

APPENDIX E

GOLDEN PASS

CONSTRUCTION PLANS

Golden Pass LNG Terminal L.P.

Golden Pass, Texas

STORMWATER POLLUTION PREVENTION PLAN

(SWPPP)

Version 1

April 2005

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1.0 INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) has been developed and will be implemented as a condition of compliance with the National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Large and Small Construction Activities, also known as Construction General Permit or CGP, as modified January 21, 2005. A copy of the CGP is presented in Appendix A. To request coverage under the CGP a Notice of Intent (NOI) must be submitted to the U.S. Environmental Protection Agency (EPA) Region VI at least 30 days prior to the commencement of construction activities. An applicant is authorized to discharge stormwater from construction activities under the terms and conditions of the CGP within seven (7) calendar days after acknowledgement of receipt of the complete NOI is posted on the EPA's website. A complete copy and blank copy of the NOI are located in Appendix C. To terminate coverage under the CGP, the owner/operator must complete a Notice of Termination (NOT) form and submit it to the EPA when the following criteria have been met:

- Final stabilization of the site has been achieved as defined in the CGP;
- All temporary erosion and sediment controls have been removed; and
- No potential remains for construction related sediment discharge to surface waters.

A copy of a blank NOT is also located in Appendix C.

A copy of this SWPPP and documentation required by the CGP (e.g. site inspection reports, etc.) including records of all data used to complete the NOI and acknowledgement letter from EPA shall be retained at the construction site during construction. It shall also be retained by the EPC contractor and Golden Pass LNG Terminal LP (GPLNG) for at least three (3) years from the date the permit coverage expires or terminated.

The purpose of the SWPPP is to minimize the impacts of construction operations on stormwater runoff. It will also serve as the primary reference for descriptions of design features and practices that will be implemented during the construction phase of the facility to minimize potential stormwater impacts.

The SWPPP includes all anticipated activities that may affect stormwater discharges associated with construction activities. However, it is the Engineering, Procurement, and Construction (EPC) contractor's responsibility to routinely update this SWPPP and to add any other activities and discharges that may be generated during construction that could potentially impact stormwater runoff quality. Where indicated within this SWPPP, the EPC contractor is required to insert additional details such as Best Management Practices (BMP) and Standard Operating Procedures (SOP) into the text to ensure that the SWPPP contains the detail necessary to be practically implemented.

1.1 Background

The National Urban Runoff Program (NURP) and the Clean Water Act (CWA) reports submitted to Congress in the 1980s identified stormwater as one of the culprits causing water quality impairment. In 1987, Congress amended the CWA to require EPA to address stormwater. The first Federal regulations were promulgated in 1990. Two Stormwater General Permits were issued in 1992; the first permit was the non-construction Industrial Permit (or baseline Industrial Permit for operation activities), and the second was the CGP. For construction and operation activities related to the gas and oil industry, EPA region VI, as opposed to the state, is the regulatory authority. The CGP was recently modified in January 2005. This SWPPP reflects the requirements of the revised CGP.

2.0 OPERATORS AND REQUIREMENTS

2.1 List of Operators

Owner/Operator: Golden Pass LNG Terminal Management LLC, the General Partner for Golden Pass LNG Terminal LP

EPC Contractor:

EPC Subcontractor:

EPC Subcontractor:

EPC Subcontractor:

EPC Subcontractor:

EPC Subcontractor:

Other Contractors:

Other Contractors:

Other Contractors:

2.2 Owner/Operator

Facility Owner Name and Address

Name: Golden Pass LNG Terminal Management LLC, the General Partner for Golden Pass LNG Terminal LP

Address: P.O. Box 4876
Houston, TX 77210-4876

Contact Person: Randy Anderson
Phone No: (281)-654-4984

Role and Responsibility: Operational control over construction, plans, and specifications. Owner must ensure that the project specifications meet the minimum requirements of the CGP and all other applicable permit conditions.

2.3 Engineering Procurement and Construction (EPC) Contractor

Name: _____
Address: _____

Contact Person: _____
Phone No: _____

Role and Responsibility: Operational control over day-to-day activities. The EPC contractor is to ensure that:

1. SWPPP meets the minimum requirements of the CGP and is to identify parties responsible for implementation of control measures as defined in the SWPPP;
2. The SWPPP delineates the project boundaries; and
3. The SWPPP identifies all parties with operational control over project specifications (including the ability to make modifications).

2.4 EPC Subcontractors

Name: _____
Address: _____

Contact Person: _____
Phone No: _____

Role and Responsibility: Operational control over day-to-day activities for only a portion of the project. The subcontractor is responsible for compliance with the conditions of the CGP as it relates to the activities they are responsible for.

Name: _____
Address: _____

Contact Person: _____
Phone No: _____

Role and Responsibility: Operational control over day-to-day activities for only a portion of the project. The subcontractor is responsible for compliance with the conditions of CGP as it relates to the activities they are responsible for.

Name: _____
Address: _____

Contact Person: _____
Phone No: _____

Role and Responsibility: Operational control over day-to-day activities for only a portion of the project. The subcontractor is responsible for compliance with the conditions of CGP as it relates to the activities they are responsible for.

2.5 Other Contractors

Name: _____
Address: _____

Contact Person: _____
Phone No: _____

Role and Responsibility:

3.0 SITE DESCRIPTION

3.1 Project Name and Location

Golden Pass Liquefied Natural Gas Terminal (GPLNG).

The proposed GPLNG Terminal will be constructed on a 477-acre tract of land located in Sabine Pass in Jefferson County, Texas. The GPLNG Terminal property is located approximately 10 miles south of Port Arthur, Texas, and 2 miles northwest of Sabine, Texas and it is bounded by wetlands abutting Texas State Highway 87 to the west and south and the Sabine-Neches Waterway (SNWW or Port Arthur Ship Channel) to the east and north. The approximately 477-acre tract of land that will be owned by GPLNG, is located in a predominately low-lying area and is zoned for industrial use. A vast majority of the tract is currently leased for cattle grazing.

3.2 Description of Nature of the Construction Activity

Construction activities for this project will consist of construction of a LNG Terminal and ancillary infrastructure. The construction activities will be conducted in two (2) phases. The final Site paving and grading will be constructed to slope the surface run-off towards stormwater inlets as depicted in the Conceptual Site Drainage Plan (located in Appendix B).

The GPLNG Terminal includes the following primary components:

- A marine terminal that will receive up to 200 LNG ships per year, with berthing capabilities to moor two LNG ships;
- LNG unloading and transfer facilities and related mechanical and piping support systems;
- Up to five on-site LNG storage tanks (approximately 155,000 cubic meters (m³) working capacity each), ten LNG vaporizers, and related regasification support systems with a design send out capacity of 2 billion cubic feet per day (bcfd) of natural gas, with a peak capacity of 2.7 bcfd; and
- Associated terminal support facilities, including administrative buildings, storage and maintenance areas, electric power systems, terminal access roads, and other civil works related to the GPLNG Terminal.

Construction of the Golden Pass LNG Terminal will require:

- Construction of the LNG unloading slip, including dredging of large volumes of soil and river sediment;
- Grading of topsoil to achieve uniform elevations for construction;
- Construction of foundations for sumps, process equipment, and tanks, including excavation or drilling for footings and slabs;
- Movement of soils to create earthen containment dikes for the site;
- Construction of sub grades for site roads; and
- Placement and compaction of fill material.

3.3 Construction Procedures

3.3.1 General Site Preparation

Site preparation for the GPLNG Terminal marine and storage facilities will include general site stripping (vegetation and debris removal) and cutting/filling/compacting to finished grade elevation, dredging of the marine slip, and construction of the perimeter storm surge protection barrier. From the inception of initial land disturbance activities, temporary erosion and sediment control devices will be installed and maintained until the completion of construction activities and the installation of permanent erosion control measures. All temporary and permanent erosion control will follow FERC's Plan and Procedures (see Appendix G).

Stripping, Cutting, Filling, and Compacting

The GPLNG Terminal site will be stripped of vegetation in areas undergoing construction activity. The stripped materials will be disposed off site in an approved disposal site. The top 8 inches of topsoil will be graded and moved to areas of lower elevation. The project site will be filled and compacted with material brought from off site to a finished grade elevation of 8 feet National Geodetic Vertical Datum (NGVD).

Construction of Perimeter Storm Surge Protection Barrier

The perimeter storm surge protection barrier, which would encircle the facility, would be constructed with a finished top-of-berm elevation of 16 feet NGVD. Construction of the perimeter barrier requires approximately 116,000 cubic yards (cy), which would be delivered to the site.

Shoreline Restoration

Approximately 2 acres of shoreline would be reclaimed adjacent to the northeast section of the LNG storage tank area. The total quantity of required fill material is estimated to be 24,000 cy.

Dredging of the Marine Slip

Dredging would begin from the southern edge of the channel into the area of Berth No. 1 and then proceed westward into the area for Berth No. 2. A crane in conjunction with a hydraulic excavator would shape the upper slopes of the dredged area and install a concrete pillow block, cable linked revetment system to prevent erosion of the constructed shoreline interface. Concrete mats would be pre-assembled into full slope lengths, then attached to previous segments, and secured by means of screw anchors to prevent slippage and dislocation. The dredging operations would result in the creation of 63.9 acres of open water. A hydraulic dredge would pump the dredged material to the designated disposal and beneficial use areas. Dredging would continue on a 24-hour basis, 7 days per week. Submerged

discharge lines would be used as required to maintain surface vessel traffic. All floating equipment would be directionally lighted and manned 24 hours per day.

The total quantity of dredged material is estimated to be approximately 6.3 million cy of sediment and new work material, consisting of 3.9 million cubic yards at the berth, and 2.4 million cubic yards outward to the edge of the existing channel. All areas would be dredged to a depth of 44 feet below mean lower low water level (MLLW), (40 feet designated depth of the SNWW plus 2 feet over-dredge plus 2 feet advanced maintenance dredging).

Material and Equipment Delivery

Material and equipment would be shipped from the place of origin to an appropriate local port (e.g., Sabine, Port Arthur, Lake Charles, Houston, Beaumont or New Orleans) and unloaded for final transportation to site by road. In all cases, a specific review would be undertaken to ensure that safe and expedient unloading is achieved.

Concrete will be delivered to the site by truck on an as needed basis or provided via an on site batch plant. Clean fill material will be delivered to the site by truck or by barge. On-site batching or storage will help to reduce vehicle traffic on public roads. During construction activities, the project would employ a concrete inspector to ensure concrete meets design specifications.

3.3.2 LNG Terminal – Marine Facilities

A new marine terminal would be constructed, consisting of an unloading slip with two berths. The slip and one of the berths would be constructed during Phase 1 with the second berth constructed during Phase 2. The slip would be approximately 1,300 feet by 1,300 feet and dredged to a depth of 44 feet below MLLW. Each berth would be approximately 1,300 feet long, designed for both port and starboard mooring with vessels. Installation of waterside facilities would begin following dredging of the slip using conventional heavy lift derrick barges using a typical Gulf of Mexico Inland Waterway Marine Construction Spread. Marine construction equipment and major materials would be delivered to the site on cargo barges. Light loads of supplies to support the Marine Spread would be delivered landside by trucks.

Crane barges would be used to lift beams and other materials into place. A heavy lift crawler crane on a barge would be used for lifting piles into place for driving. Suitable tugboats and crew boats would be used as required. It is currently envisioned that tubular steel piles within the range of 36 to 48 inches in diameter can be driven to design penetrations in a single unit without the use of field-welded splices.

Prefabrication of Process Area and Marine Berth Components

Prefabrication of the main components for the process area and marine berths will be conducted in the following manner:

- Piles for the racks and supporting foundations will be either pre-cast type or pipe piles. All piles will be manufactured off site.
- Steel reinforcement will be delivered to the site pre-formed to the required profiles and shapes.
- All structural steelwork will be manufactured and protective coated off site by suppliers with proven experience.
- Pipe spools for both utility and process lines will, in general, be shop-fabricated by specialist manufacturers.
- Mechanical equipment will, in general, be delivered to the GPLNG Terminal site as large components for final assembly for placement on prepared foundations.

Driving of Piles

The unloading platforms, breasting and mooring dolphins and access trestle would consist of reinforced concrete structures on piles. Pile driving would start with the trestle piles on Berth No. 1; continue through the platform, and then work outwards driving the dolphin piles and the intermediate walkway support piles. Upon completion of the Berth No.1 piles, the pile driver would repeat the process for Berth No. 2. A maximum 200-ton capacity crawler crane would be outfitted with 180 linear feet of fixed leaders and a hydraulic pile spotter.

The crane would stand on timber crane mats and be secured to the deck. The barge would be approximately 40 ft wide by 140 ft long by 10 ft deep and would have a 4-point mooring system and spuds for positioning. Standard deck equipment would include air compressors, welding machines, and generators. The leads and spotter arrangement would allow piles to be driven without use of a template. After driving, piles would be temporarily braced with steel channel until concrete work begins.

Installation of Unloading Dock Pile Caps

Pile caps and beams for the unloading platform, trestle, girder, roadway and pipeway of each berth would then be installed. The pile caps and beams would be cast-in-place reinforced concrete structures, supported from the steel pipe piles by means of pile clamps, hangers, and soffit beams. Forms would be removed after placement of the concrete section. The pile caps would be connected to the piles by means of a reinforced concrete plug extending into the pile top.

Installation of Deck Slabs

The concrete deck slabs would be installed by means of cast-in-place and precast reinforced concrete using both removable and stay-in-place forms. Concrete would be placed by bottom dump bucket from transit mix trucks onshore with a crane barge handling the bucket.

Installation of Dolphin Pile Caps

Dolphin pile caps will then be installed for the mooring and breasting dolphins of the berth. The mooring and breasting dolphin pile caps will include mooring hooks for spring lines to provide greater flexibility in mooring various types of vessels and fenders suitable to safely restrain the ships from wind, current, and other forces while berthed at the marine terminal.

Installation of Unloading/Vapor Return Arms, Other Deck Facilities and Access Trestles

The marine unloading and vapor return arms will then be lifted and set on the berth deck for installation. Once the arms are installed, the mezzanine platform, walkway and walkway supports, access trestles, structural steel supports, and remaining dock equipment (fire water monitors, switchgear building, etc.) will be installed along with all related pipe work, electrical work, and instrumentation.

Material Delivery

Piles, girders, and other construction materials would be delivered by barge to the crane barges. A 1,000-ton deck barge (approximately 40 x 140 ft x 10 ft) would be located alongside each of the two crane barges for material receipt and temporary working storage. Supply barges would arrive as required for the completion schedule. Appropriate tugs and crews would tend supply barges. An 850 HP tugboat and two workboats would be on site full time for barge and crew movements. There would be no barge floating area or impact to ship channel navigation. Concrete would be delivered by batch trucks from local facilities to the site and placed by the appropriate crane barge.

3.3.3 LNG Terminal – Storage Facilities

Most of the major equipment related to the cryogenic systems for the GPLNG Terminal will require specialized materials and construction techniques. Thus most, if not all, of the major facilities (excluding the LNG tanks, and LNG unloading facilities) will be prefabricated in specialty manufacturing and prefabrication sites.

Prefabrication of Tank Components

Prefabrication of the main tank components will include the following activities:

- The 9 percent nickel steel inner container shell plates will be squared to size, edge beveled, and rolled to the required radii, either close to the source of manufacture or alternatively in another fabrication facility prior to shipment to the site.
- The 9 percent nickel steel inner container bottom plates will be squared to size at the point of manufacture prior to delivery to site.
- The internal tank accessories, nozzles, and roof structure components may be prefabricated in various contract fabrication shops, which will be chosen to best suit the specialist fabrication requirements.
- The carbon steel roof plates will be cut to required profile prior to delivery to the site.
- Ladders, platforms, and other structural elements will likely be prefabricated. Piping will also be prefabricated by contractors experienced in achieving the required quality associated with the needs of LNG codes and standards.
- The tank will use a piled foundation system.

LNG Storage Tanks

Construction of the LNG storage tanks is the most schedule-sensitive element in the development of the GPLNG Terminal. The design, details, and construction of the LNG tank will be similar for all four of the tank contractors. The timing and sequence of the construction may vary somewhat between the contractors but will generally be as follows.

Pile Foundation Construction: Surface layer of soil would be treated by soil replacement or other methods suitable to the site conditions. After surveying the drilling point, piles would be driven by a suitable impact hammer to the required depth. Final pile set would be confirmed by pile driving analysis.

Mat Foundation Construction: The upper soil layer would be excavated and gravel installed. Blinding concrete for concrete pile cap would be installed after grading the soil surface. Formwork for pile cap would then be installed.

Corner Ring Construction: In order to ensure the effective development of pre-stress (PS) in the corner structure of the wall and bottom slab joint, the corner ring would be constructed prior to the wall and center portion of the bottom slab; the bottom slab and wall form a reversed T-shape. Rebar, pre-stress ducts and anchorages would be installed into fixed formwork to provide the accurate structural configuration of the corner ring. A partial pre-stressing would then be provided in the corner ring by using part-circumferential pre-stress tendons.

Bottom Slab Construction: Rebar arrangement and the installation of heating pipe will be carried out at the same time as the corner ring construction. As soon as the PS work of the corner ring is completed, the casting of bottom slab concrete will follow.

Wall Construction by Sliding Form: As soon as curing of the corner ring structure is assured, the preparation of the wall form will begin. Rebar and PS tendon duct installation will proceed before the assembly of the forms and scaffolding. Temporary construction openings to permit future access into the outer container, to permit construction of the inner container, etc., will be constructed during the initial concrete lifts and located below the thermal corner protection top horizontal embedment anchorage. Rebar and embeds will be installed. The 9 percent nickel and carbon steel insert strips will be cast into the concrete wall for the attachment of the wall liner plates, thermal corner protection along with external support embedment for piping, stairways, and other connections and structures. The concrete for the PS concrete wall will be poured, and the bottom carbon steel vapor liner will be installed.

Steel Roof Construction and Air-Raising: During the construction of the outer concrete container wall, construction of the steel dome roof and suspended deck will be undertaken on temporary supports inside the outer container. The suspended deck and dome roof will be raised into final position during the air raising operation by using blowers. At the top of the outer concrete container wall, the steel dome roof compression ring will be cast into the concrete. Upon completion of the upper concrete ring beam, the steel dome roof will be air raised into position and secured to the embedded compression ring. Construction openings will be temporarily closed during the roof air raise operation.

Closing of Temporary Entrance: For the convenience of inner tank construction, the concrete outer wall will provide a large temporary entrance. Before the pre-stressing, the entrance must be closed by self-compacted expansive concrete.

Pre-stressing of Pre-stressed Tendons: The pre-stressing of the PS tendons to design forces will be done in the sequence of the vertical wall tendons and the horizontal wall tendons. The ducts will be grouted as soon as pre-stress has been accomplished to avoid corrosion.

Concrete Roof and Connections: Once the dome roof is secured to the compression ring, all roof nozzles, other penetrations, and steel reinforcement studs will be installed. Then, the steel dome roof will be covered with concrete. The roof slab will be constructed in two or three layers. Each layer will consist of circumferential rings varying in width and poured to progress simultaneously on opposite sides of the dome. The temporary construction opening(s) will again be closed and the tank pressurized to provide internal vapor pressure support of the roof during placement of the first concrete layer. The internal

pressure will be maintained until all first layer concrete pours are completed and the concrete has cured sufficiently to be self-supporting.

Installation of Inner Tank and Tank Nozzles and Accessories: The installation of the inner tank will take place as soon as the roof is completed. Construction of the concrete plinths to receive the roof platform steelwork, etc., will be undertaken. Internal work will include the installation of vapor barriers to the inside face of the concrete container, placement of concrete leveling screeds, base insulation and sand layers, etc. Insulation will be extended up the inside face of the outer concrete container vapor barrier to a height of approximately 15 feet to provide thermal protection for the bottom corner of the concrete wall and base slab. Installation of the 9 percent nickel steel "secondary bottom" and bottom corner protection will then be completed. A concrete upper leveling course screed will be placed on top of the 9 percent nickel steel secondary bottom. Installation of the 9 percent nickel inner container annular and bottom plates will be undertaken upon completion of the upper leveling course screed. After installing the inner container annular plates, work will commence on erection of the inner tank shell with provision for a temporary opening into the inner container at the same location as the outer tank opening. The tank internal accessories such as pump columns, bottom and top fill, instrument wells, and purge and cool-down piping will then be installed. Roof platforms, walkways, and piping will also be installed. The construction opening door sheet in the inner container will be installed and closed. External attachment such as structural, platforming, and pipe support installation will then be completed.

Process Piping: Process piping from tank top to grade will be installed in accordance with applicable American National Standards Institute (ANSI), American Society of Mechanical Engineers (ASME), and American Petroleum Institute (API) standards.

Installation of Insulation and In-Tank Pumps: Following a successful inner container hydrostatic test, the tank will be washed down and cleaned. The resilient blanket will then be installed on the outside of the inner tank shell, followed by finalizing installation of the instrumentation inside the tank and annular space. The temporary construction opening will then be closed permanently. Installation of insulation systems will commence. Installation of the perlite requires the tank to be completely dry.

The tank insulation systems will then be completed. Perlite insulation will be expanded and installed using vibration into the tank annular space. The suspended deck blanket insulation will be installed along with completion of external piping insulation. After completion of all insulation system installations, the tank will be visually inspected and cleaned. LNG pumps will then be installed; the tank will be closed and purged with nitrogen to a positive gauge pressure. At this point in the construction process, the tank will be ready for purge and cool down.

