Reservation Lands that are covered under Arizona permit AZR10000I and Ute Mountain Reservation Lands that are covered under Colorado permit COR10000I.
OKR10000I	Indian country within the State of Oklahoma
OKR10000F	Discharges in the State of Oklahoma that are not under the authority of the Oklahoma Department of Environmental Quality, including activities associated with oil and gas exploration, drilling, operations, and pipelines (includes SIC Groups 13 and 46, and SIC codes 492 and 5171), and point source discharges associated with agricultural production, services, and silviculture (includes SIC Groups 01, 02, 07, 08, 09).
TXR10000F	Discharges in the State of Texas that are not under the authority of the Texas Commission on Environmental Quality (formerly TNRCC), including activities associated with the exploration, development, or production of oil or gas or geothermal resources, including transportation of crude oil or natural gas by pipeline.
TXR10000I	Indian country within the State of Texas.

7. EPA Region 7: IA, KS, MO, NE (except see Region 8 for Pine Ridge Reservation Lands)

US EPA, Region 07
 NPDES Stormwater Program
 901 N 5th St
 Kansas City, KS 66101

The States of Iowa, Kansas, and Nebraska are the NPDES Permitting Authority for the majority of discharges within their respective states. The State of Missouri is the NPDES Permitting Authority for all discharges within its state.

<u>Permit No.</u>	<u>Areas of coverage/where EPA is Permitting Authority</u>
IAR10000I	Indian country within the State of Iowa
KSR10000I	Indian country within the State of Kansas
NER10000I	Indian country within the State of Nebraska, except Pine Ridge Reservation lands (see Region 8)

8. EPA Region 8: CO, MT, ND, SD, WY, UT (except see Region 9 for Goshute Reservation and Navajo Reservation Lands), the Ute Mountain Reservation in NM, and the Pine Ridge Reservation in NE.

US EPA, Region 08
 NPDES Stormwater Program
 999 18th St, Suite 300
 (EPR-EP)
 Denver, CO 80202-2466

The States of Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming are the NPDES Permitting Authority for the majority of discharges within their respective states.

<u>Permit No.</u>	<u>Areas of coverage/where EPA is Permitting Authority</u>
COR10000F	Federal Facilities in the State of Colorado, except those located on Indian country
COR10000I	Indian country within the State of Colorado, as well as the portion of the Ute Mountain Reservation located in New Mexico
MTR10000I	Indian country within the State of Montana
NDR10000I	Indian country within the State of North Dakota, as well as that portion of the Standing Rock Reservation located in South Dakota (except for the portion of the lands within the former boundaries of the Lake Traverse Reservation which is covered under South Dakota permit SDR10000I listed below)
SDR10000I	Indian country within the State of South Dakota, as well as the portion of the Pine Ridge Reservation located in Nebraska and the portion of the lands within the former boundaries of the Lake Traverse Reservation located in North Dakota (except for the Standing Rock Reservation which is covered under North Dakota permit NDR10000I listed above)
UTR10000I	Indian country within the State of Utah, except Goshute and Navajo Reservation lands (see Region 9)
WYR10000I	Indian country within the State of Wyoming

9. EPA Region 9: CA, HI, NV, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Goshute Reservation in UT and NV, the Navajo Reservation in UT, NM, and AZ, the Duck Valley Reservation in ID, and the Fort McDermitt Reservation in OR.

US EPA, Region 09
 NPDES Stormwater Program
 75 Hawthorne St
 San Francisco, CA 94105-3901

The States of Arizona, California and Nevada are the NPDES Permitting Authority for the majority of discharges within their respective states. The State of Hawaii is the NPDES Permitting Authority for all discharges within its state.

<u>Permit No.</u>	<u>Areas of coverage/where EPA is Permitting Authority</u>
ASR100000	The Island of American Samoa
AZR100001	Indian country within the State of Arizona, as well as Navajo Reservation lands in New Mexico and Utah
CAR100001	Indian country within the State of California
GUR100000	The Island of Guam
JAR100000	Johnston Atoll
MWR100000	Midway Island and Wake Island
MPR100000	Commonwealth of the Northern Mariana Islands
NVR100001	Indian country within the State of Nevada, as well as the Duck Valley Reservation in Idaho, the Fort McDermitt Reservation in Oregon and the Goshute Reservation in Utah

10. EPA Region 10: AK, WA, ID (except see Region 9 for Duck Valley Reservation Lands), and OR (except see Region 9 for Fort McDermitt Reservation).

US EPA, Region 10
 NPDES Stormwater Program
 1200 6th Ave (OW-130)
 Seattle, WA 98101-1128
 Phone: (206) 553-6650

The States of Oregon and Washington are the NPDES Permitting Authority for the majority of discharges within their respective states.

<u>Permit No.</u>	<u>Areas of coverage/where EPA is Permitting Authority</u>
AKR100001	Indian country within the state of Alaska
IDR100000	The State of Idaho, except Indian country
IDR100001	Indian country within the State of Idaho, except Duck Valley Reservation lands (see Region 9)
ORR100001	Indian country within the State of Oregon, except Fort McDermitt Reservation lands (see Region 9)

WAR10000F	Federal Facilities in the State of Washington, except those located on Indian country
WAR10000I	Indian country within the State of Washington

Appendix C - Endangered Species Act Review Procedures

You must meet at least one of the six criteria in Part 1.3.C.6 to be eligible for coverage under this permit. You must follow the procedures in this Appendix to assess the potential effects of stormwater discharges and stormwater discharge-related activities on listed species and their critical habitat. When evaluating these potential effects, operators must evaluate the entire project area.

For purposes of this Appendix, the term “project area” is inclusive of the term “Action Area.” Action area is defined in 50 CFR §402.02 as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action.

This includes areas beyond the footprint of the construction area that may be affected by stormwater discharges and stormwater discharge related activities. “Project area” is defined in Appendix A.

(Operators who are eligible and able to certify eligibility under Criterion B, C, D, or F of Part 1.3.C.6 because of a previously issued ESA section 10 permit, a previously completed ESA section 7 consultation, or because the operator’s activities were already addressed in another operator’s certification of eligibility may proceed directly to Step Four.)