3.3.4 Construction of Other Facilities

Construction of the foundations, pipe racks, and terminal buildings together with installation of major mechanical equipment, process and utility piping, and electrical and instrumentation will occur once tank construction is underway. These facilities will be completed and pre-commissioned in readiness for mechanical completion of the LNG tanks. The process will consist of the following steps:

- The underground pipe will be installed for the fire water and potable water systems.
- Construction of foundations including piling as required for the buildings, major equipment, and pipe racks will commence as soon as the site preparation and underground pipe is completed.
- Major GPLNG Terminal equipment will be delivered to the site as required by the construction schedule and placed directly on their foundations.
- As the pipe racks are completed, work will begin on the installation of the process and utility piping and cable tray.
- As the major GPLNG Terminal equipment is set, the piping, electrical, and instrumentation installation will commence.
- Insulation will begin as the piping systems are completed.
- Instrumentation and electrical loop testing and pre-commissioning activities will be completed such that these activities will be completed concurrent with the completion of the tanks.

Buildings

The GPLNG Terminal will include the following service buildings:

- Administration Building – A 10,800-square-foot building
- Warehouse/Maintenance Building – A 18,000-square-foot building
- Main Control Room – A 5,180-square-foot building
- Berth Operator's Shelters – Two 156-square-foot buildings, one per berth
- Guard House – A 336-square-foot building
- Miscellaneous Buildings – Main and secondary substations and meter station equipment room.

Roads

The main entrance road to the GPLNG Terminal would have a 60-foot right of way (ROW). The road would be comprised of 22 feet of asphalt-surface roadway, and 3 feet (each side) of maintained shoulder. On its north side, an additional 1-foot of vegetated ground would extend from the maintained shoulder, and an approximately 15-foot wide drainage ditch would extend from the edge of the 1-foot vegetated ground strip. On its south side, structural fill material would slope down from the edge of the

maintained shoulder, and would cover a horizontal distance of approximately 6 feet (average) from the edge of the maintained shoulder to the existing ground surface.

The secondary access road would be comprised of 28 feet of maintained road base, and would slope down on each side from the edge of the maintained road base for a horizontal distance of approximately 6 feet (average) from the edge of the road base to the existing ground surface.

3.4 Testing

All testing will be carried out in accordance with all applicable state and federal codes and standards. Some of the tests to be carried out are discussed below. Additional information regarding hydrostatic test water is contained in **the GP LNG terminal NPDES Permit Application**.

3.4.1 Hydraulic Testing of the LNG Storage Tanks

The inner container of the LNG storage tanks would be hydraulically tested (hydrotested) in accordance with the requirements of API 620. It is intended that hydrotest water would be purchased from the Lower Neches River Authority, most likely obtained from the vicinity of the ExxonMobil refinery dock and transported to the terminal in barges. The water would be pumped from the extraction point using either electrically or engine driven pumps suitably sized to achieve the required transfer rate. Some nominal amount of hydrotest water may also be obtained from the Port Arthur Water Authority by means of an existing firewater line that runs adjacent to the terminal site.

In advance of filling the tanks, the source of hydrotest water would be tested to ensure that the water would meet applicable Code requirements. To minimize water usage, the three tanks to be installed during Phase 1 would be hydrotested with the same water by transferring the water at the conclusion of the hydrotesting of one tank to the next tank to be hydrotested (three during Phase 1 and two during Phase 2). Water would be introduced into the inner tank container through a manhole in the outer container concrete roof at a rate not to exceed the limitations specified in API 620.

The quantity of water required for hydrotesting one tank is estimated to be approximately 28 million gallons. It is anticipated that approximately 0.25 million gallons of additional water would be required for each successive tank tested, due to possible losses during removal of the final few inches of water from the inner tank bottoms. The total duration of each hydrotest from start of filling to emptying is expected to be approximately three weeks. There are no plans to add chemicals to the test water.

On completion of hydrotesting the final tank, the water would be pumped from inside the inner tank using electrically driven submersible pumps suitably sized for the required lift height out of the tank, as there are no bottom or side outlets on the LNG Tanks. The temporary piping used to initially fill and transfer water between the tanks would be modified to enable the water to be pumped to the point of disposal, which is expected to be within the new berth area. If necessary, multiple discharge points may be used to diffuse the discharge. The rate of discharge is expected to be approximately 1,800,000 gallons per day for the bulk pumping operation, with substantially lower rates being achieved when removing the final amounts of water from the tank bottom via a settlement pond. The test water would be sampled prior to discharge to ensure it is within accepted parameters and then discharged into the stormwater

collection system. The water would be tested for contaminants and treated, as needed, in accordance with Texas Railroad Commission (TRRC) hydrostatic testing permit and NPDES permit conditions, prior to release to the SNWW. Even if there is an inadvertent release of hydrostatic test water in a manner different than allowed in the permit, the release is not anticipated to effect ground or surface water quality.

3.4.2 Pneumatic Testing of the LNG Storage Tanks

Each tank will also be pneumatically tested at a pressure of 1.25 times the design pressure for 1 hour in accordance with API 620.

3.4.3 Hydraulic/Pneumatic Testing of Piping Systems

Piping systems will be tested in accordance with established codes either hydraulically or pneumatically, as applicable. In general, cryogenic piping will be tested with dry air or nitrogen at 1.1 times the design pressure. Non-cryogenic piping will be tested with water at 1.5 times the design pressure. The volume of water required for testing the non-cryogenic piping would be approximately 800,000 gallons. Discharge of the non-cryogenic piping test water would be similar to the discharge of the LNG storage tank test water discharge.

In general, testing of the plant piping systems will be conducted as follows:

- LNG systems will be pneumatic tested up to the high-pressure LNG pumps.
- The remaining LNG systems and all other systems will be hydrostatically tested using the water from the fire water tank and the fire water distribution system. The 480,000-gallon fire water tank will be constructed early and tested so the water will be available when hydrostatic testing is scheduled. The volume of water required for hydrostatic testing the plant piping systems is conservatively estimated to be 800,000 gallons.
- The firewater (seawater) piping supply and return system will be either hydrotested or service tested with the firewater (seawater) pumps.

After the testing is completed the fresh water will be drained into the stormwater collection system to be tested prior to being released into the SNWW. For additional information on this discharge refer to the **GP LNG terminal NPDES Permit Application**.

3.5 Restoration

Areas of the GPLNG Terminal site temporarily disturbed by construction of the proposed facilities will be stabilized with temporary erosion controls until construction is completed. Unless covered by equipment, gravel, or other covering, GPLNG Terminal site areas will be seeded to establish revegetation. All erosion control and revegetation will be in compliance with FERC's Upland Erosion Control, Revegetation, and Maintenance Plan, as well as the Wetland and Waterbody Construction and Mitigation Procedures (FERC Plan and Procedures located in Appendix G).

3.6 Construction Sequence

Construction will take place in two phases. Each phase requires approximately 48 months to complete. Phase 2 construction will commence approximately 12 months after the start of Phase 1 construction and would increase the annual capacity from 1 to 2 bcf/d. The overall schedule for completion of Phases 1 and 2 would be approximately 60 months. It is expected that construction of the marine facilities would require approximately 17 months. The marine construction labor force is estimated to average 58 with a peak labor force of 96. An anticipated timeline of construction activities includes:

Phase 1

- Site Preparation – LNG Tanks – 3 to 4 months;
- Tank S/C Mobilize- Construction Equipment and Pre-fabrication Piles – 2 months;
- Excavate Soil Improvement LNG Tanks – 2 months;
- Piling LNG Tank 1 – 1 to 2 months;
- Tank 1 Construction – 19 to 20 months;
- Piling LNG Tank 2 – 1 to 2 months;
- Tank 2 Construction – 19 to 20 months;
- Piling LNG Tank 3 – 1 to 2 months;
- Tank 3 Construction – 19 to 20 months;
- Site Preparation, Piling of Plant and Roads – 6 to 7 months;
- Design Buildings, Buy Material and Mobilize to Site – 2 to 3 months;
- Plant and Administration Building Construction – 8 to 9 months;
- Plant Foundations – 6 to 7 months; and
- Plant Mechanical Construction – 12 to 13 months.

Phase 2

- Piling LNG Tank 4 – 1 to 2 months;
- Tank 4 Construction – 19 to 20 months;
- Piling LNG Tank 5 – 1 to 2 months;
- Tank 5 Construction – 19 to 20 months;
- Phase 2 Plant Construction – 17 to 18 months;
- Site Preparation, Piling of Plant and Roads – 4 to 5 months;
- Pile Caps and Install Piperacks – 6 to 7 months;
- Phase 2 Building Construction – 4 to 5 months;

- Phase 2 Piperack Piping – 4 to 5 months;
- Form and Pour Plant Foundations -- 6 to 7 months; and
- Phase 2 Equipment, Pipe and Piperack Piping – 6 to 7 months.

Overall Construction activities will follow the following sequence:

- Step 1** – Site Preparation- site stripping, cutting, filling (final grading), construction of dike around LNG tanks, temporary erosion controls installed)
- Step 2** – LNG Terminal- Marine Facilities Construction
- Step 3** – LNG terminal- Storage Facilities
- Step 4** – Construction of other facilities- foundations, pipe racks, installation of electrical equipment and other equipment.
- Step 5** – Testing
- Step 6** – Restoration

3.7 Disturbed Area

The GPLNG Terminal property consists of approximately 477 acres. The project site will consist of approximately 205 acres, while the remaining 272 acres will, with one exception, remain in their native undisturbed state. The one exception is that during construction, an approximate 40-acre portion of the property will be used temporarily as an equipment laydown area, which will extend beyond the proposed site limits but will remain within the property limits. Temporary construction areas will be located east of the GPLNG Terminal property. The temporary construction areas include a parking lot (approximately 11 acres), an equipment laydown area with warehouse and tool room (approximately 15 acres), and construction offices or trailers (approximately 2 acres). The remaining area (12 acres) will be used as staging areas for temporary construction and concrete form work. The total area needed and area needed for each major group of facilities is presented in Table 1.

Table 3-1. GPLNG Terminal Areas Disturbed by Facility

Description	Permanent Land Requirement (Acres)
Open Water (marine slip)	63.9
Buildings	1.2
LNG Storage Tanks	5.9
Process Areas	4.1
Utility Area	1.2
Boil-off Gas Compressor	0.7
Electrical Substations	1.5
Spill Containment (sumps and troughs)	2.6
Roads	8.9
Dike Wall and Slope	50.5
Total	140.7

3.8 Runoff Coefficient

The runoff coefficient is defined as the percentage of rainfall to become runoff. The weighted average pre-construction runoff coefficient for unimproved land ranges from 0.1 to 0.3.

After construction, about 140.7 acres will have impervious surfaces. The weighted post-construction runoff coefficient for the site, is estimated as:

- Approximately 140.7 acres of pavement for concrete foundations for the various terminal facilities will have a C= 0.9;
- Approximately 336.3 acres of natural vegetation (unimproved land) with a C= 0.2.

The weighted runoff coefficient after construction will remain virtually unchanged:

$$C = [(336.3 \times 0.2) + (140.7 \times 0.9)] / 477 \text{ acres; and}$$

$$C = 0.41$$

The total area to be paved that will drain to the Port Arthur Ship Channel is approximately 26 acres. Surface runoff from areas not subject to facility operations would drain to stormwater collection sumps and be pumped to the outfall. The stormwater pumping system would be designed to accommodate a 10-year, one-hour rainfall event.

3.9 Land Use, Geology, Drainage, and Climate

The Property is located in a predominantly low-lying, largely undeveloped area and is zoned for industrial use. A majority of the Property is currently leased for cattle grazing.

The climate in the area where the GPLNG Terminal will be located has characteristics of both the tropical and temperate zones. The normal annual rainfall of 55.21 inches is distributed evenly throughout the year. Snow seldom occurs. Although the average rainfall per month is not very great, at times heavy rains may occur. Heavy rains can be expected from June through August. The temperature rarely drops below 22 F or goes above 98 F. It can be expected to drop to freezing or below, on about 6 to 15 days each year.

Topographically, the Site is characterized by relatively low elevation and relief. Except for areas located adjacent to stream banks and man-made excavations and areas of fill, area slopes are generally flat to gentle (of very low magnitude). The highest existing surface elevation on the Site is approximately 10 feet in elevation, referenced to the North American Vertical Datum, 1988 (ft NAVD88). Most of the surface to be developed ranges in elevation from 1 ft NAVD88 (i.e., tidal level) to 8 ft NAVD88. The land surface at the Site includes shoreline located at the tidal boundary of the southern shore of the Sabine-Neches Waterway (SNWW). The submerged bottom adjacent to the Site ranges from the tidal level to the depth of the SNWW maintained channel, currently approved for a depth of 40 feet below Mean Lower Low Water (MLLW) level (USACE, 2004). Parts of the Site contain wetlands, including portions of the Site that were used for dredged material placement.

The Property is in a designated 100-year flood plain. Low-lying areas, such as marshes, delta plains, and river plains, such as are present at the Site, are flooded by storm surges. Flat upland areas may also be flooded by events of heavy rainfall. Appropriate flood protection consisting of a perimeter storm surge barrier, would be constructed to a height of 16 ft MLLW (exceeding the 100 year flood level – see Resource Report 1) to surround the Terminal Project facilities. A stormwater management system would serve to route water within the storm surge barrier to appropriate discharge locations during the operation phase of the Terminal.

The general area is gently sloped with surface run-off directed toward the Port Arthur Ship Channel. Most of the precipitation in this area runs off the surface into SNWW, evaporates, or is transpired by vegetation. A small portion of the precipitation infiltrates the surface and reaches the water table.

3.10 General Location and Site Maps

Locations of the proposed facilities are shown on composites of 7.5-minute series 1:24,000 scale U.S. Geological Survey (USGS) topographic maps, which are provided in Appendix B of this SWPPP. The USGS quadrangles show the property boundaries, the site fence line, drainage paths and topography. The project's environmental inspector is responsible for determining placement of structural and nonstructural controls in accordance with criteria identified in this SWPPP. These maps in combination, contain the following information:

- Property boundary
- Property fence line
- Location of Marine terminal
- Location of Land Facilities
- Drainage patterns evidenced by topographic elevations
- Location of non-impervious surfaces (Boil-off gas compressor, meter skid, electrical substation, buildings, LNG storage, process areas, utility area);
- Location of new roads;
- Stormwater and spill prevention controls (including dikes, sumps, throughs);
- The areas of disturbance during construction; and
- Temporary construction areas (including equipment laydown area with warehouse and tool room, and construction offices or trailers)

The EPC contractor will use the maps included in Appendix B as base maps and will add the location of structural and non-structural controls, drainage patterns, areas of disturbance, temporary construction areas, and any other pertinent information.

3.11 Identification of Potential Pollutants During Construction Activities

Potential pollutants in the storm water may include construction and material debris, and disturbed soils. Construction activities will be performed to minimize cutting and re-grading of soils in order to reduce the potential for soil to be transported and discharged via stormwater from the construction area. To the extent that limited storm water may drain to the Port Arthur Ship Channel, disturbed soils may contribute sediment to the Channel. Construction activities at the GPLNG Terminal could potentially affect the surface water use and quality of the SNWW. The following activities have the potential to affect water quality:

- LNG storage tank and facility hydrostatic test water
- Dredging and dredge material handling
- Accidental releases of petroleum products
- Erosion and sedimentation from construction

The following measures will be implemented to minimize impacts from the above activities:

- GPLNG Terminal will reduce the effects to suspended sediment concentrations due to the discharge of hydrostatic test water by using diffusers and by discharging at rates and depth(s) that would reduce effects on receiving waters to the extent practicable. A hydrostatic testing water discharge permit would govern discharge effluent parameters.
- GPLNG will locate and design the marine slip to minimize dredging volume, while ensuring project design objectives. GPLNG reviewed several types of dredging, such as hopper dredging, hydraulic dredging, and mechanical dredging. Hydraulic dredging is the preferred method of dredging for the SNWW, and would be used to reduce sediment suspension in the water column to the extent practicable, and to reduce the duration of dredging.
- GPLNG will implement the SPCC Plan in Appendix I to mitigate the potential impact of an accidental release of petroleum products and other chemicals during construction.

In addition, the construction of the GPLNG Terminal will require the use of standard construction materials. These will include concrete, paints, diesel, gasoline, solvents, fertilizers, lubricants, engine and hydraulic oil, ethylene glycol and drilling fluids that may adversely impact the stormwater runoff from the construction site. The activities that have a limited potential to pollute the stormwater would include:

- Excavation and dredging;
- Leaks from construction equipment or dump trucks; and
- Construction debris.

In the event of a rainfall during construction, the main concern would be erosion. To prevent and/or minimize erosion, every effort will be made to prevent the mixing of construction pollutants with stormwater. In addition, every effort will be made to minimize grading activities and areas of disturbance to what is actually needed. If all precautions outlined above are taken, no other pollutants are expected to be present at significant concentrations in the runoff water.

3.12 Posting of Project Notice and Making Plan Available

A notice of the project must be posted conspicuously near the main entrance to the construction site. The notice should include the following information:

- A copy of the NOI submitted to the EPA Storm Water Notice Processing Center;
- The location of the SWPPP; and
- The name and telephone number of a contact person for additional information.

The CGP does not require the general public to have access to the construction site nor does it require that copies of the SWPPP be made available or mailed to members of the public. However, the SWPPP must be made available upon request to EPA, state or local agencies approving sediment and erosion plans, grading plans, or storm water management plans, local government officials and representatives from the Fish and Wildlife Service or the Nation Marine Fisheries.

4.0 CONTROLS TO REDUCE POLLUTANTS

The following controls and practices establish the minimum requirements for the EPC contractor and subcontractors to develop site specific SOPs and BMPs. GPLNG Terminal will follow the guidelines found in FERC's Upland Erosion Control, Revegetation, and Maintenance Plan as well as the Wetland and Waterbody Construction mitigation Procedures (Attachment G). The overall goals of the Sedimentation and Erosion Controls are to:

- Minimize the extent and duration of disturbance;
- Protect exposed soil by diverting runoff to stabilized areas;
- Install temporary and permanent erosion control measures; and
- Establish an effective inspection and maintenance program.

In addition, FERC's Plans and Procedures have the following specific objectives:

- The retention of sediment on site to the maximum extent practicable.
- The retention, installation, and maintenance of control measures in accordance with the manufacturer's specifications and good engineering practices. If periodic inspections or other information indicate that a control has been used inappropriately or incorrectly, the control shall be replaced or modified, as needed.
- The maintenance of off-site accumulations traps of sediment. The off-site sediment must be removed at a frequency sufficient to minimize offsite impact (e.g., fugitive sediment in street could be washed into storm sewers by the next rain and/or pose a safety hazard to users of public streets).
- The removal of sediment from sediment traps when capacity has been reduced by 50%.
- The prevention of litter, construction debris, and construction chemicals exposed to storm water from becoming a pollutant source for storm water discharges (e.g., screening outfalls, picked up daily).
- Establishment of offsite material storage areas (also including overburden and stockpiles of dirt, borrow areas, etc.) used solely by the permitted project are considered a part of the project and shall be controlled.

FERC's Plans and Procedures will be implemented during and after the proposed GPLNG Terminal construction. The control measures that will be used include, but are not limited to:

- Physical sediment traps and barriers (waterbars, silt fences, straw bale barriers, etc.);
- Severe compaction prevention (which increases surface runoff);

- Installation of erosion control fabric on steep slopes; and
- Revegetation.

The EPC contractor will install sediment traps and physical barriers as needed and will identify their locations on a map to be included in Appendix B. In addition, the EPC will develop a Revegetation Plan based on recommendations from National; Resource Conservation Service (NRCS) and will include seed mixes for the proposed GPLNG Terminal site.

During construction, the EPC contractor Environmental Inspectors will monitor the effectiveness of temporary erosion control devices. The effectiveness of revegetation and permanent erosion control devices will be monitored as part of long-term operation and maintenance (O&M) of the GP LNG Terminal. Erosion control devices will be maintained until the site is successfully stabilized.

Prior to construction the EPC contractor must add the following SOPs and BMPs that meet or exceed this plan criteria. Information shall be placed behind the applicable tabs.

Tabs should include, but not be limited to:

- temporary soil stabilization measures
- permanent soil stabilization measures
- revegetation
- installation and maintenance of structural controls
- sediment barriers along waterbodies
- discharge of solid materials
- tracking control – access roads, exit washes, sweeping
- good housekeeping practices
- painting material controls
- concrete mixing, storage, and transport
- street maintenance

4.1 Sequence of Major Storm Water Control Activities

Section 3.7 presents the Construction Sequence for major construction activities at the GPLNG Terminal. The EPC Contractor will prepare a description of the sequencing of the major storm water control activities and when, in relation to the construction process, they will be implemented. This will be included as Table 4-1.

Table 4-1. Sequence of Storm Water Control Activities

Construction Activity	Storm Water Control Activity	Responsibility

4.2 Stabilization Practices

Following completion of construction activities, exposed soils resulting from the construction activity will be stabilized.

The stabilization measures described below shall be initiated 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. GPLNG Terminal has developed and implemented specific procedures (best management practices) to control pollutants in storm water discharges during construction activities (construction standards). These procedures comply with the recommended mitigation measures described in FERC's Upland Erosion Control, Revegetation, and Maintenance Plan and Wetland and Waterbody Construction and Mitigation Procedures located in Appendix G.