Step One: Determine if Listed Threatened or Endangered Species are Present On or Near Your Project Area

You must determine, to the best of your knowledge, whether listed species are located on or near your project area. To make this determination, you should:

- Determine if listed species are in your county or township. The local offices of the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), and State or Tribal Heritage Centers often maintain lists of federally listed endangered or threatened species on their internet sites. Visit <http://www.epa.gov/npdes/stormwater/cgp> to find the appropriate site for your state or check with your local office. In most cases, these lists allow you to determine if there are listed species in your county or township.
- If there are listed species in your county or township, check to see if critical habitat has been designated and if that area overlaps or is near your project area.
- Contact your local FWS, NMFS, or State or Tribal Heritage Center to determine if the listed species could be found on or near your project area and if any critical habitat areas have been designated that overlap or are near your project area. Critical habitat areas maybe designated independently from the listed species for your county, so even if there are no listed species in your county or township, you must still contact one of the agencies mentioned above to determine if there are any critical habitat areas on or near your project area.

You can also find critical habitat designations and associated requirements at 50 CFR Parts 17 and 226. <http://www.access.gpo.gov>.

- If there are no listed species in your county or township, no critical habitat areas on or near your project area, or if your local FWS, NMFS, or State or Tribal Heritage Center indicates that listed species are not a concern in your part of the county or township, you may check box A on the Notice of Intent Form.
- If there are listed species and if your local FWS, NMFS, or State or Tribal Heritage Center indicates that these species could exist on or near your project area, you will need to do one or more of the following:
 - Conduct visual inspections: This method may be particularly suitable for construction sites that are smaller in size or located in non-natural settings such as highly urbanized areas or industrial parks where there is little or no natural habitat, or for construction activities that discharge directly into municipal stormwater collection systems.
 - Conduct a formal biological survey. In some cases, particularly for larger construction sites with extensive stormwater discharges, biological surveys may be an appropriate way to assess whether species are located on or near the project area and whether there are likely adverse effects to such species. Biological surveys are frequently performed by environmental consulting firms. A biological survey may in some cases be useful in conjunction with Steps Two, Three, or Four of these instructions.
 - Conduct an environmental assessment under the National Environmental Policy Act (NEPA). Such reviews may indicate if listed species are in proximity to the project area. Coverage under the CGP does not trigger such a review because the CGP does not regulate new sources (that is, dischargers subject to New Source Performance Standards under section 306 of the Clean Water Act), and is thus statutorily exempted from NEPA. See CWA section 511(c). However, some construction activities might require review under NEPA for other reasons such as federal funding or other federal involvement in the project.
 - If listed threatened or endangered species or critical habitat are present in the project area, you must look at impacts to species and/or habitat when following Steps Two through Four. Note that many but not all measures imposed to protect listed species under these steps will also protect critical habitat. Thus, meeting the eligibility requirements of this CGP may require measures to protect critical habitat that are separate from those to protect listed species.

Step Two: Determine if the Construction Activity’s Stormwater Discharges or Stormwater Discharge- Related Activities Are Likely to Adversely Affect Listed Threatened or Endangered Species or Designated Critical Habitat

To receive CGP coverage, you must assess whether your stormwater discharges or stormwater discharge related activities is likely to adversely affect listed threatened or endangered species or designated critical habitat that are present on or near your project area.

Potential adverse effects from stormwater discharges and stormwater discharge-related activities include:

- *Hydrological.* Stormwater discharges may cause siltation, sedimentation or induce other changes in receiving waters such as temperature, salinity or pH. These effects will vary with the amount of stormwater discharged and the volume and condition of the receiving water. Where a stormwater discharge constitutes a minute portion of the total volume of the receiving water, adverse hydrological effects are less likely. Construction activity itself may also alter drainage patterns on a site where construction occurs that can impact listed species or critical habitat.
- *Habitat.* Excavation, site development, grading, and other surface disturbance activities from construction activities, including the installation or placement of stormwater BMPs, may adversely affect listed species or their habitat. Stormwater may drain or inundate listed species habitat.
- *Toxicity.* In some cases, pollutants in stormwater may have toxic effects on listed species.

The scope of effects to consider will vary with each site. If you are having difficulty determining whether your project is likely to adversely affect listed species or critical habitat, or one of the Services has already raised concerns to you, you must contact the appropriate office of the FWS, NMFS or Natural Heritage Center for assistance. If adverse effects are not likely, then you may check box E on the NOI form and apply for coverage under the CGP. If the discharge may adversely effect listed species or critical habitat, you must follow Step Three.

Step Three: Determine if Measures Can Be Implemented to Avoid Adverse Effects

If you make a preliminary determination that adverse effects are likely to occur, you can still receive coverage under Criterion E of Part 1.3.C.6 of the CGP if appropriate measures are undertaken to avoid or eliminate the likelihood of adverse effects prior to applying for CGP coverage. These measures may involve relatively simple changes to construction activities such as re-routing a stormwater discharge to bypass an area where species are located, relocating BMPs, or by changing the “footprint” of the construction activity. You should contact the FWS and/or NMFS to see what appropriate measures might be suitable to avoid or eliminate the likelihood of adverse impacts to listed species and/or critical habitat. (See 50 CFR §402.13(b)). This can entail the initiation of informal consultation with the FWS and/or NMFS (described in more detail in Step Four).

If you adopt measures to avoid or eliminate adverse effects, you must continue to abide by those measures for the duration of the construction project and coverage under the CGP. These measures must be described in the SWPPP and are enforceable CGP conditions and/or conditions for meeting the eligibility criteria in Part 1.3. If appropriate measures to avoid the likelihood of adverse effects are not available, you must follow Step Four.