4.2.1 Temporary Stabilization

The disturbed areas should be stabilized as soon as possible after construction is complete. Stabilization should be done through rough grading and temporary seeding. Some site-specific conditions that typically require controls include but are not limited to, waterbodies, wetlands, steep slopes, and sandy soils. The environmental inspector will have the authority to determine the final location of temporary stabilization measures. Temporary erosion control will be installed immediately after initial disturbance of the soil. Temporary erosion controls must be properly maintained throughout construction (on a daily basis) and reinstalled as necessary until replaced by permanent erosion controls or restoration is complete. The following temporary controls will be used for this project:

Mulch

- Mulch will be applied on all slopes (except in actively cultivated cropland) concurrent with or immediately after seeding, where necessary, to stabilize the soil surface and to reduce wind and water erosion. Mulch will be spread uniformly over the area to cover at least 75 percent of the ground surface at a rate of 2 tons per acre of straw or its equivalent, unless the local soil conservation authority, landowner, or land managing agency approves otherwise in writing.
- Mulch can consist of weed-free straw, wood fiber hydromulch, erosion control fabric, or some functional equivalent.
- Mulch will be applied before seeding if: a) Final grading and installation of permanent erosion control measures will not be completed in an area within 20 days after the trench in that area is backfilled (10 days in residential areas); or b) Construction or restoration activity is interrupted for extended periods, such as when seeding cannot be completed due to seeding period restrictions.

- If mulching before seeding, mulch application will be increased on all slopes within 100 feet of waterbodies and wetlands to a rate of 3 tons per acre of straw or its equivalent.
- If wood chips are used as mulch, not more than 1 ton per acre will be used and the equivalent of 11 pounds per acre available nitrogen (at least 50 percent of which is slow release) will be added.
- Mulch will be adequately anchored to minimize loss due to wind and water.
- When anchoring with liquid mulch binders, rates recommended by the manufacturer will be used. Liquid mulch binders will not be used within 100 feet of wetlands or waterbodies.

4.2.2 Permanent Stabilization

Erosion and sedimentation control practices (installation of structures, revegetation, and maintenance practices) will be implemented to minimize the potential for soil erosion or sedimentation of streams and to restore the site. The technique or combination of techniques and the locations where they are employed are determined during the detailed design and/or construction inspection. They are subject to modification by the local soil conservation authorities, other appropriate agencies, or landowner demands.

Permanent erosion control techniques include both vegetative and physical techniques. The vegetative techniques include reseeding alone or reseeding with mulches or matting made of plastic sheeting or fibers such as jute. Sod laying, development of natural vegetation screens, and the planting of seedlings are other vegetative techniques that may be used. Physical techniques include sediment barriers, trench breakers, slope breakers (diversion terraces), stone paving, rock riprap (with or without filter fabric), gabions, seepage drains, energy dissipaters, and culverts.

It is anticipated that the site will be stabilized through concrete paving, asphalt paving, and gravel surfacing. Unpaved areas will maintain grass surfacing. In general, the following would be the areas where each type of surfacing would be used: the process areas would have concrete paving; the primary access road and parking lots would have asphalt paving; equipment and work areas, outside the process areas, will have gravel surfacing; and all other areas will be grass covered.

In addition, other areas where soil disturbance may occur during construction activities will be vegetated.

Revegetation

- Turf, ornamental shrubs, and specialized landscaping will be performed in accordance with GPLNG Terminal specifications.

- Fertilizer and soil pH modifiers will be added in accordance with written recommendations obtained from the local soil conservation authority, land management agencies, or landowner. Recommended soil pH modifier and fertilizer will be incorporated into the top 2 inches of soil as soon as possible after application.
- A seedbed will be prepared in disturbed areas to a depth of 3 to 4 inches using appropriate equipment to provide a firm seedbed. When hydroseeding, the seedbed will be scarified to facilitate lodging and germination of seed.
- Disturbed areas will be seeded in accordance with written recommendations for seed mixes, rates, and dates obtained from the local soil conservation authority or as requested by the landowner or land management agency. Seeding is not required in actively cultivated croplands unless requested by the landowner.
- Seeding of permanent vegetation will be performed within the recommended seeding dates. If seeding cannot be done within those dates, appropriate temporary erosion control measures will be used, and seeding of permanent vegetation will be performed at the beginning of the next recommended seeding season.
- In the absence of written recommendations from the local soil conservation authorities, all disturbed soils will be seeded within 6 working days of final grading, weather and soil conditions permitting.
- Seeding rates will be based on Pure Live Seed. Seed will be used within 12 months of seed testing.
- Grass seed will be treated with an inoculant specific to the species using the manufacturer's recommended rate of inoculant appropriate for the seeding method (broadcast, drill, or hydro).
- In the absence of written recommendations from the local conservation authorities, landowner, or land management agency to the contrary, a seed drill equipped with a cultipacker is preferred for seed application.
- Broadcast or hydroseeding can be used in lieu of drilling at double the recommended seeding rates. Where seed is broadcast, the seedbed will be firmed with a cultipacker or imprinter after seeding. In rocky soils or where site conditions may limit the effectiveness of this equipment, other alternatives may be appropriate (e.g., use of a chain drag) to lightly cover seed after application, as approved by the Environmental Inspector.

The EPC contractor shall specify the location of temporary or permanent stabilization measures and shall include any additional site specific measures consistent with these guidelines.

4.3 Specific Construction Dates

The EPC contractor will prepare a table of specific construction dates so that the Construction Operator as well as EPA may determine applicability and implementation status of SWPPP requirements. Table 4-2 will be completed and updated as necessary during the construction process in order to track these activities.

Table 4-2. Specific Construction Dates

Date	Construction Activity
	Major Grading Activities
	Completion of Activities on Portions of Site
	Initiation of Stabilization Measures

4.4 Structural Controls

Natural vegetation acts as an effective filter medium for silt removal from surface runoff. Its use as a sediment barrier results in fewer disturbances to the land than other methods. In areas where natural vegetation is not present or does not constitute a suitable barrier, temporary sediment barriers will be installed. Temporary sediment barriers, typically hay/straw bale filters or silt fences, dissipate the energy of flowing water to allow settlement of sediment from surface water runoff.

Hay Bale Berms

Bale filters are constructed of hay (or straw) bales that are securely bound to form a berm, which is held in place by two stakes driven through each bale. Bale filters are effective for small rills that can be spanned by one or two bales.

Silt Fences

Filter fabric fences (silt fences) perform the same function as hay bale berms, but have the advantage of ease of installation, versatility, and lightweight. Silt fence is a geotextile fabric with fence posts spaced no more than 10-feet apart. The posts are driven a minimum of 18-inches into the ground. The bottom edge of the silt fence fabric is buried a minimum of 4-inches into the ground. For locations having high velocity and/or high volumes of water, additional silt fence support may be required. If additional support is needed, a metal mesh fence with 6-inch or small openings is fastened on the backside of the fence posts to reinforce the silt fence fabric.

Slope Breakers

- Temporary slope breakers are intended to reduce any runoff velocity and divert water off the construction. Temporary slope breakers may be constructed of materials such as soil, silt fence, staked straw bales, or sandbags. Permanent slope breakers may be constructed of materials such as soil, sandbags, or some functional equivalent.
- Temporary slope breakers will be installed on all disturbed areas as necessary to avoid excessive erosion. Temporary slope breakers must be installed on slopes greater than 5 percent where the base of the slope is less than 50 feet from waterbody, wetland, and road crossings and at the following spacing (closer spacing should be used if necessary):

<u>Slope (%)</u>	<u>Spacing (feet)</u>
5 to 15	300
> 15 to 30	200
> 30	100

In the absence of written recommendations, this spacing will also be used for permanent slope breakers unless closer spacing is necessary to avoid excessive erosion on the construction area.

- The outfall of each temporary slope breaker will be directed to a stable, well-vegetated area, or construct an energy-dissipating device at the end of the slope breaker and off the construction ROW. In the absence of a stable area, appropriate energy-dissipating devices will be constructed at the end of the breaker.
- The outfall of each temporary slope breaker will be positioned to prevent sediment discharge into wetlands, waterbodies, or other sensitive resources.
- Temporary interceptor dikes will be properly inspected and maintained.
- Permanent slope breakers may extend slightly (approximately 4 feet) beyond the edge of the construction area to effectively drain water off the disturbed area.

Sediment Barriers

- Sediment barriers are intended to minimize the flow of sediment. They may be constructed of materials such as silt fence, staked straw bales, or sand bags.
- Temporary sediment barriers will be installed at the base of slopes adjacent to road crossings until disturbed vegetation has been reestablished.
- Temporary sediment barriers will be installed at appropriate locations to prevent siltation into waterbodies or wetlands crossed by or near the construction work area.
- All temporary sediment barriers will be properly inspected and maintained.
- All temporary sediment barriers will be maintained in place until permanent revegetation measures are successful or the upland areas adjacent to wetlands, waterbodies, or roads are stabilized.
- Temporary erosion and sedimentation control devices will not be removed until a 70 percent vegetative cover has been established.

Sedimentation and Erosion Controls for Wetlands

The following sediment controls will be implemented for wetlands:

- Sediment barriers will be installed immediately after initial disturbance of the wetland or adjacent upland. Sediment barriers will be properly maintained throughout construction and reinstalled as necessary. Sediment barriers will be maintained until replaced by permanent erosion controls or restoration of adjacent upland areas is complete
- Where wetlands are adjacent to the construction area and the construction area slopes toward the wetland, sediment barriers will be installed along the edge of the construction area as necessary to prevent sediment flow into the wetland.

Sedimentation and Erosion Controls for Areas Along Water Bodies

The following erosion and sediment control practices will be implemented for areas along water bodies:

- Sediment barriers will be installed immediately after initial disturbance of the waterbody or adjacent upland.
- Sediment barriers will be properly maintained throughout construction and reinstalled as necessary until replacement by permanent erosion controls or restoration of adjacent upland areas is complete.
- Where waterbodies are adjacent to the construction area, sediment barriers will be installed along the edge of the construction area as necessary to contain spoil and sediment within the property boundary.

4.5 Management Practices

4.5.1 Construction Storm Water Management

Storm water management will be controlled through stormwater flow attenuation, velocity dissipation devices, and water filtration through the Slope Breakers and Trench Breakers described above. The environmental inspector will have the authority to determine the location of these controls. **The locations of these controls should be identified on a map by the EPC contractor and subsequently placed in Appendix B.**

For common drainage locations that serve an area with 10 or more acres disturbed at one time, silt fences, vegetative buffer strips, or equivalent sediment controls will be required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions). Sediment traps or equivalent controls will be used to reduce loss of sediment to the SNWW. In addition, velocity dissipation devices will be used 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).

Due to land restrictions at the site (most of the undeveloped portion of the site are wetlands), and the natural water flow direction, sediment basins will not be used at this site.

The EPC contractor shall provide additional information on the specific location and types of stormwater management devices to be used during construction.

4.5.2 Post-Construction Storm Water Management

Following construction, all disturbed areas will be permanently revegetated or stabilized. Temporary stabilization may be used until conditions are right for permanent revegetation or stabilization. Follow-up inspections will be conducted of all disturbed areas after the first and second growing seasons to determine the success of revegetation. Revegetation will be considered successful if upon visual survey the density and cover of non-nuisance vegetation are similar in density and cover to adjacent undisturbed lands. Revegetation efforts will be continued until revegetation is successful.

No other active stormwater management measures following construction are expected to be necessary. These stormwater protection measures are expected to provide ample protection from erosion, sedimentation, and stormwater runoff contamination.

GPLNG Terminal storm water management will be controlled through site grading, paving, sloping, diking, drains, and NPDES discharge locations. These are addressed in the GPLNG NPDES application.

EPC contractor to include SOP for follow-up inspections and permanent stabilization measures.

4.5.3 Standard Operating Procedures

SOPs addressing a large storm event are listed in the following table. These SOPs will be attached in this section.

Activity	Standard Operating Procedure	Responsibility
	(refer to following pages:)	

The EPC contractor will develop and incorporate into this SWPPP the SOPs that address a large storm event.

4.6 Minimization of Vehicular Impacts

Measures will be implemented to minimize, to the extent practicable, off-site vehicle tracking of sediments onto paved surfaces and the generation of dust. GPLNG will add crushed gravel to all road surfaces within the site during development, as well as to parking areas. Depending on site conditions additional washdown may be necessary prior to vehicles leaving the site.

The EPC contractor is to identify specific measures, such as: paving, gravel, parking areas, thresholds (e.g.- 25 vehicles per day requires paving), entrance wash racks, street sweeping to minimize off-site vehicle tracking of sediment onto paved surfaces.

4.7 Spill Prevention Controls and Countermeasures

A construction SPCC Plan has been prepared for the GPLNG Terminal site describing the materials, which will be stored on site during construction, and controls and measures to prevent releases. The construction SPCC is included in Appendix H.

5.0 NON-STORM WATER DISCHARGE MANAGEMENT

The EPC contractor must identify all allowable sources of non-storm water discharges that are expected to be discharged as part of the construction activities (excluding flows from fire fighting activities) that will be combined with storm water discharges associated with construction activity at the site. Table 5-1 provides a list of potential non-stormwater discharges that may occur during construction.

Non-storm water discharges should be eliminated or reduced to the extent feasible. The EPC contractor must identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water discharges expected during construction. **The EPC contractor will identify any non stormwater discharges associated with construction identified at a later time and will include specific operating procedures and best management practices to address each in this section.**

Worker sanitary wastewater will not be discharged during construction. This waste will be hauled and disposed off site in accordance with all applicable regulations. There will be no other water discharges, including stormwater, associated with industrial activities other than those associated with the construction activities mentioned above.

The EPC contractor will provide this information in Table 5-1 below.

Table 5-1. Non-Stormwater Discharge Management

Non-storm water discharge	Discharge Expected for this Project? Yes or No	Pollution Prevention Measure for Expected Discharges
Fire hydrant flushing		
Discharges from support activities, including concrete or asphalt batch plants		
Discharges from equipment staging areas, and material storage areas		
Waters used to wash vehicles where detergents are not used		
Water used to control dust		
Potable water including uncontaminated water line flushing		
Routine external building wash down that does not use detergents		
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		
Uncontaminated air conditioning or compressor condensate		
Uncontaminated ground water or spring water		
Foundation or footing drains where flows are not contaminated with process materials such as solvents		
Uncontaminated excavation dewatering		
Landscape irrigation		
Test water from hydrostatic testing of tank piping	Included in NPDES Operating Permit	
Other		

6.0 MAINTENANCE

All erosion and sediment control measures and other protective measures identified in this SWPPP must be maintained in effective operating condition. Sediment will be removed from behind the silt fencing when it reaches one-third of the height of the fence. Sediment will be removed from the reinforced silt fences around inlets when the storage capacity has been approximately 50% filled. If it is determined through inspection that sediment has discharged via stormwater from the construction site, off-site accumulations will be removed, as necessary, to minimize impacts.

If site inspections required by Section 8 "Inspections" identify stormwater control devices that are not operating properly, maintenance shall be performed before the next anticipated storm event, or as necessary to maintain the continued effectiveness of stormwater controls. If maintenance prior to the next anticipated storm event is impracticably, maintenance must be scheduled and accomplished as soon as practicable. Temporary sediment barriers will remain in place until permanent revegetation measures have been judged successful. Control measures that have been improperly installed or have been disabled, run-over, removed, or otherwise rendered ineffective will be replaced or repaired, as necessary.

The EPC contractor is to provide SOPs for maintenance procedures for erosion and sediment control measures and other protective measures.

7.0 ENDANGERED OR THREATENED SPECIES

GPLNG Terminal has conducted extensive consultations with the National Fish and Wildlife Service (FWS) and with the Texas Parks and Wildlife Department concerning impacts to threatened and endangered species. As part of a comprehensive Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA), GPLNG has already evaluated potential impacts of stormwater discharges on federally and state listed endangered and threatened species and designated critical habitats.

The FERC Draft EIS concluded that with the exception of the red-cockaded woodpecker (RCW) the construction of the GPLNG Terminal is not likely to adversely affect any of the fifteen federal and state listed endangered and threatened species identified as potentially occurring within the project area. Endangered species act consultation with the FWS is ongoing. GPLNG Terminal LP may not begin construction activities until the FERC completes any necessary consultations with the FWS and NOAA Fisheries. Once written notification from the Director of OEP has been received the terms of the consultation should be included in this SWPPP.

8.0 NATIONAL REGISTER OF HISTORIC PLACES

GPLNG Terminal has conducted consultations with the Texas Historic commission (THC) and with the US Army Corps of Engineers concerning impacts to archeological and cultural resources, which may be disturbed by construction. Consultation for the GPLNG terminal is complete, and the Texas State Historical Preservation Officer (SHPO) has concurred that no historic properties would be impacted by proposed activities on the property.

9.0 INSPECTIONS

Environmental Inspectors will inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site. The inspections will be recorded and attached to this plan. In the event of flooding or other uncontrollable situations that prohibit access to the inspection sites, inspections will be conducted as soon as access is practicable. The SWPPP will be modified, as necessary, when inspection results warrant such revisions. The revisions will be completed within 7 days of the inspection, and when existing BMPs are modified, an implementation schedule will be included.

Environmental Inspectors shall have peer status with all other activity inspectors, and shall have the authority to stop any activity that violates the environmental conditions of the Certificate, Federal, State or local environmental regulations or permit conditions, or landowner requirements, and to order appropriate corrective action. The inspectors must verify that the limits of authorized construction work areas and locations of access roads are properly marked before clearing; and that the location of boundaries of sensitive resource areas, waterbodies, wetlands, or areas with special requirements along the construction work area are marked with signs and highly visible flagging. The inspectors will also keep records of compliance with the environmental conditions of the FERC certificate, and the mitigation measures proposed by the project sponsor in the application submitted to the FERC, and other Federal or state environmental permits during active construction and restoration.

Inspectors should ideally have completed the FERC Post-Certificate Environmental Compliance Seminar training and be experienced in FERC and EPA documentation and reporting, in communication and conflict management, and in inspector expectations and standards of conduct. Prior to beginning work, the inspectors should also have project-specific training on technical issues such as wetland areas, soil types, and erosion control.

The construction site should be considered stabilized when all construction activity ceases and a 80% vegetative density has been established. Areas that are not revegetated should be considered to have achieved final stabilization when they have a permanent cover that will prevent erosion of soil by wind or water. At that time, activity under this plan, including inspections will cease. Inspections should continue until disturbed areas are completely stabilized (for areas to be revegetated, this means that perennial vegetation cover reached a uniform cover of at least 80% of the pre-construction cover).

Inspection forms will be developed by the EPC contractor and included in Appendix F. Appendix F contains General Inspection Forms that can be used in conjunction with the specific forms to be developed by the EPC contractor.

Inspections shall be conducted as follows:

- All control measures should be inspected at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.
- All control measures should be maintained in good working order; if repair is necessary, it should be initiated within 24 hours of report (see above).
- A maintenance inspection report should be completed after each inspection.
- Following a storm event of 0.5 inches or larger, except that portions of the site that have been finally or temporarily stabilized will be conducted at least once every month.
- If existing BMPs need to be modified or if additional BMPs are necessary, implementation must be completed before the next storm event whenever practicable.

Inspectors will inspect the following areas on each inspection:

- Disturbed areas for evidence of or potential for pollutants entering the drainage system;
- Area used for storage of materials that are exposed to precipitation for evidence of or potential for pollutants entering the drainage system;
- Vehicle entrances/dirt tracking for evidence of off-site sediment tracking;
- Discharge points, if accessible- to determine if erosion control measures are effective in preventing significant impacts to receiving waters. If these points are inaccessible, inspectors should inspect nearby down stream locations; and
- Sediment from sediment traps must be removed when design capacity has been reduced by 50 percent.

Qualified personnel must conduct inspections. A qualified person is one 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 effectiveness of any sediment and erosion measures selected. For each inspection, the EPC contractor will complete an inspection report which must be incorporated into this SWPPP per the CGP.

10.0 MAINTAINING AN UPDATED PLAN

The original version of this stormwater pollution prevention plan was developed in April 2005 prior to construction of the GPLNG Terminal. This plan must be modified and/or updated based on information and experience gathered during actual construction activities (e.g. add and document additional controls, revise design controls, include or modify BMPs designed to correct problems, etc.). If changes to the design, construction, or maintenance could result in pollutants discharging to stormwater, then the SWPPP must be modified to address these impacts. Further, if the SWPPP proves to be ineffective in controlling pollutants, modifications implemented to correct deficiencies must be incorporated into the SWPPP. Finally, the SWPPP must also be amended if inspections by site staff, local, state, or federal officials, determines that other measures (e.g. modified BMPs) must be implemented to correct identified problems. Revisions to the SWPPP must be completed within seven (7) calendar days following the inspection.