Step Four: Determine if the Eligibility Requirements of Criterion B, C, D, or F of Part 1.3.C.6 Can Be Met

Where adverse effects are likely, you must contact the FWS and/or NMFS. You may still be eligible for CGP coverage if any likely adverse effects can be addressed through meeting Criterion B, C, D, or F of Part 1.3.C.6 of the CGP. These criteria are as follows:

1. *An ESA Section 7 Consultation Is Performed for Your Activity (See Criterion B or C of Part 1.3.C.6 of the CGP).*

Formal or informal ESA section 7 consultation is performed with the FWS and/or NMFS that addresses the effects of your stormwater discharges and stormwater discharge-related activities on federally-listed and threatened species and designated critical habitat. FWS and/or NMFS may request that consultation take place if any actions are identified that may affect listed species or critical habitat. In order to be eligible for coverage under this permit, consultation must result in a “no jeopardy opinion” or a written concurrence by the Service(s) on a finding that your stormwater discharge(s) and stormwater discharge-related activities are not likely to adversely affect listed species or critical habitat (For more information on consultation, see 50 CFR §402). If you receive a “jeopardy opinion,” you may continue to work with the FWS and/or NMFS and your permitting authority to modify your project so that it will not jeopardize listed species or designated critical habitat.

Most consultations are accomplished through informal consultation. By the terms of this CGP, EPA has automatically designated operators as non-federal representatives for the purpose of conducting informal consultations. See Part 1.3.C.6 and 50 CFR §402.08 and §402.13. When conducting informal ESA section 7 consultation as a non-federal representative, you must follow the procedures found in 50 CFR Part 402 of the ESA regulations. You must notify FWS and/or NMFS of your intention and agreement to conduct consultation as a non-federal representative.

Consultation may occur in the context of another federal action at the construction site (e.g., where ESA section 7 consultation was performed for issuance of a wetlands dredge and fill permit for the project or where a NEPA review is performed for the project that incorporates a section 7 consultation). Any terms and conditions developed through consultations to protect listed species and critical habitat must be incorporated into the SWPPP. As noted above, operators may, if they wish, initiate consultation with the Services at Step Four.

Whether ESA section 7 consultation must be performed with either the FWS, NMFS or both Services depends on the listed species that may be affected by the operator’s activity. In general, NMFS has jurisdiction over marine, estuaries, and anadromous species. Operators should also be aware that while formal section 7 consultation provides protection from incidental takings liability, informal consultation does not.

2. *An Incidental Taking Permit Under Section 10 of the ESA is Issued for the Operators Activity (See Criterion D of Part 1.3.C.6 of the CGP).*

Your construction activities are authorized through the issuance of a permit under section 10 of the ESA and that authorization addresses the effects of your stormwater discharge(s) and stormwater discharge-related activities on federally-listed species and designated critical habitat. You must follow FWS and/or NMFS procedures when applying for an ESA Section 10 permit (see 50 CFR §17.22(b)(1) for FWS and §222.22

for NMFS). Application instructions for section 10 permits for FWS and NMFS can be obtained by accessing the FWS and NMFS websites (<http://www.fws.gov> and <http://www.nmfs.noaa.gov>) or by contacting the appropriate FWS and NMFS regional office.

3. *You are Covered Under the Eligibility Certification of Another Operator for the Project Area (See Criterion F of Part 1.3.C.6 of the CGP).*

Your stormwater discharges and stormwater discharge-related activities were already addressed in another operator's certification of eligibility under Criteria A through E of Part 1.3.C.6 which also included your project area. For example, a general contractor or developer may have completed and filed an NOI for the entire project area with the necessary Endangered Species Act certifications (criteria A-E), subcontractors may then rely upon that certification and must comply with any conditions resulting from that process. By certifying eligibility under Criterion F of Part 1.3.C.6, you agree to comply with any measures or controls upon which the other operator's certification under Criterion B, C, or D of Part 1.3.C.6 was based. Certification under Criterion F of Part 1.3.C.6 is discussed in more detail in the Fact Sheet that accompanies this permit.

You must comply with any terms and conditions imposed under the eligibility requirements of Criterion A through F to ensure that your stormwater discharges and stormwater discharge-related activities are protective of listed species and/or critical habitat. Such terms and conditions must be incorporated in the project's SWPPP. If the eligibility requirements of Part 1.3.C.6 cannot be met, then you are not eligible for coverage under the CGP. In these instances, you may consider applying to EPA for an individual permit.

Appendix D - Small Construction Waivers and Instructions

These waivers are only available to stormwater discharges associated with small construction activities (i.e., 1-5 acres). As the operator of a small construction activity, you may be able to qualify for a waiver in lieu of needing to obtain coverage under this general permit based on: (A) a low rainfall erosivity factor, (B) a TMDL analysis, or (C) an equivalent analysis that determines allocations for small construction sites are not needed. Each operator, otherwise needing permit coverage, must notify EPA of its intention for a waiver. It is the responsibility of those individuals wishing to obtain a waiver from coverage under this general permit to submit a complete and accurate waiver certification as described below. Where the operator changes or another is added during the construction project, the new operator must also submit a waiver certification to be waived.

A. Rainfall Erosivity Waiver

Under this scenario the small construction project's rainfall erosivity factor calculation ("R" in the Revised Universal Soil Loss Equation) is less than 5 during the period of construction activity. The operator must certify to the EPA that construction activity will occur only when the rainfall erosivity factor is less than 5. The period of construction activity begins at initial earth disturbance and ends with final stabilization. Where vegetation will be used for final stabilization, the date of installation of a stabilization practice that will provide interim non-vegetative stabilization can be used for the end of the construction period, provided the operator commits (as a condition of waiver eligibility) to periodically inspect and properly maintain the area until the criteria for final stabilization as defined in the construction general permit have been met. If use of this interim stabilization eligibility condition was relied on to qualify for the waiver, signature on the waiver with its certification statement constitutes acceptance of and commitment to complete the final stabilization process. The operator must submit a waiver certification to EPA prior to commencing construction activities.

Note: The rainfall erosivity factor "R" is determined in accordance with Chapter 2 of Agriculture Handbook Number 703, Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE), pages 21–64, dated January 1997; United States Department of Agriculture (USDA), Agricultural Research Service.