11.0 REQUIRED REPORTS, DOCUMENTATION, AND RECORD KEEPING

The following documentation will be kept on file at the construction site:

- 1) A copy of this SWPPP, NOI, EPA's acknowledgement letter, and
- 2) Inspection reports

A separate report will be developed for each inspection. Inspection reports shall identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report shall contain a certification that the facility is in compliance with this SWPPP and the NPDES/CGP permit. In addition, inspection reports should include the following information:

- Summarize the scope of the inspection
- Provide the name(s) and qualifications of personnel making the inspection
- Indicate the date(s) of the inspection
- Location(s) of discharges of sediment or other pollutants from the site;
- Weather information for the reporting period, including duration and intensity of storm events and whether any discharges occurred;
- Weather information at the time of the inspection;
- Location(s) of SOPs and BMPs that need to be maintained;
- Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location and plans for correction of the problem; and
- Location(s) where additional BMPs are needed that did not exist at the time of inspection.
- Corrective action required including changes to the SWPPP necessary and implementation dates

- 3) Construction activities

In addition to inspection and maintenance reports, records of the construction activity on the site must be kept. Specifically the following information must be maintained:

- The dates when major grading activities occur in a particular area;
- The date when construction activities cease in an area, temporarily or permanently; and
- The date when an area is stabilized, temporarily or permanently.

4) Erosion control maintenance activities

5) Other documentation

The EPC contractor and GPLNG Terminal will keep copies of the SWPPP (including a copy of the GCP), the NOI, and the acknowledgment letter from EPA at the construction site for review by federal, state, and/or local inspectors.

All documentation shall be retained as part of the SWPPP for at least three years from the date that the site is finally stabilized.

6) Sample data

The EPA General Permit for Texas (TXR15000F) does not require collection of sample or monitoring data during discharge activities. If an EPA Environmental Inspector observes conditions which he believes could result in an excessive discharge of pollutants, he can request that samples be collected. If this occurs, a sampling plan would be developed by the site Environmental Inspector in coordination with the EPA to address the relevant streams and pollutants of concern.

12.0 SITE MANAGEMENT PRACTICES

12.1 Standards

Control measures must be installed in accordance with sound engineering practices and relevant manufacturer's specifications.

12.2 Practices

- Spoil piles will be protected.
- Buffer zones will be implemented on any identified wetland.
- Soils will be stockpiled for backfill. If rocks are encountered, they will be hauled to an off-site disposal area.
- Waste Materials- All trash, litter, and debris will be collected for off-site disposal. All refuse will be disposed of according to state and local regulations.
- Off-site Vehicle Tracking- The entrance to the construction site is already asphalt paved, which will help reduce vehicle tracking of sediments off site. Periodic sweeping and scraping will remove sediment tracked onto public roads.
- Once all other construction activities permanently cease in an area, that area will be stabilized with reseeding and/or mulched, as needed. Once revegetation has been judged successful, temporary erosion/sediment control structures will be removed.
- As weather conditions dictate, access roads will undergo dust suppression with water mist. Dump trucks carrying materials from the site should be covered with a tarpaulin.
- All excess topsoil will be stockpiled during initial excavation, and reused to revegetate areas of the site after construction is completed.
- If weather conditions are unfavorable for revegetation, temporary stabilization should be ensured on all areas (e.g. with mulch and matting).
- As areas of the site are completed, revegetation should begin within 14 days of completion of work in the area, or as soon as weather conditions allow (arid mid-summer conditions make successful revegetation unlikely). If revegetation is not possible, then temporary stabilization measures should be implemented within 14 days of completion of work. If construction activities temporarily cease on an area and are not scheduled to begin again in that location for more than 21 days, temporary stabilization (mulch applied with tack or netting, soil retention blankets, etc) measures should be put in place.
- Worker sanitary waste will be hauled off site for disposal in accordance with all applicable regulations

The EPC contractor shall provide site specific SOPs and other detailed information, at least, for the following activities:

- Protection of spoil piles
 - Specific buffer zones allowed for wetlands
 - Off site vehicle tracking
 - Management of waste materials
 - Management of sanitary worker waste
 - Soil stockpiling
 - Dust suppression
 - Truck Washing
 - Others
- (See Section 4.0)

13.0 RECEIVING WATERS, WETLANDS, AND TMDL APPLICABILITY

The primary perennial surface waterbody associated with the GPLNG Terminal is the SNWW. The SNWW forms the northern boundary of the Property. Other permanent water features include three man-made drainages that run parallel to and extend from levees that run through the central portion of the Site. The SNWW and drainages are tidally influenced and characterized as estuarine (i.e., mix of fresh and tidal waters) with salinities that range from fresh to 25 parts per thousand (ppt). The drainages extend from the shoreline into the interior of the Site. Flow is tidally influenced, and changes in direction on tidal cycles. The normal water depth in these drainages is approximately one to two feet (BES, 2004).

Other surface water bodies within 0.5 mile of the Property (but outside the Property), include:

- Keith Lake, to the west of SH 87 (approximately 0.33 mile from the Property); and,
- Sabine Lake, to the north of the SNWW and Pleasure Island (approximately 0.44 mile from the Property at its closest point).

Sabine Lake is an inland estuary bisected by the Texas-Louisiana border near Orange and Port Arthur, Texas. The Neches River discharges into the northwest corner of Sabine Lake and the Sabine River discharges into the northeast corner. The SNWW – a 75-mile-long, deep-draft navigation channel - commences at the confluence of the Sabine and Neches Rivers and the head of Sabine Lake. This commercial waterway services the ports of Port Arthur, Beaumont, and Orange. The SNWW lies on the western side of Sabine Lake and forms a deepwater channel between the Sabine and Neches Rivers, and the Gulf of Mexico. The SNWW is dredged to approximately 40 feet and separated from Sabine Lake by Pleasure Island. The SNWW is approximately 0.15 to 0.2 miles wide adjacent to the Property.

A wetland delineation conducted at the Property in accordance with the routine onsite determination methods defined in the USACE Wetlands Delineation Manual (USACE, 1987) identified 66 wetlands that comprise 257 acres of the Property. GPLNG has taken measures to reduce the potential effects to wetlands by locating the terminal Site on the portion of the Property that consists primarily of uplands. Construction of the terminal will affect 98.18 acres of wetlands, including 34.48 acres of coastal emergent marsh, 62.14 acres of palustrine emergent wetland, 0.80 acres of palustrine scrub-shrub wetland and 0.77 acres of water and shoreline.

In the unlikely event of a release of other petroleum products or chemicals or hydrocarbons, measures in the construction SPCC Plan would be implemented immediately to avoid and/or minimize potential effects.

Construction of the GPLNG Terminal would have no measurable effect on groundwater quality or quantity. Groundwater resources underlying and in the vicinity of the Site are not used for drinking water and, therefore, drinking water supplies would be unaffected by construction of the Terminal. Construction of the Terminal Project facilities would use local surface water resources and, therefore, would not affect groundwater quality or quantity. The addition of impervious surfaces within the facility once it has been constructed may cause an insignificant decrease in the local recharge of groundwater to the shallow water-bearing zone underlying the Site (by converting infiltration to runoff); however, this phenomenon would not have an effect on water supply, since the primary water supply in the area is surface waters. Construction activities could potentially affect the surface water use and quality of the SNWW. The main sources of contaminants could be originated from dredging and dredge material management, hydro test water from tanks, accidental releases of petroleum products, and erosion and sedimentation during construction. The intent of this plan is to reduce the impacts from erosion and sedimentation from construction and dredging activities during construction.

The proposed project is not subject to any Total Maximum Daily Load (TMDL) requirements over and above the requirements of the CGP. There is no EPA approved or established TMDL for the SNWW in Jefferson County.

14.0 STORMWATER POLLUTION PREVENTION PLAN CERTIFICATION

a. Golden Pass LNG Terminal 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.

Signed: _____ Date: _____
Print Name: _____
Title: _____
Company: _____

b. EPC Contractor/Subcontractor(s) Certification

I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

Signed: _____ Date: _____
Print Name: _____
Title: _____
Company: _____

[Copy page as needed]

APPENDIX A
TEXT OF NPDES PERMIT

NPDES General Permit for Storm Water Discharges From Construction Activities

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As modified effective January 21, 2005

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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 Subpart 1.3 of this National Pollutant Discharge Elimination System (NPDES) general permit, except for those activities excluded from authorization of discharge in Subpart 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 July 1, 2003 (as modified effective January 21, 2005).

This permit and the authorization to discharge shall expire at midnight, July 1, 2008.

Signed:

Linda M. Murphy, Director, Office of Ecosystem Protection
EPA Region 1

Kevin Bricke, Acting Director, Division of Environmental Planning and Protection
EPA Region 2

Carlos E. O'Neill, P.E., Acting Division Director, Caribbean Environmental Protection Division
EPA Region 2

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

Rebecca Harvey, Chief, NPDES Program Branch
EPA Region 5

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

Leo J. Alderman, Director, Water, Wetlands, and Pesticides Division
EPA Region 7

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

Nancy Woo, Acting Director, Water Division
EPA Region 9

Randall F. Smith, Director, Office of Water
EPA Region 10

The signatures are for the permit conditions in Parts 1 through 9 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 storm water 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 storm water 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 two permits issued in 1998 (63 FR 7858, February 17, 1998 for EPA Regions 1, 2, 3, 7, 8, 9, and 10 and 63 FR 36489, July 6, 1998 for EPA Region 6). Any references to the 1998 CGP in this permit refer to those two permits.

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 reduce or eliminate storm water pollution from construction activity by requiring that you plan and implement appropriate pollution control practices to protect water quality.

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 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 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 Storm Water Discharges

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

1. Storm water associated with large and small construction activity as defined in Appendix A;
2. Storm water discharges designated by EPA as needing a storm water 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 storm water 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. Appropriate controls and measures are identified in a Storm Water Pollution Prevention Plan (SWPPP) covering the discharges from the support activity areas; 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-Storm Water Discharges

You are authorized for the following non-storm water discharges, provided the non-storm water component of the discharge is in compliance with Subpart 3.5 (Non-Storm Water Discharge Management):

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 Subpart 3.4.G;
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 storm water discharges from industrial sites may need to be covered by a separate NPDES permit.
2. This permit does not authorize discharges mixed with non-storm water. This exclusion does not apply to discharges identified in Subpart 1.3.B, provided the discharges are in compliance with Subpart 3.5 (Non-Storm Water Discharge Management).
3. This permit does not authorize storm water 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 Subpart 4.2.
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 Subpart 4.2. However, EPA may authorize your coverage under this permit after you have included appropriate controls and implementation procedures in your SWPPP designed to bring your discharge into compliance with water quality standards.
5. *Discharging into Receiving Waters With an Approved 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 you incorporate into your SWPPP 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 incorporate into your SWPPP any 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 incorporate that allocation into your SWPPP and 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 storm water 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 adherence to a SWPPP that meets the requirements of the CGP will be consistent with the approved TMDL. Where an EPA-approved or established TMDL has not

specified a wasteload allocation applicable to construction storm water discharges, but has not specifically excluded these discharges, adherence to a SWPPP that meets the requirements of the CGP 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 storm water discharges, allowable non-storm water discharges, and storm water 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 storm water discharges, allowable non-storm water discharges, or storm water 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 storm water discharges, allowable non-storm water discharges, and storm water 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 storm water discharges, allowable non-storm water discharges, and storm water 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 storm water discharges, allowable non-storm water discharges, and storm water 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 storm water discharges, allowable non-storm water discharges, and storm water 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 storm water discharges, allowable non-storm water discharges, and storm water discharge-related activities on federally-listed species and federally-designated critical habitat; or
- Criterion E. Storm water discharges, allowable non-storm water discharges, and storm water 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 storm water discharges, allowable non-storm water discharges, and storm water 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. Such terms and conditions must be documented and incorporated into your SWPPP.

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 STORM WATER FROM CONSTRUCTION ACTIVITY

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.

2.1 Authorization to Discharge Date

This permit is effective as of the publication date in the Federal Register and is effective for five years, expiring at midnight on the anniversary of publication in the fifth year.

- A. If you submit an NOI during the first 90 days after the issuance date of this permit you are authorized to discharge storm water from construction activities under the terms and conditions of this permit seven (7) calendar days after submittal to EPA of a complete and accurate NOI (i.e., 7 days from date of postmark), except as noted in Subpart 2.1.C.
- B. If you submit an NOI after the first 90 days of this permit and prior to the expiration date of this permit, you are authorized to discharge storm water 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>, except as noted in Subpart 2.1.C.
- C. EPA may delay your authorization based on eligibility considerations of Subpart 1.3 (e.g., ESA concerns). In these instances, you are not authorized for coverage under this permit until you receive notice from EPA of your eligibility.

2.2 Notice of Intent Contents

- A. You must use the NOI form provided in Appendix E (or a photocopy thereof) and available at www.epa.gov/npdes/stormwater/cgp. If EPA makes other NOI forms available (either directly, by public notice, or by making information available on the Internet), you may take advantage of any of those options to satisfy the NOI use requirements of this Subpart.
- B. You must provide the following information on the NOI form:
 1. The applicable permit number for which you are requesting coverage (See Appendix B);

2. Operator name, address, telephone number, and Employer Identification Number (EIN) as established by the U.S. Internal Revenue Service;
3. Project/Site name, address, county or similar governmental subdivision, and latitude/longitude of your construction project or site;
4. Whether your site is located in Indian country and if so, the name of the Reservation, if applicable;
5. Whether the SWPPP has been prepared in advance of filing of this NOI and the location where the applicable SWPPP may be viewed;
6. Name of the water(s) of the U.S. into which your site discharges;
7. Indication whether your discharge is consistent with the assumptions and requirements of applicable EPA approved or established TMDLs;
8. Estimated dates of commencement of construction activity and final stabilization (i.e., project start and completion dates);
9. Total acreage (to the nearest quarter acre) to be disturbed for which you are requesting permit coverage;
10. Whether any federally-listed threatened or endangered species, or federally-designated critical habitat are in your project area to be covered by this permit, and the basis for certifying eligibility for permit coverage based on the instructions in Appendix C;
11. A certification statement, signed and dated by an authorized representative as defined in Appendix G, Section 11, and the name and title of that authorized representative.

2.3 Submission Deadlines

- A. *New Projects*: To obtain coverage under this permit, you must submit a complete and accurate NOI and be authorized consistent with Subpart 2.1 prior to your commencement of construction activities.
- B. *Permitted Ongoing Projects (only applicable for first 90 days after this permit is issued)*: If you previously received authorization to discharge for your project under the 1998 CGP and you wish to continue coverage under this permit:
 1. Except as noted in 2.3.B.2, you must:
 1. Submit an NOI within 90 days of the issuance date of this permit, and
 2. Until you are authorized under this permit consistent with Subpart 2.1, comply with the terms and conditions of the 1998 CGP under which you were previously authorized.
 2. If you meet the termination of coverage requirements in accordance with Subpart 5.1 within 90 days of the issuance date of this permit (e.g., construction will be finished and final stabilization achieved) you must:
 1. Submit an NOT consistent with the 2003 CGP using the NOT form provided in Appendix F, and
 2. Until coverage is no longer required, comply with the terms and conditions of the 1998 CGP under which you were previously authorized.
- C. *Unpermitted Ongoing Projects (only applicable for first 90 days after this permit is issued)*: If you previously did not receive authorization to discharge for your project under the 1998 CGP and you wish to obtain coverage under this permit:
 1. Except as noted in 2.3.C.2, you must:
 1. Submit an NOI within 90 days of the issuance date of this permit, and
 2. Until you are authorized under this permit consistent with Subpart 2.1, comply with an interim Storm Water Pollution Prevention Plan (SWPPP) consistent with the 1998 CGP.
 2. If you meet the termination of coverage requirements in accordance with Subpart 5.1 within 90 days of the issuance date of this permit (e.g., construction will be finished and final stabilization achieved) you must comply with an interim Storm Water Pollution Prevention Plan (SWPPP) consistent with the 1998 CGP until permit coverage is no longer required.

- 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 Subpart 2.1. The Agency reserves the right to take enforcement action for any unpermitted discharges that occur between the commencement of construction and discharge authorization.

2.4 Where to Submit

- A. Except as noted in Subpart 2.3.B, you must send your complete and accurate NOI to EPA at one of the following addresses:

For Regular U.S. Mail Delivery:

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

For Overnight/Express Mail Delivery:

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

- B. In lieu of Subpart 2.4.A, when available, you may submit your NOI using EPA's electronic NOI system (i.e., eNOI) as detailed at www.epa.gov/npdes/stormwater/cgp.

PART 3: STORM WATER POLLUTION PREVENTION PLANS (SWPPPS)

3.1 Storm Water Pollution Prevention Plan Framework

- A. A SWPPP must be prepared prior to submission of an NOI as required in Part 2. At least one SWPPP must be developed for each construction project covered by this permit and such SWPPP must be prepared in accordance with good engineering practices.
- B. The SWPPP must:
1. Identify all potential sources of pollution which may reasonably be expected to affect the quality of storm water discharges from the construction site;
 2. Describe practices to be used to reduce pollutants in storm water discharges from the construction site; and
 3. Assure compliance with the terms and conditions of this permit.
- C. Once a definable area has been finally stabilized, you may mark this on your SWPPP and no further SWPPP or 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).
- D. You must implement the SWPPP as written from commencement of construction activity until final stabilization is complete.

3.2 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. Subpart 3.2.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 Subpart 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 Subpart 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 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 best management practices (BMPs) and other controls required by the SWPPP. You must ensure either directly or through coordination with other permittees, that your activities do not render another party's pollution control 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 storm water discharge controls and other measures are consistent with one another (e.g., provisions to protect listed species and critical habitat).

3.3 Pollution Prevention Plan Contents: Site and Activity Description

- A. The SWPPP must identify all operators for the project site, and the areas of the site over which each operator has control.
- B. The SWPPP 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. The SWPPP must contain a legible site map, showing the entire site, identifying:
1. Direction(s) of storm water flow and approximate slopes anticipated after major grading activities;
 2. Areas of soil disturbance and areas that will not be disturbed;
 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 storm water discharges to a surface water; and
 8. Areas where final stabilization has been accomplished and no further construction-phase permit requirements apply.
- D. The SWPPP must describe and identify the location and description of any storm water discharge associated with industrial activity other than construction at the site. This includes storm water discharges from dedicated asphalt plants and dedicated concrete plants, that are covered by this permit.

3.4 Pollution Prevention Plan Contents: Controls to Reduce Pollutants

- A. The SWPPP must include a description of all pollution control measures (i.e., BMPs) that will be implemented as part of the construction activity to control pollutants in storm water discharges. 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.
- B. 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. Site plans should ensure that existing vegetation is preserved where possible and that disturbed portions of the site are stabilized. Use of impervious surfaces for stabilization should be avoided.
- C. The following records must be maintained as part of the SWPPP:
 1. Dates when major 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.
- D. The SWPPP must include a description of structural practices to divert flows from exposed soils, retain/detain flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Placement of structural practices in floodplains must be avoided to the degree practicable.
- E. The SWPPP must include a description of all post-construction storm water management measures that will be installed during the construction process to control pollutants in storm water discharges after construction operations have been completed. Structural measures should be placed on upland soils to the degree practicable. Such measures must be designed and installed in compliance with applicable federal, local, state or tribal requirements.
- F. The SWPPP must describe measures to 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.
- G. The SWPPP must describe measures to minimize, to the extent practicable, off-site vehicle tracking of sediments onto paved surfaces and the generation of dust.
- H. The SWPPP must include a description of construction and waste materials expected to be stored on-site with updates as appropriate. The SWPPP must also include a description of controls, including storage practices, to minimize exposure of the materials to storm water, and spill prevention and response practices.
- I. The SWPPP must include a description of pollutant sources from areas other than construction (including storm water discharges from dedicated asphalt plants and dedicated concrete plants), and a description of controls and measures that will be implemented at those sites to minimize pollutant discharges.

3.5 Non-Storm Water Discharge Management

The SWPPP must identify all allowable sources of non-storm water discharges listed in Subpart 1.3.B of this permit, except for flows from fire fighting activities, that are combined with storm water discharges associated with construction activity at the site. Non-storm water discharges should be eliminated or reduced to the extent feasible. The SWPPP must identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water component(s) of the discharge.

3.6 Maintenance of Controls

- A. All erosion and sediment control measures and other protective measures identified in the SWPPP must be maintained in effective operating condition. If site inspections required by Subpart 3.10 identify BMPs that are not operating effectively, maintenance must be performed as soon as possible and before the next storm event whenever practicable to maintain the continued effectiveness of storm water controls.
- B. If existing BMPs need to be modified or if additional BMPs are necessary for any reason, implementation must be completed before the next storm event whenever practicable. If implementation before the next storm event is impracticable, the situation must be documented in the SWPPP and alternative BMPs must be implemented as soon as possible.
- C. Sediment from sediment traps or sedimentation ponds must be removed when design capacity has been reduced by 50 percent.

3.7 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 storm water discharges or storm water 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;
- F. A description of measures necessary to protect federally-listed endangered or threatened species, or federally-designated critical habitat. The permittee must describe and implement such measures to maintain eligibility for coverage under this permit.

3.8 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 Storm Water Notice Processing Center notifying you of their receipt of your administratively complete NOI must also be included as a component of the SWPPP.

3.9 Applicable State, Tribal, or Local Programs

The SWPPP must be consistent with all applicable federal, state, tribal, or local requirements for soil and erosion control and storm water management, including updates to the SWPPP as necessary to reflect any revisions to applicable federal, state, tribal, or local requirements for soil and erosion control.

3.10 Inspections

- A. Inspections must be conducted 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. Inspection frequency may be reduced 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. 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. 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

storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activity.

- E. 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 storm water conveyance system. Sedimentation and erosion control measures identified in the SWPPP 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. 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 Subpart 3.10.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.
- G. 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 any changes to the SWPPP necessary and implementation dates.

A record of each inspection and of any actions taken in accordance with this Part must be retained as part of 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 the SWPPP and this permit. The report must be signed in accordance with Appendix G, Section 11 of this permit.

3.11 Maintaining an Updated Plan

- A. The SWPPP, including the site map, must be amended whenever there is 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. The SWPPP must be amended if during inspections or investigations by site staff, or by local, state, tribal or federal officials, it is determined that the SWPPP is ineffective in eliminating or significantly minimizing pollutants in storm water discharges from the construction site.
- C. Based on the results of an inspection, the SWPPP must be modified as necessary to include additional or modified BMPs designed to correct problems identified. Revisions to the SWPPP must be completed within

seven (7) calendar days following the inspection. Implementation of these additional or modified BMPs must be accomplished as described in Subpart 3.6.B.

3.12 Signature, Plan Review and Making Plans Available

- A. 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 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. 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. 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 Storm Water 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. SWPPPs must be made available upon request by 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 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. All SWPPPs must be signed and certified in accordance with Appendix G, Section 11.

3.13 Management Practices

- A. All control measures must be properly selected, installed, and maintained in accordance with any relevant manufacturer specifications and good engineering practices. If periodic inspections or other information indicates a control has been used inappropriately, or incorrectly, the operator must replace or modify the control for site situations as soon as practicable.
- B. If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize off-site impacts.
- C. Litter, construction debris, and construction chemicals that could be exposed to storm water must be prevented from becoming a pollutant source in storm water discharges.
- D. Except as provided below, stabilization measures must be initiated 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.
1. Where stabilization by the 14th day is precluded by snow cover or frozen ground conditions, stabilization measures must be initiated as soon as practicable.
 2. 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.

3. 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.
- E. A combination of sediment and erosion control measures are required to achieve maximum pollutant removal.
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.
- F. Velocity dissipation devices must be placed 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).

3.14 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 section 1.3.C.5 for further information on determining permit eligibility related to TMDLs.

PART 4: SPECIAL CONDITIONS, MANAGEMENT PRACTICES AND OTHER NON-NUMERIC LIMITATIONS

4.1 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.

4.2 Requiring 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 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 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 the coverage of 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 an alternative general permit if your reasons are adequate to support the request.
- C. When an individual NPDES permit is issued to you, who are 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, who are 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.

4.3 Releases in Excess of Reportable Quantities

The discharge of hazardous substances or oil in storm water discharges from the construction site must be prevented or minimized in accordance with the SWPPP. 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 202–426–2675) 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
- you must modify the SWPPP as required under Subpart 3.11 within 7 calendar days of knowledge of the release to: provide a description of the release, the circumstances leading to the release, and the date of the release. Plans must identify measures to prevent the reoccurrence of such releases and to respond to such releases.

4.4 Spills

This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

4.5 Attainment of Water Quality Standards After Authorization

- A. You must select, install, implement and maintain BMPs 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 Subpart 4.5.B below, your SWPPP developed, implemented, and updated consistent with Part 3.0 is 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 storm water 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. Develop a supplemental BMP action plan describing SWPPP modifications in accordance with Subpart 3.11 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 Subpart 4.2.

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

PART 5: TERMINATION OF COVERAGE

5.1 Requirements

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.

5.2 Submitting a Notice of Termination

It is your responsibility to submit a complete and accurate Notice of Termination (NOT), using the form provided in Appendix F (or a photocopy thereof) available at www.epa.gov/npdes/stormwater/cgp. If EPA notifies dischargers (either directly, by public notice, or by making information available on the Internet) of other NOT form options (e.g., electronic submission), you may take advantage of those options to satisfy the requirements of Part 5.

- A. The Notice of Termination must include the following information:
1. The NPDES permit tracking number for the storm water discharge;
 2. The basis for submission of the NOT, including: final stabilization has been achieved on all portions of the site for which the permittee is responsible; another operator/permittee has assumed control 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;
 3. You, the operator's name, address, telephone number and your organization's Employer Identification Number (EIN) as established by the U.S. Internal Revenue Service;
 4. The name of the project and address (or a description of location if no street address is available) of the construction site for which the notification is submitted; and
 5. A certification statement, signed and dated by an authorized representative as defined in Appendix G, Section 11 and the name and title of that authorized representative.

5.3 Where to Submit

A. All NOTs must be submitted to one of the following addresses:

For Regular U.S. Mail Delivery:

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

For Overnight/Express Mail Delivery:

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

B. In lieu of Subpart 5.3.A, you can submit your NOT to EPA using EPA's electronic system (i.e., eNOI), when available. Check www.epa.gov/npdes/stormwater/cgp for updates.

PART 6: 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 7: REOPENER CLAUSE

7.1 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.

7.2 Water Quality Protection

If there is evidence indicating that the storm water 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 4.5 of this permit, or the permit may be modified to include different limitations and/or requirements.

7.3 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 8: 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 9: 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.

State Coastal Zone Management Act (CZMA) certification was not received from Massachusetts in time for that state to be included in this permit. As such, large construction activities in Massachusetts covered under the 1998 CGP will continue to be covered under that permit. EPA will reissue the CGP for Massachusetts for large and small construction activities at a later date, and will include any state-specific modifications or additions as part of the State's CZMA certification process.

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. 23-56).
- 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, March 1997 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. 23-56 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 DEP 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 the you of the duty to comply with other applicable Massachusetts statutes and regulations.

2. 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 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: 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. NYR100001: Indian country within the State of New York

St. Regis Mohawk Territory at Akwesasne

- a. 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: Clean Water Program Manager.
- b. 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. Within 10 days of the inspection required under Subpart 3.10.G of this permit, the permittee shall provide a copy of the Inspection Report to the Environment Division.

C. Region 6

1. NMR150000: The State of New Mexico, except Indian country

NOTE: Conditions in the New Mexico Environment Department (NMED) certification of the permit resulted in permit requirements adding further restrictions on eligibility for discharges to Outstanding National Resource Waters (ONRWs), expanding on requirements for pollution prevention plans, and limiting options provided in the permit related to inspection frequency and final stabilization.

- a. In addition to all other provisions of this permit, operators who intend to obtain authorization under this permit for all new storm water discharges must satisfy the conditions in Subpart 9.C.1.a.i, unless a TMDL has been established for the receiving stream which specifies a waste load allocation (WLA) for

construction storm water discharges or the receiving stream is a Tier 3 water, in which case Subpart 9.C.1.a.ii applies.

- i. The operator must include a Sediment Control Plan (SCP) as a part of the Storm Water Pollution Prevention Plan (SWPPP). The SCP must include site-specific interim and permanent stabilization, managerial, and structural solids, erosion, and sediment control BMPs and/or other controls that are designed to prevent an increase in the sediment yield and flow velocity from pre-construction, undisturbed conditions. This applies to discharges both during construction and after construction operations have been completed. The SCP must identify, and document the rationale for selecting these BMPs and/or other controls. The SCP 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 the BMPs. Using appropriate soil loss prediction models (such as SEDCAD 4.0, RUSLE, SEDIMONT II, MULTISED, etc.), the operator(s) must demonstrate, and include documentation in the SCP, that implementation of the site-specific practices will result in sediment yields that will not be greater than the sediment yield levels from pre-construction, undisturbed conditions. The SCP must be prepared in accordance with good engineering practices and certified by a registered professional engineer. The operator(s) must design, implement, and maintain BMPs in the manner specified in the SCP and the SWPPP.
 - ii. Operators are not eligible to obtain authorization under this permit for all new storm water 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 storm water discharges from large and small construction activities.
- b. Storm water discharges associated with industrial activity to Clean Water Act section 303(d) waters as well as all other "waters of the State" that the New Mexico Environment Department, Surface Waters Quality Bureau (SWQB) has determined to be or may reasonably be expected to be contributing to a violation of a water quality standard and/or that do not comply with the applicable anti-degradation provisions of the State's WQS 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).

- c. Inspections required under Subpart 3.10 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 Parts 3.10.B and C still apply.
- d. Permittees can not 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.
- e. 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. NMR15000I: 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 discharges on the Pueblo of Acoma.

- i. A copy of the storm water pollution prevention plan, Notice of Intent, and Notice of Termination must be submitted to the Haaku Water Office at the address below. The pollution prevention plan must be submitted to the Pueblo at least thirty (30) days in advance of submitting the Notice of Intent to EPA.

HAAKU WATER OFFICE
 Pueblo of Acoma
 P.O. 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 2.4. (Where to Submit) is amended to add the following section (2.4.C):

C. 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 Islet

Regular U.S. Mail Delivery

OR

Overnight/Express Mail Delivery

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

Environment 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 3.4. (Pollution Prevention Plan Contents: Controls to Reduce Pollutants), 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 3.8 (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 3.10.(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 3.10. (Inspections), section G, 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 2.4.C." (See above)
- viii. Subpart 3.12. (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) must be retained at the construction site (or other location easily accessible during normal business hours to the Pueblo of Isleta's Environmental 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 3.12. (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 Environment 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 Environment Department staff for review and copying at the time of an on-site inspection.

- x. Subpart 3.13. (Management Practices), section A is amended to add: "Erosion and sediment controls shall be designed to retain sediment on-site."
- xi. Subpart 4.3 (Releases in Excess of Reportable Quantities), first bullet is amended to read: "you must provide notice to the Pueblo of Isleta Environment 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 4.5 (Attainment of Water Quality Standards After Authorization), is amended to add the following fourth bullet:

"You must provide the Pueblo of Isleta, at the address listed in Subpart 2.4.C, with a copy of the EPA notification, the supplemental action plan, data and certification required by EPA."
- xiii. Subpart 5.3. (Where to Submit) is amended to add the following section (5.3.C):

C. Copies of all Notices of Termination submitted to EPA must also be sent concurrently to the Pueblo of Isleta at the following address.

Regular U.S. Mail Delivery

OR

Overnight/Express Mail Delivery

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

Environment Department
 Building L
 11000 Broadway, SE
 Albuquerque, NM 87105

- xiv. Any correspondence, other than NOIs and NOTs, with the Pueblo of Isleta concerning storm water discharges authorized by this permit shall sent one of the addresses in Subpart 5.3.C (see above).
- xv. Appendix G, Section 9, first sentence is amended to read:

"You must allow the Pueblo of Isleta's Environment 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, B, C, F, G and 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 5.3.C (See above) at the time it is submitted to EPA.
- c. *Pueblo of San Juan.* The following conditions apply only to discharges on the Pueblo of San Juan.
 - 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:

Office of Environmental Affairs
 Pueblo of San Juan
 P.O. Box 717
 San Juan, 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 Sandia.* The following conditions apply only to discharges on the Pueblo of Sandia.

- i. Copies of the Notice of Intent (NOI) and Notice of Termination (NOT) must be provided to the Pueblo at the same time it is submitted to the Environmental Protection Agency.
Environment Department
Pueblo of Sandia
Box 6008
Bernalillo, NM 87004
 - ii. The Storm Water Pollution Prevention Plan must be available to tribal environmental personnel upon request.
 - iii. 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.
 - e. *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 Santa Clara Pueblo Office of Environmental Affairs at the same time it is submitted to the Environmental Protection Agency.
Santa Clara Pueblo
Office of Environmental Affairs
One Knee Street
P.O. Box 580
Española, NM 87532
 - f. *Pueblo of Tesuque* The following conditions apply only to discharges on the Pueblo of Tesuque.
 - i. A copy of the storm water pollution prevention plan, Notice of Intent, and Notice of Termination must be submitted to the Pueblo of Tesuque Environment Department at the address below. The Notice of Intent and the Notice of Termination must be submitted at the same time they are submitted to EPA. The pollution prevention plan must be submitted before the project begins. Phone: 505- 983-2667 FAX: 505-982-2331
Pueblo of Tesuque
Environment Department
Rt. 42, Box 360-T
Santa Fe, NM 87506
3. OKR15000F: 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. 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 an 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 ongoing activities such as sand and gravel mining or any other mineral mining are not authorized.

9. 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 an water or watershed designated "ORW" (Outstanding Resource Water) in Oklahoma's Water Quality Standards, this permit may not be used to authorize discharges from concrete or asphalt batch plants."
- D. Region 8
1. MTR10000I: Indian country within the State of Montana
 - a. Confederated Salish and Kootenai Tribes of the Flathead Nation. The following conditions apply only for projects on the Flathead Indian Reservation:

- i. The permittee must send the SWPPP to the Tribes at least 30 days before construction starts. The 30 day period will give Tribal staff time to become familiar with the project site, prepare for construction inspections and determine compliance with Tribal water quality standards, as required by the Tribe's Water Quality Management Ordinance 89B (1990) and Surface Water Quality Standards & Antidegradation Policy (1995). Copies of the SWPPP should be sent to the following address:

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

- ii. Before submitting the Notice of Termination, permittees must clearly demonstrate to an appointed tribal staff person during an on-site inspection that requirements for site stabilization have been met and all temporary erosion control structures removed. The staff person performing the on-site inspection will be determined by the Environmental Protection Division Manager. The staff person will draft a short letter stating the stabilization requirements have been met to add to the permittees Notice of Termination submission to EPA.
- iii. 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 sent to EPA. Copies of the NOI and NOT should be sent to the address above.

- b. Fort Peck Tribes - Assiniboine & Sioux. The following conditions apply only for projects within 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 sent to EPA. Copies of the NOI and NOT should be sent to the following address:

Deb Madison
Environmental Program Manager
Fort Peck Assiniboine & Sioux Tribes
P.O. Box 1027
Poplar, MT 59255

E. 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. AZR100001: 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: All NOIs for proposed storm water discharge coverage shall be provided to the following address:

Tribal Environmental Planning Office
P.O. Box 2109
Whiteriver, AZ 85941

3. NIR100000: Commonwealth of the Northern Mariana Islands (CNMI)

- a. An Earthmoving and Erosion Control Permit shall be obtained from the CNMI DEQ prior to any construction activity covered under the NPDES general permit.
- b. All conditions and requirements set forth in the USEPA NPDES general permit for discharges from large and small construction must be complied with.

- c. A SWPPP for storm water discharges from construction activity must be approved by the Director of the CNMI DEQ prior to the submission of the NOI to USEPA. The CNMI address for the submittal of the SWPPP for approval is:
Commonwealth of the Northern Mariana Islands
Office of the Governor
Director, Division of Environmental Quality (DEQ)
P.O. Box 501304 C.K.
Saipan, MP 96950-1304
- d. An NOI to be covered by the general permit for discharges from large and small construction sites must be submitted to CNMI DEQ (use above address) and USEPA, Region 9, in the form prescribed by USEPA, accompanied by a SWPPP approval letter from CNMI DEQ.
- e. The NOI must be postmarked seven (7) calendar days prior to any storm water discharges and a copy must be submitted to the Director of CNMI DEQ (use above address) no later than seven (7) calendar days prior to any stormwater discharges.
- f. Copies of all monitoring reports required by the NPDES general permit must be submitted to CNMI DEQ (use above address).
- g. In accordance with section 10.3(h) and (i) of the CNMI water quality standards, CNMI DEQ reserves the right to deny coverage under the general permit and to require submittal of an application for an individual NPDES permit based on a review of the NOI or other information made available to the Director.

F. Region 10

1. AKR100000: The State of Alaska, except Indian country

- a. Operators of construction projects disturbing five or more acres occurring outside the Municipality of Anchorage must submit a copy of the Storm Water Pollution Prevention Plan (SWPPP) and a copy of the Notice of Intent (NOI) to the State of Alaska Department of Environmental Conservation (ADEC) for review, and shall be accompanied by the state-required fee of \$400. Submittal of the SWPPP and the NOI to the ADEC should be made at the same time the NOI is submitted to the EPA.
- b. Operators of publicly-funded projects disturbing five or more acres occurring within the Municipality of Anchorage must submit a copy of the SWPPP and a copy of the NOI to the ADEC for review, and shall be accompanied by the state-required fee of \$400. Submittal of the SWPPP and the NOI to the ADEC should be made at the same time the NOI is submitted to the EPA.
- c. Operators of construction projects disturbing at least one acre and less than five acres must submit a copy of the NOI to the ADEC at the same time it is submitted to the EPA.
- d. Storm Water Pollution Prevention Plans and Notices of Intent must be submitted to ADEC at the following address:
Alaska Department of Environmental Conservation
Water Quality Permitting/Storm Water
555 Cordova Street
Anchorage, Alaska 99501
- e. Operators of private construction projects disturbing one or more acres within the Municipality of Anchorage shall submit a copy of the Storm Water Pollution Prevention Plan to the Municipality at the following address:
Municipality of Anchorage, Office of Planning Development and Public Works
4700 S. Bragaw Street
P.O. Box 196650
Anchorage, Alaska 99519-6650
- f. Submittal of the SWPPP to the Municipality of Anchorage should be made before or at the same time the NOI is submitted to the EPA and the ADEC and shall be accompanied by any Municipality-required fee.

2. IDR100000: The State of Idaho, except Indian country
- a. Any construction related storm water discharges to impaired water bodies on Idaho's Clean Water Act (CWA) Section 303(d) list with EPA-approved Total Maximum Daily Loads (TMDL) must be consistent with any load allocations established by the applicable TMDL.
 - b. No net increase of listed pollutants is allowed in any construction related storm water discharges to an impaired water body considered "high priority" as included on Idaho's CWA Section 303(d) list that does not yet have an EPA-approved TMDL.
 - c. If a TMDL has not been established for an impaired water body considered "medium priority" or "low priority" as included on Idaho's CWA Section 303(d) list, BMPs shall be employed as necessary to prohibit further impairment of the designated or existing beneficial uses.
 - d. Only BMPs authorized by the appropriate designated agency as defined in the Idaho Water Quality Standards and Wastewater Treatment Requirements (IDAPA 58.01.02 et seq.), or otherwise approved by the Idaho Department of Environmental Quality, will be allowed.
 - e. Use of the "Equivalent Analysis Waiver" in Addendum D 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

Cascade Satellite Office:
 109 N. Main St., PO Box 247
 Cascade, ID 83611
 Tel: (208)382-6808
 Fax: (208)382-3327

Coeur d'Alene Regional Office:
 2110 Ironwood Parkway
 Coeur d'Alene ID 83814
 Tel: (208)769-1422
 Fax: (208)769-1404

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

Idaho Falls Regional Office:
 900 N. Skyline, Suite B
 Idaho Falls, ID 83402
 Tel: (208)528-2650
 Fax: (208)528-2695

Lewiston Regional Office:
 1118 "F" Street
 Lewiston, ID 83501
 Tel: (208)799-4370
 Toll Free: 1-877-541-3304
 Fax: (208)799-3451

Pocatello Regional Office:
 444 Hospital Way #300
 Pocatello ID 83201
 Tel: (208)236-6160
 Fax: (208)236-6168

Twin Falls Regional Office:
 601 Pole Line Road, Suite 2
 Twin Falls, ID 83301
 Tel: (208)736-2190
 Fax: (208)736-2194

3. 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 all Erosion Control and/or Storm Water Pollution Prevention Plans to the CTUIR Water Resources Program for review and approval by the Department of Natural Resources Director prior to submitting the Notice of Intent to EPA and prior to beginning any discharge activities.
 - iii. The operator shall contact the CTUIR Tribal Historic Preservation Office (THPO) prior to beginning any construction activities to determine whether a cultural resource survey of the project area or other investigation is required. All cultural resource fieldwork must be conducted by qualified personnel and documented using Oregon Reporting Standards. The resulting report must be submitted to the THPO for concurrence at least 30 days before any ground disturbing work can occur at the site. The operator must obtain THPO concurrence in the form of a letter, which (if necessary) will include any measures that must be taken to prevent or mitigate adverse effects to potentially eligible historic properties, prior to any ground disturbing work.
 - iv. The operator shall submit copies of the Notice of Intent to the CTUIR Water Resources Program and the CTUIR Tribal Historic Preservation Office at the same time it is submitted to EPA.

- v. Erosion Control and Storm Water Pollution Prevention Plans and Notices of Intent shall be submitted to:

Confederated Tribes of the Umatilla Indian Reservation
Water Resources Program
P.O. Box 638
Pendleton, OR 97801
(541) 276-3447

Confederated Tribes of the Umatilla Indian Reservation
Cultural Resources Protection Program
Tribal Historic Preservation Office
P.O. Box 638
Pendleton, OR 97801
(541) 276-3629

- 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

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

The following conditions apply to stormwater discharges from all permitted construction sites which disturb one acre or more and which discharge to surface waters (40 CFR part 122.26(b)(14)(x) and 122.26 (b)(15)):

- a. Discharges must not cause or contribute to a violation of surface water quality standards (Chapter 173-201A WAC), sediment management standards (Chapter 173-204 WAC), ground water quality standards (Chapter 173-200 WAC), and human health-based criteria in the National Toxics Rule (Federal Register, Vol. 57, No. 246, Dec. 22, 1992, pages 60848-60923). Discharges that are not in compliance with these standards are not authorized.
- b. You must apply all known available and reasonable methods of prevention, control and treatment (AKART), including the preparation and implementation of an adequate Stormwater Pollution Prevention Plan (SWPPP), with all appropriate BMPs installed and maintained in accordance with the SWPPP and the terms and conditions of this permit.
- c. Stormwater BMPs must be properly designed, constructed, maintained and operated to:
 - i. Prevent pollution of state waters and protect water quality, including compliance with applicable state water quality standards;
 - ii. Satisfy state requirements for all known available and reasonable methods of prevention, control and treatment (AKART) of wastes (including construction stormwater runoff) prior to discharge to waters of the state; and
 - iii. Satisfy the federal technology-based treatment requirements under 40 CFR part 125.3.
- d. You must document the technical basis for the design criteria used to select and design your stormwater management BMPs. You must document within your Stormwater Pollution Prevention Plan (SWPPP) how stormwater BMPs were selected, the pollutant removal performance expected from the BMP being selected, the technical basis (scientific, technical studies, and/or modeling) which support the performance claims for the BMPs being selected, and an assessment of how the selected BMP will

comply with state water quality standards, satisfy the state AKART requirements, and satisfy the federal technology-based treatment requirements.