EPA has developed an online rainfall erosivity calculator to help small construction sites determine potential eligibility for the rainfall erosivity waiver. You can access the calculator from EPA's website at: www.epa.gov/npdes/stormwater/lew. The R factor can easily be calculated by using the construction site latitude/longitude or address and estimated start and end dates of construction. This calculator may also be useful in determining the time periods during which construction activity could be waived from permit coverage. You may find that moving your construction activity by a few weeks or expediting site stabilization will allow you to qualify for the waiver. Use this online calculator or the Construction Rainfall Erosivity Waiver Fact Sheet

(www.epa.gov/npdes/pubs/fact3-1.pdf) to assist in determining the R Factor for your small construction site.

If you are the operator of the construction activity and eligible for a waiver based on low erosivity potential, you may submit a rainfall erosivity waiver electronically via EPA's eNOI system (www.epa.gov/npdes/eNOI) or provide the following information on the waiver certification form in order to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operators;
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The rainfall erosivity factor calculation that applies to the active construction phase at your project site; and
5. A statement, signed and dated by an authorized representative as provided in Appendix G, Subsection 11, that certifies that the construction activity will take place during a period when the value of the rainfall erosivity factor is less than five.

You can access the waiver certification form from EPA's website at:

(http://www.epa.gov/npdes/pubs/construction_waiver_form.pdf). Paper copies of the form must be sent to one of the addresses listed in Part D of this section.

Note: If the R factor is 5 or greater, you cannot apply for the rainfall erosivity waiver, and must apply for permit coverage as per Subpart 2.1 of the construction general permit, unless you qualify for the Water Quality Waiver as described below.

If your small construction project continues beyond the projected completion date given on the waiver certification, you must recalculate the rainfall erosivity factor for the new project duration. If the R factor is below five (5), you must update all applicable information on the waiver certification and retain a copy of the revised waiver as part of the site SWPPP. The new waiver certification must be submitted prior to the projected completion date listed on the original waiver form to assure your exemption from permitting requirements is uninterrupted. If the new R factor is five (5) or above, you must submit an NOI as per Part 2.

B. TMDL Waiver

This waiver is available if EPA has established or approved a TMDL that addresses the pollutant(s) of concern and has determined that controls on stormwater discharges from small construction activity are not needed to protect water quality. The pollutant(s) of concern include sediment (such as total suspended solids, turbidity or siltation) and any other pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from the construction activity. Information on TMDLs that have been established or approved by EPA is available from EPA online at <http://www.epa.gov/owow/tmdl/> and from state and tribal water quality agencies.

If you are the operator of the construction activity and eligible for a waiver based on compliance with an EPA established or approved TMDL, you must provide the following information on the Waiver Certification form in order to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operator(s);
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The name of the water body(s) that would be receiving stormwater discharges from your construction project;
5. The name and approval date of the TMDL;
6. A statement, signed and dated by an authorized representative as provided in Appendix G, Subsection 11, that certifies that the construction activity will take place and that the stormwater discharges will occur, within the drainage area addressed by the TMDL.

C. Equivalent Analysis Waiver

This waiver is available for non-impaired waters only. The operator can develop an equivalent analysis that determines allocations for his small construction site for the pollutant(s) of concern or determines that such allocations are not needed to protect water quality. This waiver requires a small construction operator to develop an equivalent analysis based on existing in-stream concentrations, expected growth in pollutant concentrations from all sources, and a margin of safety.

If you are a construction operator who wants to use this waiver, you must develop your equivalent analysis and provide the following information to be waived from permitting requirements:

1. Name, address and telephone number of the construction site operator(s);
2. Name (or other identifier), address, county or similar governmental subdivision, and latitude/longitude of the construction project or site;
3. Estimated construction start and completion (i.e., final stabilization) dates, and total acreage (to the nearest quarter acre) to be disturbed;
4. The name of the water bodies that would be receiving stormwater discharges from your construction project;
5. Your equivalent analysis;
6. A statement, signed and dated by an authorized representative as provided in Appendix G, Subsection 11, that certifies that the construction activity will take place and that the stormwater discharges will occur, within the drainage area addressed by the equivalent analysis.

D. Waiver Deadlines and Submissions

1. Waiver certifications must be submitted prior to commencement of construction activities.
2. If you submit a TMDL or equivalent analysis waiver request, you are not waived until EPA approves your request. As such, you may not commence construction activities until receipt of approval from EPA.
3. Late Notifications: Operators are not prohibited from submitting waiver certifications after initiating clearing, grading, excavation activities, or other construction activities. The Agency reserves the right to take enforcement for any unpermitted discharges that occur between the time construction commenced and waiver authorization is granted.

Submittal of a waiver certification is an optional alternative to obtaining permit coverage for discharges of stormwater associated with small construction activity, provided you qualify for the waiver. Any discharge of stormwater associated with small construction activity not covered by either a permit or a waiver may be considered an unpermitted discharge under the Clean Water Act. As mentioned above, EPA reserves the right to take enforcement for any unpermitted discharges that occur between the time construction commenced and either discharge authorization is granted or a complete and accurate waiver certification is submitted. EPA may notify any operator covered by a waiver that they must apply for a permit. EPA may notify any operator who has been in non-compliance with a waiver that they may no longer use the waiver for future projects. Any member of the public may petition EPA to take action under this provision by submitting written notice along with supporting justification.

Complete and accurate Rainfall Erosivity waiver certifications not otherwise submitted electronically via EPA's eNOI system (www.epa.gov/npdes/eNOI) must be sent to one of the following addresses:

Regular U.S. Mail Delivery

EPA Stormwater Notice Processing
Center
Mail Code 4203M
U.S. EPA
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Overnight/Express Mail Delivery

EPA Stormwater Notice Processing
Center
Room 7420
U.S. EPA
1201 Constitution Avenue, NW
Washington, DC 20004

Complete and accurate TMDL or equivalent analysis waiver requests must be sent to the applicable EPA Region office specified in Appendix B.

Appendix E - Notice of Intent Form and Instructions

From the effective date of this permit, operators are to use the Notice of Intent Form contained in this Appendix to obtain permit coverage.

Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity Under an NPDES General Permit

NPDES Form Date

This Form Replaces Form 3510-9 (8/98)

Form Approved OMB Nos. 2040-0188 and 2040-0211

Who Must File an NOI Form

Under the provisions of the Clean Water Act, as amended (33 U.S.C. 1251 et. seq.; the Act), federal law prohibits storm water discharges from certain construction activities to waters of the U.S. unless that discharge is covered under a National Pollutant Discharge Elimination System (NPDES) Permit. Operator(s) of construction sites where one or more acres are disturbed, smaller sites that are part of a larger common plan of development or sale where there is a cumulative disturbance of at least one acre, or any other site specifically designated by the Director, must submit an NOI to obtain coverage under an NPDES general permit. Each person, firm, public organization, or any other entity that meets either of the following criteria must file this form: (1) they have operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or (2) they have day-to-day operational control of those activities at the project necessary to ensure compliance with SWPPP requirements or other permit conditions. If you have questions about whether you need an NPDES storm water permit, or if you need information to determine whether EPA or your state agency is the permitting authority, refer to www.epa.gov/npdes/stormwater/cgp or telephone the Storm Water Notice Processing Center at (866) 352-7755.

Where to File NOI Form

See the applicable CGP for information on where to send your completed NOI form.

Completing the Form

Obtain and read a copy of the appropriate EPA Storm Water Construction General Permit for your area. To complete this form, type or print uppercase letters, in the appropriate areas only. Please place each character between the marks (abbreviate if necessary to stay within the number of characters allowed for each item). Use one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions on this form, refer to www.epa.gov/npdes/stormwater/cgp or telephone the Storm Water Notice Processing Center at (866) 352-7755. Please submit original document with signature in ink. Do not send a photocopied signature.

Section I. Permit Number

Provide the number of the permit under which you are applying for coverage (see Appendix B of the general permit for the list of eligible permit numbers).

Section II. Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the project described in this application. An operator of a project is a legal entity that controls at least a portion of site operations and is not necessarily the site manager. Provide the employer identification number (EIN from the Internal Revenue Service;

IRS), also commonly referred to as your taxpayer ID. If the applicant does not have an EIN enter "NA" in the space provided. Also provide the operator's mailing address, telephone number, fax number (optional) and e-mail address (to be notified via e-mail of NOI approval when available). Correspondence for the NOI will be sent to this address.

Section III. Project/Site Information

Enter the official or legal name and complete street address, including city, state, zip code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for permit coverage to be granted.

The applicant must also provide the latitude and longitude of the facility either in degrees, minutes, seconds; degrees, minutes, decimal; or decimal format. The latitude and longitude of your facility can be determined in several different ways, including through the use of global positioning system (GPS) receivers, U.S. Geological Survey (U.S.G.S.) topographic or quadrangle maps, and EPA's web-based siting tools, among others. Refer to www.epa.gov/npdes/stormwater/cgp for further guidance on the use of these methodologies. For consistency, EPA requests that measurements be taken from the approximate center of the construction site. Applicants must specify which method they used to determine latitude and longitude. If a U.S.G.S. topographic map is used, applicants are required to specify the scale of the map used.

Indicate whether the project is in Indian country, and if so, provide the name of the Reservation. If the project is in Indian Country Lands that are not part of a Reservation, indicate "not applicable" in the space provided.

Enter the estimated construction start and completion dates using four digits for the year (i.e., 05/27/1998). Enter the estimated area to be disturbed including but not limited to: grubbing, excavation, grading, and utilities and infrastructure installation. Indicate to the nearest quarter acre. Note: 1 acre = 43,560 sq. ft.

Section IV. SWPPP Information

Indicate whether or not the SWPPP was prepared in advance of filing the NOI form. Check the appropriate box for the location where the SWPPP may be viewed. Provide the name, fax number (optional), and e-mail address of the contact person if different than that listed in Section II of the NOI form.

Section V. Discharge Information

Enter the name(s) of receiving waterbodies to which the project's storm water will discharge. These should be the first bodies of water that the discharge will reach. (Note: If you discharge to more than one waterbody, please indicate all such waters in the space provided and attach a separate sheet if necessary.) For example, if the discharge leaves your

Notice of Intent (NOI) for Storm Water Discharges Associated with Construction Activity Under an NPDES General Permit

NPDES Form Date

This Form Replaces Form 3510-9 (8/98)

Form Approved OMB Nos. 2040-0188 and 2040-0211

site and travels through a roadside swale or a storm sewer and then enters a stream that flows to a river, the stream would be the receiving waterbody. Waters of the U.S. include lakes, streams, creeks, rivers, wetlands, impoundments, estuaries, bays, oceans, and other surface bodies of water within the confines of the U.S. and U.S. coastal waters. Waters of the U.S. do not include man-made structures created solely for the purpose of wastewater treatment. U.S. Geological Survey topographical maps may be used to make this determination. If the map does not provide a name, use a format such as "unnamed tributary to Cross Creek". If you discharge into a municipal separate storm sewer system (MS4), you must identify the waterbody into which that portion of the storm sewer discharges. That information should be readily available from the operator of the MS4.

Indicate whether your storm water discharges from construction activities will be consistent with the assumptions and requirements of applicable EPA approved or established TMDL(s). To answer this question, refer to www.epa.gov/npdes/stormwater/cgp for state- and regional-specific TMDL information related to the construction general permit. You may also have to contact your EPA regional office or state agency. If there are no applicable TMDLs or no related requirements, please check the "yes" box in the NOI form.

Section VI. Endangered Species Information

Indicate for which criterion (i.e., A, B, C, D, E, or F) of the permit the applicant is eligible with regard to protection of federally listed endangered and threatened species, and designated critical habitat. See Part 1.3.C.6 and Appendix C of the permit. If you select criterion F, provide the permit tracking number of the operator under which you are certifying eligibility. The permit tracking number is the number assigned to the operator by the Storm Water Notice Processing Center after EPA acceptance of a complete NOI.

Section VII. Certification Information

All applications, including NOIs, must be signed as follows:
For a corporation: By a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means:

(i) 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 (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or

delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated NOI form will not be considered eligible for permit coverage. If the NOI was prepared by someone other than the certifier (for example, if the NOI was prepared by the facility SWPPP contact or a consultant for the certifier's signature), include the name, organization, phone number and email address of the NOI preparer.