If you choose to follow the stormwater management practices contained in stormwater technical manuals approved by Washington State, including the proper selection, implementation and maintenance of appropriate BMPs, you are presumed to have satisfied this demonstration requirement and do not need to include within the SWPPP the technical basis which support the performance claims for the BMPs being used. The SWPPP must include a reference to the manual used. Approved stormwater technical manuals include:

- i. Stormwater Management Manual for Western Washington, August 2001, for sites west of the crest of the Cascade Mountains;
 - ii. Stormwater Management Manual for Eastern Washington, (completion expected in the fall of 2003) for sites east of the crest of the Cascade Mountains; or
 - iii. Other equivalent stormwater management guidance documents approved by Ecology.
- e. Stormwater discharges from construction sites which disturb 5 acres or more (40 CFR part 122.26(b)(14)(x)) and which discharge to surface waters listed as impaired by the state under Section 303(d) of the Clean Water Act for turbidity, fine sediment, high pH, and/or phosphorus are subject to an effluent limitation that is equal to the applicable water quality standards at the point of discharge. If impairment is due to turbidity and/or fine sediment, the turbidity at the point of discharge shall not exceed the background (upstream) turbidity of the receiving water.
- i. Effluent limitations apply to direct discharges to listed waterbodies as well as indirect discharges via a stormwater conveyance system.
 - ii. All references and requirements associated with Section 303(d) of the Clean Water Act shall use the most current listing by Ecology of impaired waters that exists at the time of application for coverage under this permit
- f. Stormwater discharges from construction sites which disturb 5 acres or more (40 CFR part 122.26(b)(14)(x)) and which discharge to surface waters for which there is a total maximum daily load (TMDL) allocation or other control plan that addresses sediment (including turbidity, fine sediment, total suspended solids or siltation), high pH, or phosphorus must be consistent with the requirements in the approved TMDL or applicable control plan. Control plans may be total maximum daily load (TMDL) determinations, restrictions for the protection of endangered species, ground water management plans, or other limitations that regulate or set limits on discharges to a specific waterbody or groundwater recharge area.

Information on impaired waterways is available from the Department of Ecology web site at: <http://www.ecy.wa.gov/programs/wq/stormwater>. You may also contact the Department of Ecology for more information about impaired waterways at:

Mailing Address:

Department of Ecology
Stormwater Unit
PO Box 47600
Olympia, WA 98504-7600
Phone: 360-407-6000

Physical Address:

Department of Ecology
300 Desmond Drive
Lacey, WA 98503
Phone: 360-407-6000

5. WAR10000I: Indian country within the State of Washington
 - a. Puyallup Tribe of Indians. The following conditions apply only for projects on the Puyallup Reservation:
 - i. Each operator shall be responsible for achieving compliance with the Puyallup Tribe's Water Quality Standards.

- ii. Each operator shall submit all Pollution Prevention Plans to the Puyallup Tribe Environmental Department for review and approval prior to beginning any discharge activities.
 - iii. Each operator shall submit a copy of the Notice of Intent to the Puyallup Tribal Environmental Department at the same time it is submitted to EPA.
 - iv. Storm Water Pollution Prevention Plans and Notices of Intent shall be submitted to:
Puyallup Tribe Natural Resources, Environmental Department
1850 Alexander Avenue
Tacoma, WA 98421
- b. Confederated Tribes of the Chehalis Reservation. The following conditions apply only for projects on the Chehalis Reservation:
- i. The operator shall be responsible for achieving compliance with the Chehalis Tribe's Water Quality Standards.
 - ii. The operator shall submit a Storm Water Pollution Prevention Plan to the Chehalis Tribe Department of Natural Resources 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 Chehalis Tribe Department of Natural Resources at the same time it is submitted to EPA.
 - iv. Storm Water Pollution Prevention Plans and Notices of Intent shall be submitted to:
Chehalis Tribe Department of Natural Resources
420 Howanut Road
Oakville, WA 98568

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 Storm Water Associated with Construction Activity" as used in this permit, refers to a discharge of pollutants in storm water 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 washout, fueling), or other industrial storm water directly related to the construction process (e.g., concrete or asphalt batch plants) are located.

"Eligible" means qualified for authorization to discharge storm water 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, storm water, 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 storm water;
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 storm water 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 storm water 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 storm water 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 storm water 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 storm water to flow into a small wetland or other habitat that is on the site that contains listed species.)
- The areas where storm water discharges flow from the construction site to the point of discharge into receiving waters. (Example: Where storm water 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 storm water from construction activities discharge into receiving waters and the areas in the immediate vicinity of the point of discharge. (Example: Where storm water from construction activities discharges into a stream segment that is known to harbor listed aquatic species.)
- The areas where storm water BMPs will be constructed and operated, including any areas where storm water flows to and from BMPs. (Example: Where a storm water 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 storm water 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.

"Storm Water" means storm water runoff, snow melt runoff, and surface runoff and drainage.

"Storm Water Discharge-Related Activities" as used in this permit, include: activities that cause, contribute to, or result in storm water point source pollutant discharges, including but not limited to: excavation, site development, grading and other surface disturbance activities; and measures to control storm water including the siting, construction and operation of BMPs to control, reduce or prevent storm water 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 - Storm Water 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 storm water 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 Storm Water 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)
MAR100001	Indian country within the State of Massachusetts
CTR100001	Indian country within the State of Connecticut
NHR100000	State of New Hampshire
RIR100001	Indian country within the State of Rhode Island
VTR10000F	Federal Facilities in the State of Vermont
MER100001	Indian country within the State of Maine

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

For NJ, NY, and VI:

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

For PR:

US EPA, Region 02
Caribbean Environmental Protection Division
NPDES Storm Water 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>
NYR100001	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 Storm Water 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.

Permit No. Areas of Coverage/Where EPA is Permitting Authority

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 Storm Water 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 Storm Water 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.

Permit No. Areas of coverage/where EPA is Permitting Authority

MIR100001 Indian country within the State of Michigan
MNR100001 Indian country within the State of Minnesota
WIR100001 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 Storm Water 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>
LAR15000I	Indian country within the State of Louisiana
NMR150000	The State of New Mexico, except Indian country
NMR15000I	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.
OKR15000I	Indian country within the State of Oklahoma
OKR15000F	Discharges in the State of Oklahoma that are not under the authority of the Oklahoma Department of Environmental Quality, including activities associated with 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).
TXR15000F	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.
TXR15000I	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 Storm Water 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 Storm Water 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 Storm Water 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
AZR10000I	Indian country within the State of Arizona, as well as Navajo Reservation lands in New Mexico and Utah
CAR10000I	Indian country within the State of California
GUR100000	The Island of Guam
JAR100000	Johnston Atoll
MWR100000	Midway Island and Wake Island
NIR100000	Commonwealth of the Northern Mariana Islands
NVR10000I	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 Storm Water 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>
AKR100000	The State of Alaska, except Indian country
AKR10000I	Indian country within the state of Alaska
IDR100000	The State of Idaho, except Indian country
IDR10000I	Indian country within the State of Idaho, except Duck Valley Reservation lands (see Region 9)
ORR10000I	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 Subpart 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 storm water discharges and storm water 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 storm water discharges and storm water 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 Subpart 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 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 may be 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 storm water collection systems.
 - Conduct a formal biological survey. In some cases, particularly for larger construction sites with extensive storm water 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 Storm Water Discharges or Storm Water 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 storm water discharges or storm water 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 storm water discharges and storm water discharge-related activities include:

- *Hydrological.* Storm water 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 storm water discharged and the volume and condition of the receiving water. Where a storm water 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 storm water BMPs, may adversely affect listed species or their habitat. Storm water may drain or inundate listed species habitat.
- *Toxicity.* In some cases, pollutants in storm water 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 Subpart 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 storm water 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 Subpart 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 Subpart 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 Subpart 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 Subpart 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 storm water discharges and storm water 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 storm water discharge(s) and storm water 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 Subpart 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 Subpart 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 storm water discharge(s) and storm water 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 Subpart 1.3.C.6 of the CGP).

Your storm water discharges and storm water discharge-related activities were already addressed in another operator's certification of eligibility under Criteria A through E of Subpart 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 Subpart 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 Subpart 1.3.C.6 was based. Certification under Criterion F of Subpart 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 storm water discharges and storm water 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 Subpart 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 storm water 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 Permitting Authority 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 funded a cooperative agreement with Texas A&M University to develop an online rainfall erosivity calculator. You can access the calculator from EPA's website at: www.epa.gov/npdes/stormwater/cgp. Use of the calculator allows you to determine potential eligibility for the rainfall erosivity waiver. It 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.

If you are the operator of the construction activity and eligible for a waiver based on low erosivity potential, you must provide the following information on the waiver certification 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.

At the time of publication, a Low Erosivity Waiver Form is not available. If EPA does create a form, it will be noticed (either directly, by public notice, or by making information available on the Internet at www.epa.gov/npdes/stormwater/cgp).

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 storm water 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 storm water 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 storm water 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 storm water 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 storm water 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 storm water associated with small construction activity, provided you qualify for the waiver. Any discharge of storm water 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 must be sent to the following address:

Regular U.S. Mail Delivery

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

Overnight/Express Mail Delivery

EPA Storm Water 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

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, 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 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 (if you would like 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,

Instructions for Completing EPA Form 3510-9

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

NPDES Form

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

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

fax number (optional), and e-mail address (optional) 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 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 and title 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.

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.

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
Storm Water 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 Storm Water 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 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

Enter the existing NPDES Storm Water General Permit Tracking Number assigned to the project by EPA's Storm Water Notice Processing Center. If you do not know the permit tracking number, refer to www.epa.gov/npdes/stormwater/cgp or contact the Storm Water 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 and telephone number of the operator. *Optional:* enter the fax number and e-mail address 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 and title 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.

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 Subpart 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 Subpart 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 Subpart 2.2, and sent to the address specified in Subpart 2.3.
- 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).)

3. 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.

NPDES General Permit for Storm Water Discharges From Construction Activities - Fact Sheet
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I. Introduction

The United States Environmental Protection Agency (EPA) is reissuing the general permit that authorizes the discharge of pollutants in storm water discharges associated with construction activity (also known as the "construction general permit" or "CGP"). The CGP, upon reissuance, covers storm water discharges associated with both small and large construction activity. Small construction activity is added in response to the Phase II Storm Water Regulations promulgated on December 8, 1999 (64 FR 68722). Specifically, the Phase II regulations add permitting requirements for storm water discharges from construction activities that disturb from one to five acres. Phase I Storm Water Regulations promulgated on November 16, 1990 (55 FR 47990) established permitting requirements for storm water discharges from construction activities that disturb five acres or more. As used in this permit, "storm water associated with large construction activity" refers to the disturbance of five or more acres, as well as disturbance of less than five acres of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb five acres or more (40 CFR §122.26(b)(14)(x)). "Storm water associated with small construction activity," as defined in 40 CFR §122.26(b)(15), refers to the disturbance of equal to or greater than one and less than five acres of land for construction or the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one and less than five acres.

Appendix B contains a list of areas eligible for coverage under the CGP. Individual permit numbers exist for each eligible area, as noted in Appendix B. However, the CGP is written as if it was a single permit rather than a number of legally separate and individually numbered general permits it is comprised of. Unless otherwise noted, references to the "permit" or the "CGP" apply to the common language of each of the separate general permits.

This CGP replaces two previous Construction General Permits that were issued for five-year terms by EPA Regions 1, 2, 3, 7, 8, 9, and 10 in February 1998 (63 FR 7858) and by EPA Region 6 in July 1998 (63 FR 36490), respectively. EPA public noticed a draft CGP on December 20, 2002 (67 FR 78116). This final CGP is based on that draft, taking into account comments received. Details of comments received and EPA response to those comments are provided in the administrative record.

The most significant changes from the 1998 CGP include:

- Modified permit to include all areas in the country for which EPA is the permitting authority, except for Region 4 that continues to operate under a Regional-specific permit. This included removal of certain areas for which EPA is no longer the permitting authority (e.g., the States of Maine and Arizona are now authorized to administer the NPDES permitting program).
- Modified permit coverage to include small construction activities, and to identify waiver opportunities for small construction activities based on low rainfall erosivity, TMDLs, and equivalent analyses in accordance with EPA's regulations.
- Added uncontaminated excavation dewatering and irrigation runoff as allowable non-storm water discharges.
- Added restrictions on, and documentation of requirements for, discharges to waters with Total Maximum Daily Loads (TMDLs) approved or established by EPA.
- Removed state and county Endangered Species Act (ESA) appendix of Federally-listed or proposed species.
- Added new options for authorization procedures and NOI submission deadlines to accommodate new seven-day reviews of NOIs by U.S. Fish & Wildlife Service and National Marine Fisheries Service.
- Modified information required on NOI form to require:
 - applicable permit number,
 - U.S. Internal Revenue Service Employer Identification Number (EIN), where applicable,
 - methodology for determining latitude and longitude,
 - name of Indian reservation, where applicable,
 - address of SWPPP location (changed from optional to required) and contact person,
 - whether the discharge is consistent with the assumptions and requirements of applicable EPA approved or established TMDLs,
 - specification of the criterion the operator certified for ESA eligibility, and the specific permit tracking number of an operator certifying under another operator's eligibility determination.

- Updated NOI submission deadlines to account for ongoing projects.
- Added language to support the ability of operators to submit NOIs and NOTs using EPA's electronic NOI system when it becomes available.
- Clarified procedure for operator to delineate on the SWPPP areas of the project where no further requirements apply following final stabilization.
- Clarified documentation requirements for ESA eligibility, and added documentation requirements for permit eligibility for waters that have an established TMDL.
- Modified inspection provisions to include option for weekly site inspections and guidelines for inspection of utility line installation, pipeline construction, and other linear construction activities.
- Provided further clarification on stabilization requirements for project areas where construction has temporarily ceased.
- For clarification purposes, added definitions for the following terms:
 - "Arid Areas"
 - "Eligible"
 - "Federal Facility"
 - "Indian Country"
 - "Large construction Activity"
 - "New Project"
 - "Ongoing Project"
 - "Permitting Authority"
 - "Project Area"
 - "Receiving Water"
 - "Semi-Arid Areas"
 - "Site"
 - "Small Construction Activity"
 - "Storm Water Discharge-Related Activity"
 - "Total Maximum Daily Load" or "TMDL"
 - "Wetland"

The final CGP contains individual permit numbers for the following areas:

Region 1: The State of New Hampshire; Indian Country in the States of Rhode Island and Connecticut; Federal facilities in Vermont.

Region 2: The Commonwealth of Puerto Rico and Indian Country in the State of New York.

Region 3: The District of Columbia and Federal facilities in the State of Delaware.

Region 5: Indian Country in the States of Michigan, Minnesota, and Wisconsin, except the Sokaogon Chippewa (Mole Lake) Community.

Region 6: The State of New Mexico; Indian Country in the States of Louisiana, Oklahoma, Texas, and New Mexico (except Navajo Reservation Lands [see Region 9] and Ute Mountain Reservation Lands [see Region 8]); 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 492X and 5171) and point source discharges associated with agricultural production, services, and silviculture Includes SIC Groups 01, 02, 07, 08, and 09), and discharges in the State of Texas that are not under the authority of the Texas Commission on Environmental Quality (formerly the Texas Natural Resource Conservation Commission), 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.

Region 7: Indian Country in the States of Iowa, Kansas and Nebraska (except Pine Ridge Reservation Lands [see Region 8]).

Region 8: Federal facilities in Colorado; Indian Country in Colorado (as well as the portion of the Ute Mountain Reservation located in New Mexico), Montana, North Dakota (as well as that portion of the Standing Rock Reservation located in South Dakota and excluding the lands within the former boundaries of the Lake Traverse Reservation which is covered under the permit for areas of South Dakota), 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 and excluding the Standing Rock Reservation which is covered under the permit for areas of North Dakota), Utah (except Goshute and Navajo Reservation lands [see Region 9]) and Wyoming.

Region 9: The Islands of American Samoa and Guam, Johnston Atoll, Midway/Wake Islands and Commonwealth of the Northern Mariana Islands; Indian Country in Arizona (as well as Navajo Reservation lands in New Mexico and Utah), California and Nevada (as well as the Duck Valley Reservation in Idaho, the Fort McDermitt Reservation in Oregon and the Goshute Reservation in Utah).

Region 10: The States of Alaska and Idaho; Indian Country in Alaska and Idaho (except Duck Valley Reservation [see Region 9]), Washington and Oregon (except for Fort McDermitt Reservation [see Region 9]); Federal facilities in Washington.

II. Answers to Common Questions

In this section, EPA provides answers to some of the more common questions on the construction storm water permitting program. It is intended to help permittees understand the permit. Be aware these answers are general and may not take into account all scenarios possible at construction sites.

What is the Goal of This Permit?

The goal of this permit is to protect the quality and beneficial uses of the nation's surface water resources from pollution in storm water runoff from construction activities. To achieve this goal, the permit requires operators to plan and implement appropriate pollution prevention and control practices for storm water runoff during the construction period. These Best Management Practices (BMPs) are aimed primarily at controlling erosion and sediment transport, but also include controls, including good housekeeping practices, aimed at other pollutants such as construction chemicals and solid waste (e.g., litter). As used in this permit, the terms "Construction and Construction-related activities" include all clearing, grading, excavation, and stockpiling activities that will result in the disturbance of one or more acres of land area.

What Types of Construction Activities May Need a Storm Water Permit?

Any construction activity that will, or is part of a "common plan" of development or sale that will, disturb one or more acres and has the potential to have a discharge of storm water to a water of the United States must either have a permit OR have qualified for a waiver. These regulated discharges are broken into two categories: "Large" and "Small". A large construction activity is one that will disturb, or is part of a "common plan" that will cumulatively disturb, five or more acres. A small construction activity is one that will disturb, or is part of a "common plan" that will cumulatively disturb, one or more acres.

Construction and construction-related activities refer to the actual earth disturbing construction activities and those activities supporting the construction project such as construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck washout, fueling), measures used to control the quality for storm water associated with construction activity, or other industrial storm water directly related to the construction process (e.g., concrete or asphalt batch plants). It does not refer to construction activities unrelated to earth disturbing activities such as interior remodeling, completion of interiors of structures, etc. "Construction" does not include routine earth disturbing activities that are part of the normal day-to-day operation of a completed facility (e.g., daily cover for landfills, maintenance of gravel roads or parking areas, landscape maintenance, etc). Also, it does not include activities under a State or Federal reclamation program to return an abandoned property into an agricultural or open land use.

Are There Situations Where a Permit is Not Needed?

If all of the storm water from the construction activity is captured on-site and allowed to evaporate, soak into the ground on-site, or is used for irrigation, you do not need coverage under this permit. Under the Clean Water Act, it is illegal to have a point source discharge of pollutants to a water of the United States that is not authorized by a permit. If there is a potential for a discharge, you need to apply for coverage under this permit. Many local governments have separate requirements for soil and erosion control from construction projects. There maybe other federal, state, tribal, or local requirements concerning discharges to ground water or impoundment of runoff (e.g., water rights).

If a Construction Activity Does Not Adversely Impact Water Quality, is Coverage Under the Construction General Permit Still Necessary?

Waivers are possible only for discharges of storm water associated with SMALL construction activity (i.e., construction disturbing less than 5 acres). These waivers are authorized by federal regulation at 40 CFR §§122.26(b)(15)(i)(A) & (B) and are explained in Appendix D of the permit. Waivers are not available for any construction activity disturbing 5 acres or greater, or less than 5 acres if part of a common plan of development or sale that will ultimately disturb 5 or more acres (or if designated for permit coverage by EPA).

With All the People Involved in a Construction Project, How Do I Know If I Am the One That Needs to Apply for the Permit?

You must apply if you meet one or both parts of the definition of "Operator." This means you should apply for permit coverage if you have operational control over either the construction plans and specifications, including the ability to make modifications to those plans and specifications (e.g., owner or developer of project), or you have day-to-day operational control of those activities at a project which are necessary to ensure compliance with a storm water pollution prevention plan (SWPPP) for the site or other permit conditions (e.g., general contractor). Where your activity is part of a larger common plan of development or sale, you are only responsible for the portions of the project for which you meet the definition of "operator."