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 3.7 hours. This estimate includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Chief, Information Policy Branch 2136, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460. Include the OMB control number on any correspondence. Do not send the completed form to this address.

Visit this website for mailing instructions:

www.epa.gov/npdes/stormwater/mail

Visit this website for instructions on how to submit electronically:

www.epa.gov/npdes/stormwater/enoi

Appendix F - Notice of Termination Form and Instructions

From the effective date of this permit, operators are to use the Notice of Termination Form contained in this Appendix to terminate permit coverage.

Instructions for Completing EPA Form 3510-13

Notice of Termination (NOT) of Coverage Under an NPDES General Permit for Stormwater Discharges Associated with Construction Activity

NPDES Form

This Form Replaces Form 3517-7 (8-98)

Form Approved OMB Nos. 2040-0086 and 2040-0211

Who May File an NOT Form

Permittees who are presently covered under the EPA-issued National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction Activity may submit an NOT form when final stabilization has been achieved on all portions of the site for which you are responsible; another operator has assumed control in accordance with Appendix G, Section 11.C of the General Permit over all areas of the site that have not been finally stabilized; coverage under an alternative NPDES permit has been obtained; or for residential construction only, temporary stabilization has been completed and the residence has been transferred to the homeowner.

"Final stabilization" means that all soil disturbing activities at the site have been completed and that a uniform perennial vegetative cover with a density of at least 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed. See "final stabilization" definition in Appendix A of the Construction General Permit for further guidance where background native vegetation covers less than 100 percent of the ground, in arid or semi-arid areas, for individual lots in residential construction, and for construction projects on land used for agricultural purposes.

Completing the Form

Type or print, using uppercase letters, in the appropriate areas only. Please place each character between the marks. Abbreviate if necessary to stay within the number of characters allowed for each item. Use only one space for breaks between words, but not for punctuation marks unless they are needed to clarify your response. If you have any questions about this form, refer to www.epa.gov/npdes/stormwater/cgp or telephone the Stormwater Notice Processing Center at (866) 352-7755. Please submit original document with signature in ink - do not send a photocopied signature.

Section I. Permit Number

Enter the existing NPDES Stormwater General Permit Tracking Number assigned to the project by EPA's Stormwater Notice Processing Center. If you do not know the permit tracking number, refer to www.epa.gov/npdes/stormwater/cgp or contact the Stormwater Notice Processing Center at (866) 352-7755.

Indicate your reason for submitting this Notice of Termination by checking the appropriate box. Check only one:

Final stabilization has been achieved on all portions of the site for which you are responsible.

Another operator has assumed control according to Appendix G, Section 11.C over all areas of the site that have not been finally stabilized.

Coverage under an alternative NPDES permit has been obtained.

For residential construction only, if temporary stabilization has been completed and the residence has been transferred to the homeowner.

Section II. Operator Information

Provide the legal name of the person, firm, public organization, or any other entity that operates the project described in this application and is covered by the permit tracking number identified in Section I. The operator of the project is the legal entity that controls the site operation, rather than the site manager. Provide the employer identification number (EIN from the Internal Revenue Service; IRS). If the applicant does not have an EIN enter "NA" in the space provided. Enter the

complete mailing address, telephone number, and email address of the operator. Optional: enter the fax number of the operator.

Section III. Project/Site Information

Enter the official or legal name and complete street address, including city, state, zip code, and county or similar government subdivision of the project or site. If the project or site lacks a street address, indicate the general location of the site (e.g., Intersection of State Highways 61 and 34). Complete site information must be provided for termination of permit coverage to be valid.

Section IV. Certification Information

All applications, including NOIs, must be signed as follows:
For a corporation: By a responsible corporate officer. For the purpose of this Part, a responsible corporate officer means: (i) 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 (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated NOT form will not be considered valid termination of permit coverage.

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 0.5 hours per notice, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments regarding the burden estimate, any other aspect of the collection of information, or suggestions for improving this form including any suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, 2136, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460. Include the OMB number on any correspondence. Do not send the completed form to this address.

Visit this website for mailing instruction:
www.epa.gov/npdes/stormwater/mail

Visit this website for instructions on how to submit electronically:
www.epa.gov/npdes/stormwater/enoi

Appendix G - Standard Permit Conditions
STANDARD PERMIT CONDITIONS

1. Duty To Comply

You must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

- A. You must comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
- B. The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. §2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. §3701 note) (currently \$27,500 per day for each violation).

The Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.

C. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Pursuant to 40 CFR Part 19 and the Act, administrative penalties for Class I violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. §2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. §3701 note) (currently \$11,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$27,500). Pursuant to 40 CFR Part 19 and the Act, penalties for Class II violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. §2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. §3701 note) (currently \$11,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$137,500).

2. Duty to Reapply

If you wish to continue an activity regulated by this permit after the expiration date of this permit, you must apply for and obtain a new permit.

3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for you in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to Mitigate

You must take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance

You must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by you to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by you only when the operation is necessary to achieve compliance with the conditions of this permit.

6. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. Your filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. Property Rights

This permit does not convey any property rights of any sort, or any exclusive privileges.

8. Duty to Provide Information

You must furnish to EPA, within a reasonable time, any information which EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. You must also furnish to EPA upon request, copies of records required to be kept by this permit.

9. Inspection and Entry

You must allow EPA, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

- A. Enter upon your premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- D. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

10. Monitoring and Records

- A. Samples and measurements taken for the purpose of monitoring must be representative of the monitored activity.
- B. You must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of EPA at any time.
- C. Records of monitoring information must include:
 1. The date, exact place, and time of sampling or measurements;
 2. The individual(s) who performed the sampling or measurements;
 3. The date(s) analyses were performed
 4. The individual(s) who performed the analyses;
 5. The analytical techniques or methods used; and
 6. The results of such analyses.
- D. Monitoring results must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, unless other test procedures have been specified in the permit.
- E. The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both.