In many instances, there may be more than one party at a site performing tasks related to "operational control" and hence, more than one operator must submit an NOI. Depending on the site and the relationship between the parties (e.g., owner, developer, general contractor), there can either be a single party acting as site operator and consequently be responsible for obtaining permit coverage, or there can be two or more operators all needing permit coverage. Exactly who is considered an operator is largely controlled by how the "owner" of the project chooses to structure the contracts with the "contractors" hired to design and/or build the project. The following are three general operator scenarios (variations on any of these three are possible, especially as the number of "owners" and contractors increases):

- ▶ *"Owner" as sole permittee.* The property owner designs the structures for the site, develops and implements the SWPPP, and serves as general contractor (or has an on-site representative with full authority to direct day-to-day operations). The "Owner" is the only party that needs permit coverage, in which case everyone else on the site may be considered subcontractors and not need permit coverage.
- ▶ *"Contractor" as sole permittee.* The property owner hires one company (i.e., a contractor) to design the project and oversee all aspects of the construction project, including preparation and implementation of the SWPPP and compliance with the permit (e.g., a "turnkey" project). Here, the contractor would likely be the only party needing a permit. It is under this scenario that an individual having a personal residence built for his own use (e.g., not those to be sold for profit or used as rental property) would not be considered an operator. EPA believes that the general contractor, being a professional in the building industry, should be the entity rather than the individual who is better equipped to meet the requirements of both applying for permit coverage and developing and properly implementing a SWPPP. However, individuals would meet the definition of "operator" and require permit coverage in instances where they perform general contracting duties for construction of their personal residences.
- ▶ *Owner and contractor as co-permittees.* The owner retains control over any changes to site plans, SWPPPs, or storm water conveyance or control designs; but the contractor is responsible for overseeing actual earth disturbing activities and daily implementation of SWPPP and other permit conditions. In this case, which is the most common scenario, both parties need to apply for coverage.

However, you are probably not an operator and subsequently do not need permit coverage if:

- ▶ You are a subcontractor hired by, and under the supervision of, the owner or a general contractor (i.e., if the contractor directs your activities on-site, you probably are not an operator); or
- ▶ Your activities on site result in earth disturbance and you are not legally a subcontractor, but a SWPPP specifically identifies someone other than you (or your subcontractor) as the party having operational control to address the impacts your activities may have on storm water quality (i.e., another operator has assumed responsibility for the impacts of your construction activities). EPA anticipates that this will be the case for many, if not most, utility service line installations.

In addition, for purposes of this permit and determining who is an operator, "owner" refers to the party that owns the structure being built. Ownership of the land where construction is occurring does not necessarily imply the property owner is an operator (e.g., a landowner whose property is being disturbed by construction of a gas

pipeline). Likewise, if the erection of a structure has been contracted for, but possession of the title or lease to the land or structure is not to occur until after construction, the would-be owner may not be considered an operator (e.g., having a house built by a residential homebuilder).

My Project Will Disturb Less Than One Acre, But it May Be Part of a "Larger Common Plan of Development or Sale." How Can I Tell and What Must I Do?

In many cases, a common plan of development or sale consists of many small construction projects. For example, a common plan of development for a residential subdivision might lay out the streets, house lots, and areas for parks, schools and commercial development that the developer plans to build or sell to others for development. All these areas would *remain* part of the common plan of development or sale.

If your smaller project is part of a larger common plan of development or sale that collectively will disturb one or more acres (e.g., you are building on 6 half-acre residential lots in a 10-acre development or are putting in a fast food restaurant on a 3/4 acre pad that is part of a 20 acre retail center) you need permit coverage. "Common plan" is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating construction activities may occur on a specific plot. You must still meet the definition of operator in order to be required to get permit coverage, regardless of the acreage you personally disturb. As a subcontractor, it is unlikely you would need permit coverage.

However, where only a small portion of the original common plan of development remains undeveloped and there has been a period of time where there is no ongoing construction activities (i.e., all areas are either undisturbed or have been finally stabilized), you may re-evaluate your individual project based on the acreage remaining from the original "common plan." If less than five but more than one acre remains to build out the original "common plan" permit coverage may still be required, but you can treat your project as part of a "small" construction activity and may be eligible for the waivers available for small construction activities (e.g., one of six lots totaling 2 acres in a 50 acre subdivision can be treated as part of a 2 acre rather than 50 acre "common plan"). If less than one acre remains of the original common plan, your individual project may be treated as part of a less than one acre development and no permit would be required.

When Can You Consider Future Construction on a Property to be Part of a Separate Plan of Development or Sale?

After the initial "common plan" construction activity is completed for a particular parcel, any subsequent development or redevelopment of that parcel would be regarded as a new plan of development. For example, after a house is built and occupied, any future construction on that lot (e.g., reconstructing after fire, adding a pool or parking area, etc.), would stand alone as a new "common plan" for purposes of calculating acreage disturbed to determine if a permit was required. This would also apply to similar situations at an industrial facility, such as adding new buildings, a pipeline, new wastewater treatment facility, etc. that was not part of the original plan.

What If the Extent of the Common Plan of Development or Sale is Contingent on Future Activities?

EPA recognizes that there are situations where you will not know beforehand exactly how many acres will be disturbed, or whether some activities will ever occur. If you are not sure exactly how many acres will be disturbed, you should make the best estimate possible and may wish to overestimate to ensure you do not run into the situation where you should have a permit, but don't. For example, if you originally estimated less than 5 acres would actually be disturbed and took advantage of the "R" Factor waiver, but you actually disturbed 5.5 acres, you would lose your waiver and would need to apply for permit coverage. This could result in delays in obtaining permit authorization and costs associated with contract changes to implement permit requirements - in addition to being liable for any unpermitted discharges.

If you have a long-range master plan of development where some portions of the master plan are a conceptual rather than a specific plan of future development and the future construction activities would, if they occur at all, happen over an extended time period, you may consider the "conceptual" phases of development to be separate "common plans" provided the periods of construction for the physically interconnected phases will not overlap. For example, a university or an airport may have a long-range development concept for their property, with future development based largely on future needs and available funding. A school district could buy more land than needed for a high school with an indefinite plan to add more classrooms and a sports facility some day. An oil and gas exploration and production company could have a broad plan to develop wells within a lease or production area, but decisions on how many wells would be drilled within what time frame and which wells would be tied to a

pipeline would be largely driven by current market conditions and which, if any, wells proved to be commercially viable.

What if the "Common Plan of Development or Sale" Actually Consists of Non-Contiguous Separate Projects?

There are several situations where discrete projects, that could be considered part of a larger "common plan," can actually be treated as separate projects for the purposes of permitting:

- A. A public entity (e.g., a municipality, state, tribe, or federal agency) need not consider all construction projects within their entire jurisdiction to be part of an overall "common plan." For example, construction of roads or buildings in different parts of a state, county, or city could be considered separate "common plans." Only the interconnected parts of a project would be considered to be a "common plan" (e.g., a building and its associated parking lot and driveways, airport runway and associated taxiways, a building complex, etc.)
- B. Where discrete construction projects within a larger common plan of development or sale are located 1/4 mile or more apart and the area between the projects is not being disturbed, each individual project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed. For example, two oil and gas well pads separated by 1/2 mile could be treated as separate "common plans." However, if the same two well pads and an interconnecting access road were all under construction at the same time, they would generally be considered as part of a single "common plan" for permitting purposes. If a utility company was constructing new trunk lines off an existing transmission line to serve separate residential subdivisions located more than 1/4 mile apart, the two trunk line projects could be considered to be separate projects.

What Do You Need to Do to Apply for Permit Coverage?

First - you will need a copy of the CGP to determine if you are eligible for the permit. The text of the permit also explains, for example what must be included in your SWPPP and what you need to do in order to comply with the permit.

Second - you need to determine if you are eligible to use the permit. You will need to document how you determined your eligibility with regard to protection of endangered species, total maximum daily loads, etc.

Third - you will need to prepare your SWPPP. You will also need to include a copy of the CGP and documentation of your eligibility in your SWPPP.

Fourth - you will need to fill out an NOI form and submit it to EPA at least seven days before you start construction.

What are My Options For Meeting the "Final Stabilization" Criteria?

In most cases, you can terminate permit coverage as soon as the portion(s) of the project for which you are an operator are finally stabilized. A definition of "Final Stabilization" is in Appendix A of the CGP. For the purpose of these discussions, "structure" is used not only in the more traditional sense of "buildings," but also refers to other things that would remain in a non-vegetated condition after construction has ended. Examples of "structures" include: buildings; parking lots; roads; gravel equipment pads, sidewalks, runways, etc. All other disturbed areas must be finally stabilized by either vegetative or non-vegetative practices, except disturbed areas on lands that will be returned to an agricultural use such as cropland, rangeland, or silviculture need only be returned to the preexisting condition (e.g., tilled land, grass rangeland, agricultural buffer strip, etc). Where a residential homeowner has decided to install their lawn themselves, only temporary stabilization is required. Perennial vegetation could include grasses, ground covers, trees, shrubs, etc. Vegetative final stabilization requires 70 percent coverage of the "natural" vegetative cover in that part of the country. If the natural vegetation in your area covers 50 percent of the land, final stabilization is achieved when coverage of 35 percent or more of the land is achieved (70 percent of 50 percent). Non-vegetative stabilization could include rip-rap, gravel, gabions, etc. Impervious cover such as concrete or asphalt should be avoided as a final stabilization technique. Long-term, semi-permanent erosion control practices combined with seeds that would establish vegetative stabilization (e.g., properly secured seed impregnated erosion control mats, etc.) could also be used as "final stabilization." To qualify as "long-term," the erosion control practice must be selected, designed, and installed so as to provide at least three years of erosion control.

EPA believes, where the environmental threat is low (i.e., in arid and semi-arid climates), that "final stabilization" can also include techniques that employ re-vegetation combined with other stabilization measures. "Other stabilization measures" in this context include what are known as "temporary degradable rolled erosion control products," a.k.a., "erosion control blankets" (ECBs) along with an appropriate seed base. With proper selection (degradability, application, siting, etc), design, and installation, ECBs can be very effective in preventing the

detachment and transportation of soil until they naturally degrade and vegetation has assumed this function. Therefore, upon proper selection, design, and installation of the combination ECB-seed technique in arid or semi-arid areas, a permittee can be considered to have achieved final stabilization and can terminate permit coverage. If more than 3 years (i.e., three growing seasons) is required to establish the 70 percent of the natural vegetative cover, this technique cannot be used or cited for fulfillment of permit termination requirements prior to actual establishment of vegetative cover.

What if the Operator(s) Changes Before the Project is Completed?

If operational control changes, the old operator submits a Notice of Termination (NOT) and the new operator submits a Notice of Intent (NOI) before taking over operational control.

In many instances, operational control changes, but only for a portion of the site. In these instances, the new operator must:

1. submit an NOI; and
2. develop and implement their own SWPPP or adopt the SWPPP of the previous operator if it's still applicable (with appropriate revisions)

What if Earth Disturbance is a Normal Part of the Post-Construction Use of the Site?

The earth disturbing activity has to be part of a project to build, demolish, or replace a structure (e.g., building, road, pad, pipeline, transmission line, etc.) to trigger the need for permit coverage. Earth disturbance that is a normal part of the long-term use or maintenance of the property is not covered by the construction general permit. For example, re-grading a dirt road or cleaning out a roadside drainage ditch to maintain its "as built" state is road maintenance and not construction. Restoring the well pad of an existing oil or gas well is operation of a well and not construction. Re-grading and re-graveling a gravel parking lot or equipment pad is site maintenance and not construction. Repaving is routine maintenance unless underlying and/or surrounding soil is cleared, graded, or excavated as part of the repaving operation. Where clearing, grading, or excavating (i.e., down to bare soils) takes place, permit coverage is required if more than one acre is disturbed. Reworking planters that are part of the landscaping at a building is landscape maintenance and not construction. Applying daily cover at a landfill is part of the operation of a landfill and not construction.

Does the exclusion of "Routine Maintenance" Apply to all Construction Activity?

Yes. The definition of small construction at 40 CFR §122.26(b)(15)(i) includes the phrase "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 facility" EPA has revised the definition of "large construction" in this permit to include similar language. However, the term "routine maintenance" should not be confused with activities such as repairs, replacement, and other types of non-routine maintenance that require permit coverage where more than one acre is disturbed.

How Many Notices of Intent (NOIs) Must I Submit? Where and When Are They Sent?

You only need to submit one NOI to cover all activities for which you are considered the operator in any given project. The site map you develop for the SWPPP identifies which parts of the overall project are under your control. For example, if you are a homebuilder in a residential development, you need submit only one NOI to cover all your lots, even if they are on opposite sides of the development.

A complete NOI must be sent at least seven days before work begins on the site. The address for submitting NOIs is found in Part 2 of the CGP. You must also look in Part 9 of the permit to determine if copies of the NOI form must be sent to a State or Indian Tribe.

Do I Have Flexibility in Preparing the Storm Water Pollution Prevention Plan (SWPPP) and Selecting Best Management Practices (BMPs) For My Site?

Storm water pollution prevention plan requirements were designed to allow maximum flexibility to develop storm water controls based on the specifics of the site. Some of the factors you might consider include: more stringent local development requirements and/or building codes; precipitation patterns for the area at the time the project will be underway; soil types; slopes; layout of structures for the site; sensitivity of nearby water bodies; safety concerns (e.g., potential hazards of water in storm water retention ponds to the safety of children; and coordination with other site operators.

The approach and BMPs used for controlling pollutants in storm water discharges from small construction sites may vary from those used for large sites since their characteristics can differ in many ways. Operators of small

sites may have more limited access to qualified design personnel and technical information. Sites may also have less space for installing and maintaining certain BMPs. A number of structural BMPs (e.g., use of inlet protection, or silt fence) and non-structural BMPs (minimizing disturbance, good housekeeping) have shown to be efficient, cost effective, and versatile for small construction site operators to implement. As is the case with large construction sites, erosion and sediment control at small construction sites is best accomplished with proper planning, installation, and maintenance of controls.

Must Every Permittee Have His or Her Own Separate SWPPP or is a Joint Plan Allowed?

The only requirement is that there be at least one SWPPP for a site that incorporates the required elements for all operators, but there can be separate plans if individual permittees so desire. EPA encourages permittees to explore possible cost savings by having a joint SWPPP. For example, the general contractor could assume the inspection responsibilities for the entire site, while each homebuilder shares in the installation and maintenance of sediment traps serving common areas.

If a Project Will Not Be Completed Before This Permit Expires, How Can I Keep Permit Coverage?

If the permit is reissued or replaced with a new one before the current one expires, you will need to comply with the new permit conditions in order to transition coverage from the old permit. This will likely include submitting a new NOI. If the permit expires before a replacement permit can be issued, the permit will be administratively continued. You are automatically covered under the continued permit, without needing to submit anything to EPA, until the earliest of:

1. The permit being reissued or replaced;
2. Submittal of a Notice of Termination (NOT);
3. Issuance of an individual permit for your activity; or
4. EPA issues a formal decision not to reissue the permit, at which time you must seek coverage under an alternative permit.

When Can I Terminate Permit Coverage? Can I Terminate Coverage (i.e., Liability for Permit Compliance) Before the Entire Project is Finished?

You can submit an NOT for your portion of a site providing: (1) You have achieved final stabilization (e.g., 70 percent revegetation) of the portion of the site for which you are responsible; (2) another operator/permittee has assumed control, according to Subpart 5.1.B of the permit over all areas of the site that have not been finally stabilized for which you are responsible (for example, a developer can pass permit responsibility for lots in a subdivision to the homebuilder who purchases those lots, providing the homebuilder has filed his or her own NOI); (3) coverage under an alternative NPDES permit has been obtained for the discharge; or (4) for residential construction only, you have completed temporary stabilization and the residence has been transferred to the homeowner.

Is Coverage Required for Oil and Gas Construction?

EPA received numerous comments concerning the applicability of the construction permit requirements, which were modeled after residential and commercial construction, to oil and gas construction. The oil and gas industry noted that a residential or commercial project typically has a definite plan of development that involves a planning phase, a construction phase and termination of the construction, while an oil and gas construction project is typically on a very tight schedule and moves very quickly from planning to construction because both the access to mineral rights and the availability of drilling rigs are on schedules.

EPA believes sediment from oil and gas sites can be a problem, but realizes that this type of construction may require different controls than residential and commercial construction. EPA has extended the permit application deadline for oil and gas construction activity disturbing 1 to 5 acres from March 10, 2003 to March 10, 2005. See 68 Federal Register 11325. The two-year postponement will allow for time for EPA to analyze and better evaluate: the impact of the permit requirements on the oil and gas industry; the appropriate BMPs for preventing contamination of storm water runoff resulting from construction association with oil and gas exploration, production, processing, or treatment operations or transmission facilities; and the scope and effect of 33 U.S.C. 1342(l)(2) and other storm water provisions of the CWA.

The two-year postponement applies only to "small" oil and gas construction projects. Large construction has been regulated as an industrial activity under CWA section 402(p)(6) since promulgation of the Phase I storm water rule. Large construction activity was covered under the 1998 CGP and must now obtain permit coverage under the 2003 CGP.

Do I Need to Have Coverage Under the MSGP and the CGP for Mining Activity?

Coverage under the CGP is required for the construction or exploration phase, and coverage under the multi-sector general permit (MSGP) is required for the active mining phase. This is due to EPA's concern that the initial clearing, grading, or excavation on a site could escape permit coverage under the MSGP for mining activities (e.g., Sector G -Metal Mining) despite the significant pollutant discharges that may result. Members of the mining industry have requested to be covered by only one permit for any and all earth disturbances. To allow this, EPA may need to modify the MSGP. As part of the next MSGP reissuance, EPA will consider the effectiveness and justification for addressing different mining phases in two different permits, including whether all mining and mining-related activities (from exploration and construction to reclamation) should be placed in the MSGP. At present, however, discharges relating to the exploration and construction phases of mining operations must be covered by the CGP, while discharges from active mining activities must be covered under the MSGP.

III. Coverage Provided by General Permits

Section 402(p) of the Clean Water Act (CWA) provides that storm water discharges associated with industrial activity that discharge to waters of the United States must be authorized by an NPDES permit. The term "discharge" when used in the context of the NPDES program means the discharge of pollutants (40 CFR §122.2).

On November 16, 1990, EPA published regulations under the NPDES program that defined one facet of the phrase "storm water discharges associated with industrial activity" as including discharges from construction activity (including clearing, grading and excavation activities) that result in the disturbance of five or more acres of total land area, including smaller areas that are part of a larger common plan of development or sale (40 CFR §122.26(b)(14)(x)). These are commonly referred to as Phase I construction activities or "large" construction activities.

The regulation entitled "National Pollution Discharge Elimination System - Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges" (64 FR 68722) was published by EPA on December 8, 1999. This regulation, known as Phase II of the storm water program, expands the existing NPDES storm water program to address discharges that result in land disturbance of: equal to or greater than one and less than five acres; less than one acre if part of a larger common plan of development or sale that disturbs between one and five acres; and other construction activities designated by EPA based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to waters of the United States (40 CFR §122.26(b)(15)(ii)). However, the Phase II rule allows for the exclusion of certain sources from permit coverage based on a demonstration of the lack of impact on water quality, as well as the inclusion of others based on a higher likelihood of localized adverse impact on water quality. Exclusion from the program is available through waivers to operators of small construction activity who certify for one of the available waivers.

All large construction activities, regulated under 40 CFR §122.26(b)(14)(x), are required to obtain coverage under a storm water permit including sites disturbing less than five acres that are part of a larger common plan of development or sale that has the potential to disturb five or more acres collectively. A similar permit requirement exists for small construction activities, regulated under 40 CFR §122.26(b)(15)(i), that disturbs less than one acre but are part of a larger common plan of development or sale having the potential to disturb at least one, but less than five acres collectively. Examples of these would be lots in a subdivision or industrial park.

To help clarify what projects must be addressed as part of a "common plan of development or sale" and what projects can be considered on their own merit, EPA is addressing the issue of non-contiguous construction activities. Where discrete construction projects within a larger common plan of development or sale are located at least 1/4 mile apart and the area between the projects is not being disturbed, each individual project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same "common plan" is not concurrently being disturbed. For example, two oil and gas well pads separated by 1/4 mile could be treated as separate "common plans." However, if the same two well pads and an interconnecting access road were all under construction at the same time, they would generally be considered as part of a single "common plan" for permitting purposes. If a utility company was constructing new trunk lines off an existing transmission line to serve separate residential subdivisions located more than 1/4 mile apart, the two trunk line projects could be considered to be separate projects.

For situations where a common plan of development or sale exists and a single SWPPP is developed for an entire site, the requirements and burdens associated with maintaining permit compliance can be commensurately reduced as portions of the site are stabilized. For example, BMPs may be removed and inspections ceased for a stabilized area, as long as the threat of pollutants in any discharges from the area resulting from construction or construction-related activities no longer exists. It is not necessary to revise the NOI in this situation. Instead, the

construction operator must thoroughly document all activities leading up to and including final stabilization, so that an inspector will understand that BMPs and regular inspections are no longer needed in that area.

The NPDES regulations, at 40 CFR §122.44(s) provide for the incorporation of qualifying State, Tribal or local erosion and sediment control program requirements by reference into the CGP for both small and large construction activities. Under that provision, the CGP would require compliance with the qualifying local program rather than with two different sets of requirements (i.e., CGP and the qualifying program). EPA has opted not to include any qualifying State, Tribal or local erosion and sediment control program requirements in the CGP at this time.

Federal regulations, at 40 Part 125, Subpart M, establish guidelines for issuance of NPDES permits for the discharges into the territorial seas, the contiguous zone, and the oceans. The regulations specify that EPA shall determine whether a discharge will cause unreasonable degradation of the marine environment based on consideration of a number of factors (see 40 CFR §125.122(a)). EPA has made the determination that the CGP is designed to control discharges such that these discharges that are in compliance with the terms and conditions of this permit will not cause unreasonable degradation of the marine environment. As such, this permit is consistent with provisions specified in 40 CFR §125.123(a).