11. Signatory Requirements

- A. All applications, including NOIs, must be signed as follows:
 1. For a corporation: By a responsible corporate officer. For the purpose of this Part, a responsible corporate officer means: (i) 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 (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
2. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or
 3. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this Part, a principal executive officer of a federal agency includes (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of EPA).
- B. All reports required by this permit, including SWPPPs, must be signed by a person described in Appendix G, Subsection 11.A above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
1. The authorization is made in writing by a person described in Appendix G, Subsection 11.A;
 2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and
 3. The signed and dated written authorization is included in the SWPPP. A copy must be submitted to EPA, if requested.
- C. Changes to Authorization. If an authorization under Part 2.1 is no longer accurate because a different operator has responsibility for the overall operation of the construction site, a new NOI satisfying the requirements of Part 2.1 must be submitted to EPA prior to or together with any reports, information, or applications to be signed by an authorized representative. The change in authorization must be submitted within the time frame specified in Part 2.4, and sent to the address specified in Part 2.2.
- D. Any person signing documents required under the terms of this permit must include the following certification:
- “I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons

directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

- E. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

12. Reporting Requirements

- A. **Planned changes.** You must give notice to EPA as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:
1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b); or
 2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR §122.42(a)(1).
- B. **Anticipated noncompliance.** You must give advance notice to EPA of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- C. **Transfers.** This permit is not transferable to any person except after notice to EPA. EPA may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act. (See 40 CFR §122.61; in some cases, modification or revocation and reissuance is mandatory.)
- D. **Monitoring reports.** Monitoring results must be reported at the intervals specified elsewhere in this permit.
1. Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by EPA for reporting results of monitoring of sludge use or disposal practices.
 2. If you monitor any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by EPA.
 3. Calculations for all limitations which require averaging of measurements must use an arithmetic mean.
- E. **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date.
- F. **Twenty-four hour reporting.**

1. You must report any noncompliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time you become aware of the circumstances. A written submission must also be provided within five days of the time you become aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
 2. The following shall be included as information which must be reported within 24 hours under this paragraph.
 - a. Any unanticipated bypass which exceeds any effluent limitation in the permit. (See 40 CFR §122.41(g).)
 - b. Any upset which exceeds any effluent limitation in the permit
 - c. Violation of a maximum daily discharge limitation for any of the pollutants listed by EPA in the permit to be reported within 24 hours. (See 40 CFR §122.44(g).)
 13. EPA may waive the written report on a case-by-case basis for reports under Appendix G, Subsection 12.F.2 if the oral report has been received within 24 hours.
- G. Other noncompliance. You must report all instances of noncompliance not reported under Appendix G, Subsections 12.D, 12.E, and 12.F, at the time monitoring reports are submitted. The reports must contain the information listed in Appendix G, Subsection 12.F.
- H. Other information. Where you become aware that you failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Permitting Authority, you must promptly submit such facts or information.

13. Bypass

A. Definitions.

1. Bypass means the intentional diversion of waste streams from any portion of a treatment facility
2. Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

B. Bypass not exceeding limitations. You may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Appendix G, Subsections 13.C and 13.D.

C. Notice—

1. Anticipated bypass. If you know in advance of the need for a bypass, you must submit prior notice, if possible at least ten days before the date of the bypass.
2. Unanticipated bypass. You must submit notice of an unanticipated bypass as required in Appendix G, Subsection 12.F (24-hour notice).

D. Prohibition of bypass.

1. Bypass is prohibited, and EPA may take enforcement action against you for bypass, unless:
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - c. You submitted notices as required under Appendix G, Subsection 13.C.
2. EPA may approve an anticipated bypass, after considering its adverse effects, if EPA determines that it will meet the three conditions listed above in Appendix G, Subsection 13.D.1.

14. Upset

- A. Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond your reasonable control. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- B. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Appendix G, Subsection 14.C are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- C. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 1. An upset occurred and that you can identify the cause(s) of the upset;
 2. The permitted facility was at the time being properly operated; and
 3. You submitted notice of the upset as required in Appendix G, Subsection 12.F.2.b(24 hour notice).
 4. You complied with any remedial measures required under Appendix G, Section 4.
- D. Burden of proof. In any enforcement proceeding, you, as the one seeking to establish the occurrence of an upset, has the burden of proof.

Appendix E – Site Inspection Forms (and Site Log)

The results of each inspection shall be summarized in an inspection report or checklist that is entered into or attached to the site log book. It is suggested that the inspection report or checklist be included in this appendix to keep monitoring and inspection information in one document, but this is optional. However, it is mandatory that this SWPPP and the site inspection forms be kept onsite at all times during construction, and that inspections be performed and documented as outlined below.

At a minimum, each inspection report or checklist shall include:

- a. Inspection date/times
- b. Weather information: general conditions during inspection, approximate amount of precipitation since the last inspection, and approximate amount of precipitation within the last 24 hours.
- c. A summary or list of all BMPs that have been implemented, including observations of all erosion/sediment control structures or practices.
- d. The following shall be noted:
 - i. locations of BMPs inspected,
 - ii. locations of BMPs that need maintenance,
 - iii. the reason maintenance is needed,
 - iv. locations of BMPs that failed to operate as designed or intended, and
 - v. locations where additional or different BMPs are needed, and the reason(s) why
- e. A description of stormwater discharged from the site. The presence of suspended sediment, turbid water, discoloration, and/or oil sheen shall be noted, as applicable.
- f. A description of any water quality monitoring performed during inspection, and the results of that monitoring.
- g. General comments and notes, including a brief description of any BMP repairs, maintenance or installations made as a result of the inspection.
- h. A statement that, in the judgment of the person conducting the site inspection, the site is either in compliance or out of compliance

with the terms and conditions of the SWPPP and the NPDES permit. If the site inspection indicates that the site is out of compliance, the inspection report shall include a summary of the remedial actions required to bring the site back into compliance, as well as a schedule of implementation.

- i. Name, title, and signature of person conducting the site inspection; and the following statement: “I certify under penalty of law that this report is true, accurate, and complete, to the best of my knowledge and belief”.

When the site inspection indicates that the site is not in compliance with any terms and conditions of the NPDES permit, the Permittee shall take immediate action(s) to: stop, contain, and clean up the unauthorized discharges, or otherwise stop the noncompliance; correct the problem(s); implement appropriate Best Management Practices (BMPs), and/or conduct maintenance of existing BMPs; and achieve compliance with all applicable standards and permit conditions. In addition, if the noncompliance causes a threat to human health or the environment, the Permittee shall comply with the Noncompliance Notification requirements in Special Condition S5.F of the permit.

INSTRUCTIONS

- The following provides a basis for a site inspection form. This particular form is optional and not required. However, if this form or a similar form is not used, the site inspection information required under this SWPPP and General Permit must still be included in the site log book. This form may be edited, replicated, and placed in this Appendix to function as the site log book for inspection and monitoring requirements. This will keep all SWPPP and monitoring information for the construction site in the same location for easy reference.

Site Inspection Form

General Information

Project Name: _____

Inspector Name: _____

Title: _____

CESCL # : _____

Date: _____

Time: _____

- Inspection Type:**
- After a rain event
 - Weekly
 - Turbidity/transparency benchmark exceedance
 - Other

Weather _____

Precipitation Since last inspection _____

In last 24 hours _____

Description of General Site Conditions: _____

Inspection of BMPs

Element 1: Mark Clearing Limits

BMP: _____

Location	Inspected			Functioning			Problem/Corrective Action
	Y	N		Y	N	NIP	

BMP: _____

Location	Inspected			Functioning			Problem/Corrective Action
	Y	N		Y	N	NIP	

Element 2: Establish Construction Access

BMP: _____

Location	Inspected			Functioning			Problem/Corrective Action
	Y	N		Y	N	NIP	

BMP: _____

Location	Inspected			Functioning			Problem/Corrective Action
	Y	N		Y	N	NIP	

Element 3: Control Flow Rates

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

Element 4: Install Sediment Controls

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

Element 5: Stabilize Soils

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

Element 6: Protect Slopes

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

--	--

Element 7: Protect Drain Inlets

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

Element 8: Stabilize Channels and Outlets

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

BMP:

Location	Inspected		Functioning			Problem/Corrective Action
	Y	N	Y	N	NIP	

Element 9: Control Pollutants

BMP:

Location	Inspected			Functioning			Problem/Corrective Action
	Y	N		Y	N	NIP	

BMP:

Location	Inspected			Functioning			Problem/Corrective Action
	Y	N		Y	N	NIP	

Element 10: Control Dewatering

BMP:

Location	Inspected			Functioning			Problem/Corrective Action
	Y	N		Y	N	NIP	

BMP:

Location	Inspected			Functioning			Problem/Corrective Action
	Y	N		Y	N	NIP	

BMP:

Location	Inspected			Functioning			Problem/Corrective Action
	Y	N		Y	N	NIP	

Stormwater Discharges From the Site				
		Observed?		Problem/Corrective Action
		Y	N	
Location				
	Turbidity	<input type="checkbox"/>	<input type="checkbox"/>	
	Discoloration	<input type="checkbox"/>	<input type="checkbox"/>	
	Sheen	<input type="checkbox"/>	<input type="checkbox"/>	
Location				
	Turbidity	<input type="checkbox"/>	<input type="checkbox"/>	
	Discoloration	<input type="checkbox"/>	<input type="checkbox"/>	
	Sheen	<input type="checkbox"/>	<input type="checkbox"/>	

Water Quality Monitoring	
Was any water quality monitoring conducted? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If water quality monitoring was conducted, record results here:	
If water quality monitoring indicated turbidity 250 NTU or greater; or transparency 6 cm or less, was the US EPA notified by phone within 24 hrs?	
<input type="checkbox"/> Yes <input type="checkbox"/> No	
If the US EPA was notified, indicate the date, time, contact name and phone number below:	
Date:	
Time:	
Contact Name:	
Phone #:	
General Comments and Notes	
Include BMP repairs, maintenance, or installations made as a result of the inspection.	
Were Photos Taken? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If photos taken, describe photos below:	

Appendix F – Engineering Calculations

INSTRUCTIONS

- Insert hard copies of all engineering calculations.



Consulting Engineers

1601 5th Avenue, Suite 1600
Seattle, WA 98101
(206) 622-5822 Fax (206) 622-8130

project	Tahoma Phase II	by	MSM	sheet no.
location	Kent, WA	date	9/1/2011	
client	VA			job no.
SwPPP Calcs Assumptions				

2 AND 10-YR RUNOFF PEAK FLOW PRIOR TO CONSTRUCTION

NORTH DISTURBED

SPOILS AREA = AC. (MODEL AS 50% GRASS, 50% IMP.)

HMA / AG. ROAD AREA = AC. (MODEL AS 100% IMP.)

FORESTED (REMAINDER) = AC.

TOTAL = AC.

SOUTH DISTURBED

IMPERVIOUS AREA = AC.

GRASS AREA = AC.

FORESTED AREA = AC.

TOTAL = AC.

NORTH
 2-yr peak = cfs
 10-yr peak = cfs

SOUTH
 2-yr peak = cfs
 10-yr peak = cfs

2 AND 10-YR RUNOFF PEAK FLOW DURING CONSTRUCTION

TOTAL NORTH DISTURBED = 9.42 AC.

TOTAL SOUTH DISTURBED = 9.76 AC.

(MODEL BOTH AS 50% GRASS, 50% IMP.)

NORTH
 2-yr peak = 2.24 cfs
 10-yr peak = 3.40 cfs

SOUTH
 2-yr peak = 2.33 cfs
 10-yr peak = 3.52 cfs

2 AND 10-YR RUNOFF PEAK FLOW AFTER CONSTRUCTION

North (see detention calcs)

2-yr peak = 0.580 cfs

10-yr peak = 0.936 cfs

These #'s used for prior to const. in 1st draft of SWPPP.

South (see detention calcs) (sum "S-1", "S-2", and "S-3" areas)

2-yr peak = 1.49 + 0.087 + 0.270 = 1.88 cfs

10-yr peak = 1.76 + 0.105 + 0.459 = 2.32 cfs

These #'s are combining peaks from disturbed + undisturbed tributary to pond "S-1", whereas "during const" flows only