EPA issued the first round of the Phase I construction general permit on two dates: September 9, 1992, for certain States and territories, and September 25, 1992, for the other States and territories where EPA was the Permitting Authority. The Phase I permit was commonly referred to as the Baseline Construction General Permit. The second-round permit (also known as the "national construction general permit"), issued February 17, 1998, was for use in the states, territories and Indian country in EPA Regions 1, 2, 3, 7, 8, 9, and 10 where EPA was the NPDES permitting authority. EPA Region 4 issued its permit on March 31, 1998 (63 FR 15621) that was modified on April 28, 2000 (65 FR 25122). EPA Region 6 issued its permit on July 6, 1998 (63 FR 36490). Today's permit reflects changes under Phase II of the storm water program, and is for use in all states, territories, and Indian country where EPA is the NPDES permitting authority, except in EPA Region 4. Operators of construction projects in EPA Region 4 should continue to seek coverage under the appropriate permit, either the Region 4 CGP, another applicable EPA permit, or a state permit.

Operators of construction projects in EPA Region 6, previously not covered under the national construction general permit, may now be covered by the terms of this permit. The previous Region 6 construction general permit covered the states of New Mexico and Texas; Indian Country in Louisiana, Oklahoma, Texas and New Mexico (except Navajo Reservation Lands [see Region 9] and Ute Mountain Reservation Lands [see Region 8] until July 7, 2003. Upon expiration, operators of construction projects in Region 6 where EPA is the permitting authority must re-apply for coverage under this CGP (see Subpart 1.2 of the CGP for locations where EPA is the Permitting Authority). Operators of construction projects in Texas, other than oil, gas, and pipeline construction, must seek coverage under Texas' permit. More information is available for Texas operators at: www.tceq.state.tx.us/index.html. Operators of discharges in 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 492X and 5171) and point source discharges associated with agricultural production, services, and silviculture Includes SIC Groups 01, 02, 07, 08, and 09), and discharges in the Texas that are not under the authority of the Texas Commission on Environmental Quality (formerly the Texas Natural Resource Conservation Commission), 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 must seek coverage under this CGP or, if appropriate, submit a waiver certification form. EPA Region 6 is hereby providing notice pursuant to Subpart VI.B.4 of the Region 6 permit published July 6, 1998, that those permits will not be reissued and permit coverage under those permits will not be administratively continued after permit expiration.

IV. Summary of Options for Controlling Pollutants

EPA is providing the following information on controlling pollutants in storm water discharges to assist permittees in preparing SWPPPs. Most controls for construction activities can be categorized in either of two groups: (1) erosion and sediment controls and (2) storm water management measures.

Sediment and erosion controls ordinarily address pollutants in storm water generated from the site during active construction-related work. Storm water management measures are customarily installed before, and coincident with, completion of construction activities, but primarily result in reductions of pollutants in storm water discharged from the site after the construction has been completed. Additional measures that should be employed throughout a project include housekeeping BMPs, such as materials management and litter control.

1. Sediment and Erosion Controls

Erosion controls provide the first line of defense in preventing off-site sedimentation and are designed to prevent erosion through protection and preservation of soil. Sediment controls are designed to remove sediment from runoff before the runoff is discharged from the site. Sediment and erosion controls can be further divided into two major classes of controls: stabilization practices and structural practices. Typically, a combination of stabilization practices and structural practices (as well as storm water management and housekeeping measures) are necessary throughout the site to provide adequate water quality protection. Major types of sediment and erosion practices are summarized below. A more thorough description of these practices is given in "Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices," U.S. EPA, 1992 (www.epa.gov/npdes/pubs/owm0307.pdf). Permittees should also consider the construction of new projects in phases to minimize the amount of bare soil which is exposed at one time and the amount of stabilization or structural controls that would be required.

A. Stabilization Practices

Stabilization refers to covering or maintaining an existing cover over soil. Vegetative cover includes grass, trees, vines, shrubs, etc. Stabilization measures can also include non-vegetative controls such as geotextiles, riprap or gabions (wire mesh boxes filled with rock). Mulches such as straw or bark can be somewhat effective at stabilization in stand-alone fashion but are most effective when used in conjunction with vegetation.

Stabilization of exposed soil is one of the foremost means to minimize pollutant discharge during construction activities. Stabilization reduces erosion potential by intercepting water so that it infiltrates into the ground instead of running off the surface, and slowing the velocity of runoff, thereby promoting deposition of sediment already being carried. Stabilization provides large reductions in the levels of suspended sediment in discharges and receiving waters. Examples of stabilization measures are summarized below.

- Temporary Seeding. Seeding of temporary vegetation provides stabilization by establishing vegetative cover at areas of the site where earth disturbing activities have temporarily ceased, but will resume later in the construction project. Without temporary stabilization, soil can be exposed to precipitation for an extended period leaving it vulnerable to erosion, even though earth-disturbing activities are not occurring on these areas. Temporary seeding practices have been found to be up to 95 percent effective in reducing erosion.¹
- Permanent Seeding. Establishing a permanent and sustainable ground cover at a site stabilizes the soil and hence reduces sediment in runoff. Permanent seeding is typically required at most sites for aesthetic reasons.
- Mulching. Mulching is often done coupled with permanent and temporary seeding. Where temporary or permanent seeding is not feasible, exposed soil can be stabilized by spreading plant residues or other suitable materials on the soil surface. Although generally not as effective as vegetation, mulching by itself provides a measure of temporary erosion control. Mulching in conjunction with seeding provides erosion protection prior to the onset of plant growth. In addition, mulching protects newly-applied seeds, providing a higher likelihood of successful vegetation. To maintain its effectiveness, mulch should be anchored to resist wind displacement.
- Sod Stabilization. Sod stabilization involves establishing long-term stands of grass by planting sod on exposed surfaces. When maintained properly, sod can be more than 99 percent effective in reducing erosion, and is the most immediately effective vegetation method available. However, the cost of sod stabilization (relative to other vegetative controls) typically limits its use to situations where a quick vegetative cover is desired (e.g., steep or erodible slopes) and sites which can be maintained with ground equipment. Sod is also sensitive to climate and may require intensive watering and fertilization.²
- Vegetative Buffer Strips. Vegetative buffer strips are indigenous or replanted strips of vegetation located at the top and bottom of a slope, outlining property boundaries or adjacent to receiving waters such as streams or wetlands. Vegetative buffer strips can slow runoff at critical locations, decreasing erosion and allowing sedimentation. They can be especially useful for very narrow linear construction projects such as underground utilities or pipelines.
- Preservation of Trees. This practice involves preserving selected trees already on-site prior to development. Mature trees provide extensive canopy and root systems which protect and hold soil in

¹Guidelines for Erosion and Sediment Control in California; USDA, Soil Conservation Service, Davis, CA; revised 1985.

²Ibid.

place. Shade trees also keep soil from drying rapidly, decreasing the soil's susceptibility to erosion. Measures taken to protect trees can vary significantly, from simply installing tree armor and fences around the drip line, to more complex measures such as building retaining walls and tree wells. Along with the erosion benefits provided by trees, they can also add to the aesthetics and value of the property.

- **Contouring and Protection of Sensitive Areas.** Contouring refers to the practice of building in harmony with the natural flow and contour of the land. By minimizing changes in the natural contour of the land, existing drainage patterns are preserved as much as possible, thereby reducing erosion. Minimizing the amount of regrading done will also reduce the amount of soil being disturbed. The preservation of sensitive areas at a site such as steep slopes and wetlands should also be a priority. Disturbance of soil on steep slopes should be avoided due to vulnerability to erosion. Wetlands should be protected because they provide flood protection, pollution mitigation and an essential aquatic habitat.

B. Structural Practices

Structural practices involve the installation of devices to divert, store or limit runoff. Structural practices have several objectives. First, structural practices can be designed to prevent water from flowing on disturbed areas where erosion may occur. This involves diverting runoff from undisturbed, up-slope areas through use of earth dikes, temporary swales, perimeter dikes or other diversions to stable areas. Another objective of structural practices may be to cause sedimentation before the runoff leaves the site. Methods for removing sediment from runoff include diverting flows to a trapping or storage device or filtering diffuse flows through on-site silt fences. All structural practices require proper maintenance (e.g., removal of collected sediment) to remain functional and should be designed to avoid presenting a safety hazard - especially in areas frequented by children.

- **Earth Dikes.** Earth dikes are temporary berms or ridges of compacted soil that channel water to a desired location. Earth dikes should be stabilized with vegetation or an equally efficacious method.
- **Silt Fences.** Silt fences are a barrier of geotextile fabric (filter cloth) used to intercept sediment in diffuse runoff. They must be firmly anchored and may require additional support, such as reinforcing with wire mesh. Used alone, silt fences are usually inappropriate for flows of concentrated high volume or high velocity. They must be carefully maintained to ensure structural stability and be cleaned of excess sediment.
- **Drainage Swales.** A drainage swale is a channel lined with grass, riprap, asphalt, concrete or other materials. They are installed to convey runoff without causing erosion.
- **Sediment Traps.** Sediment traps are installed in drainage pathways, at storm drain inlets or other discharge points from disturbed areas. They are temporary structures designed to reduce water velocity and subsequently allow soil particles to settle.
- **Check Dams.** Check dams are small temporary dams constructed across a swale or drainage ditch to reduce the velocity of runoff, thereby reducing erosion in the swale or ditch. They should not be used in a permanent stream. More elaborate erosion controls in a flow conduit may be unnecessary if check dams are installed, due to the decrease in energy of the runoff.
- **Level Spreaders.** Level spreaders are outlets for dikes and flow channels consisting of an excavated depression constructed at zero grade across a slope. Level spreaders convert concentrated runoff into diffuse flow and release it onto areas stabilized by existing vegetation.
- **Subsurface Drains.** Subsurface drains transport runoff to an area where the water can be managed effectively. Drains can be made of tile, pipe, or tubing.
- **Pipe Slope Drains.** A pipe slope drain is a temporary runoff conveyance running down a slope to prevent erosion on the face of the slope.
- **Temporary Storm Drain Diversions.** Temporary storm drain diversions are used to re-direct flow in a storm drain for capturing sediment in a trapping device.
- **Storm Drain Inlet Protection.** Storm drain inlet protection reduces sediment entering storm drainage systems prior to permanent stabilization of disturbed areas. Examples include a sediment filter or an excavated detention area around a storm drain inlet.
- **Rock Outlet Protection.** Rock protection placed at the outlet of conduits can reduce the depth and velocity of water so the flow will not cause downstream erosion.
- **Other Controls.** Examples of other controls include temporary sedimentation basins, sump pits, entrance stabilization, waterway crossings and wind breaks.

2. Storm Water Management Measures

Storm water management measures are usually installed before, and coincident with, completion of construction activities. The measures primarily result in reductions of pollutants in storm water discharged from the site after cessation of construction activities. Storm water management may also be needed for compliance with flood control requirements (that may be unrelated to NPDES requirements).

Construction frequently causes significant alterations in the characteristics of the affected land. One such change is an increase in the overall imperviousness of the site, which can dramatically affect the site's flow patterns. An increase in runoff may increase the amount of pollutants carried by the runoff. In addition, some activities (e.g., automobile travel on newly-built roads) can result in higher pollutant concentrations in runoff compared to pre-construction levels. Traditional storm water management controls attempt to limit increases in the amount of runoff and pollution discharged from land impacted by construction.

Storm water management measures include, but are not limited to, on-site infiltration of runoff, flow attenuation by vegetation or natural depressions, outfall velocity dissipation devices, storm water retention basins and artificial wetlands, and storm water detention structures. For many sites, a combination of these controls may be appropriate. A summary of storm water management controls is provided below. A more complete description of storm water management controls is found in "Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices," U.S. EPA, 1992, and "A Current Assessment of Urban Best Management Practices," Metropolitan Washington Council of Governments, March 1992. In designing storm water controls, features that would pose a safety hazard - especially for children - should be avoided and/or have limited public access.

On-Site Infiltration. Inducing infiltration, through infiltration trenches or basins, can reduce the volume and pollutant loadings of storm water discharges from a site. Infiltration measures tend to mitigate impacts to an area's natural hydrologic characteristics. Properly designed and installed infiltration constructs can reduce peak discharges, facilitate recharging of the groundwater, augment low flow conditions in receiving streams, reduce storm water discharge volumes and pollutant loads, and inhibit downstream erosion.

Infiltration measures are particularly effective in permeable soils and where the water table and bedrock are well below the surface. Infiltration basins can also double as sediment basins during construction. Infiltration trenches can be easily incorporated into less active areas of a development and are appropriate for small sites and in-fill developments. However, trenches may require regular maintenance to prevent clogging, particularly where grass inlets or other sedimentation measures are not used. In some situations, such as low density areas of parking lots, porous pavement can provide for infiltration.

Flow Attenuation by Vegetation or Natural Depressions. Flow attenuation caused by vegetation or natural depressions can facilitate pollutant removal and infiltration and can reduce the erosivity of runoff. Use of vegetative flow attenuation measures can protect habitats and enhance the appearance of a site. These measures include grass swales and filter strips as well as trees that are either preserved or planted during construction.

Given their limited capacity to accept large volumes of runoff (and the concomitant erosivity), vegetative controls should usually be used in combination with other storm water devices. Incorporating check dams into flow paths can provide additional infiltration and flow attenuation. Grass swales are typically used in areas such as low or medium density residential development and highway medians as an alternative to curb and gutter drainage system. In general, the costs of vegetative controls are less than for other storm water measures.

Outfall Velocity Dissipation Devices. Outfall velocity dissipation devices include riprap and stone or concrete flow spreaders. They slow the flow of water discharged from a site thereby reducing erosion.

Retention Structures/Artificial Wetlands. Retention structures are ponds and artificial wetlands that are designed to maintain a permanent pool of water. Properly installed and maintained retention structures (also known as wet ponds) and artificial wetlands can achieve a high removal rate of sediment, biochemical oxygen demand (BOD), organic nutrients and metals, and are most cost-effective when used to control runoff from larger, intensively developed site. These constructs rely on settling and biological processes to remove pollutants. Retention ponds and artificial wetlands can also become wildlife habitats, recreation, and landscape amenities, and increase local property values.

While the Agency believes artificial wetlands can be one of the most effective long-term storm water management measures, EPA also recognizes the potential problems to which wetlands may contribute at certain sites. This could be the case at airports where bird populations drawn to wetlands proximate to runways/taxiways may endanger moving aircraft. EPA recommends that structures that maintain continuous habitat for wildlife not be

constructed within 10,000 feet of a public-use airport serving turbine-powered aircraft, or within 5,000 feet of a public-use airport serving piston-powered aircraft. EPA, as always, stresses public safety and sound engineering judgement in the implementation of any storm water measure, control or BMP.

Water Quality Detention Structures. Storm water detention structures, which include extended detention ponds, control the rate at which water drains after a storm event. Extended detention ponds are usually designed to completely drain in about 24 to 48 hours and to remain dry at other times. They can provide pollutant removal efficiencies similar to those of retention pond. Extended detention systems are typically designed to provide both water quality and water quantity (flood control) benefits.

3. Housekeeping Best Management Practices (BMPs)

Pollutants that could be discharged in storm water from construction sites because of poor housekeeping include oil, grease, paints, gasoline, concrete truck wash down, raw materials used in the manufacture of concrete (sand, aggregate, and cement), solvents, litter, debris and sanitary wastes. Construction site SWPPPs should address the following to prevent the discharge of pollutants:

- Designate and control areas for equipment maintenance and repair;
- Provide waste receptacles at convenient locations and regular collection of wastes;
- Locate equipment wash down areas on site, and provide appropriate control of washwater to prevent unauthorized dry weather discharges and avoid mixing with storm water;
- Provide protected storage areas for chemicals, paints, solvents, fertilizers, and other potentially toxic materials; and
- Provide adequately maintained sanitary facilities.

V. Summary of Permit Conditions

This section has been written in an informal style and follows the structure of the CGP, but does not reflect verbatim the actual language used in the permit. It is intended to help the regulated community and members of the public understand the intent and basis of the actual permit language. If any confusion or conflicts exist between this summary and the actual CGP language, the permittee must comply with the CGP as written.

1. Coverage Under This Permit

1.1 Introduction

This Construction General Permit (CGP) authorizes storm water discharges from large and small construction-related 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). EPA is also making this permit available, consistent with 40 CFR §122.26(b)(15(ii)), for storm water discharges from any other construction activity designated by EPA based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to waters of the United States. This permit expands coverage from the 1998 CGP that provided coverage for large construction sites (i.e., those disturbing greater than 5 acres) to include both small and large construction activities (i.e., any project disturbing greater than one acre).

One significant change from the 1998 CGP to the 2003 CGP is that EPA now presents permit language in a more reader-friendly, plain language format. In several places in the CGP, EPA has replaced the terms "operator", "applicant", and "permittee" with the easier-to-understand terms of "you" or "your." As such, once an operator requests coverage under the CGP, the CGP is worded to speak directly to that operator, who is now the permittee.

Similar to the 1998 CGP, the goal of this permit is to reduce or eliminate storm water pollution from construction activity through development and implementation of an appropriate SWPPP.

1.2 Permit Area

As noted above, the CGP is actually a compilation of numerous identical permits, each with its own NPDES permit number. Each separate CGP is individually numbered and only makes available coverage to construction activities in the permit's designated area or category (e.g., State, Federal facility within a State, Indian Country,

etc.). A list of each of these areas, along with the associated NPDES permit number, is provided in Appendix B of the permit. Each permittee will be assigned a tracking number associated with the appropriate NPDES permit number when his or her Notice of Intent (NOI) is received and processed by EPA.

This permit modifies the area of available coverage from the February 1998 CGP and is now available for all areas, except those within EPA Region 4, for which EPA is the permitting authority. Specifically, this permit includes those activities previously covered by the EPA Region 6 CGP (63 FR 36489, July 6, 1998), adds Indian Country in EPA Region 5, and clarifies those oil and gas related activities in Oklahoma for which EPA remains the permitting authority. This permit excludes those areas that have recently been authorized to administer the NPDES Permitting Program (i.e., the State of Maine and the State of Arizona). EPA will continue to be the permitting authority for Indian Lands in the State of Arizona.

State Coastal Zone Management Act (CZMA) certification was not received from Massachusetts in time for that state to be included in this permit. As such, large construction activities in Massachusetts covered under the 1998 CGP will continue to be covered under that permit. EPA will reissue the CGP for Massachusetts for large and small construction activities at a later date, and will include any state-specific modifications or additions as part of the State's CZMA certification process.

1.3 Eligibility

This section of the permit describes those requirements that are a pre-condition to obtaining coverage under the CGP. Specifically, only construction activities that meet the eligibility conditions in Subpart 1.3 can be covered by this permit. As such, if an operator is not eligible for coverage under the CGP, but files an NOI requesting coverage, then any discharges are considered to be unpermitted and in violation of the Clean Water Act. However, once eligibility has been attained, if the operator does not comply with the requirements of the CGP, the operator may be in violation of the CGP for otherwise eligible discharges.

1.3.A Allowable Storm Water Discharges. This permit authorizes all discharges of storm water from construction activities except those excluded under Limitations on Coverage (Subpart 1.3.C) in the CGP. Coverage under the CGP is authorized for:

- Storm water discharges associated with construction activities from either large or small construction sites (including storm water discharges from operators disturbing less than one acre that are part of a larger common plan of development or sale that, combined, disturbs one acre or more);
- Storm water discharges from sites disturbing less than one acre, but designated by EPA as needing coverage under the CGP;
- Storm water discharges from construction site support activities given that these support activities are directly related to the construction site with NPDES CGP coverage; and
- Any discharge authorized by a different NPDES permit commingled with discharges authorized by this permit.

As noted above, activities that occur on-site in support of construction activity are covered under the CGP. Specifically, the permit authorizes discharges from construction support activities (e.g., concrete or asphalt batch plants, equipment staging yards, material storage areas, etc.) for local project(s) with which an operator is currently involved (e.g., a concrete batch plant providing concrete to several different highway projects in the same county). Authorization of this discharge is contingent upon (1) the support activity not being a commercial operation serving multiple, unrelated construction projects and not operating beyond the completion of the last related construction project it serves; and (2) appropriate controls are identified in the SWPPP for the discharges from the support activity areas.

1.3.B Allowable Non-Storm Water Discharges. This permit authorizes certain non-storm water discharges associated with construction activity, provided that the non-storm water component is in compliance with Subpart 3.5 of the permit. Specifically, operators are required to identify in the SWPPP all allowable sources of non-storm water discharges and must identify and ensure the implementation of appropriate pollution prevention measures for these discharges. The operator should also eliminate or reduce these discharges to the extent feasible. Allowable non-storm water discharges include those listed in Subpart 1.3.B of the CGP. Two additional sources have been added since the 1998 CGP. Specifically, the permit includes uncontaminated excavation dewatering and landscape irrigation. These two sources were added to address concerns of operators that certain uncontaminated site discharges were not covered under the 1998 CGP and may need coverage under an additional NPDES permit.

1.3.C *Limitations on Coverage.* Not all storm water discharges from construction sites are authorized by this permit. Specifically excluded are:

1.3.C.1 *Post Construction Discharges.* Storm water discharges originating from a site after construction activities have ceased, the site has achieved final stabilization, and a Notice of Termination has been submitted. If there will be a discharge of storm water associated with industrial activity, or some other regulated discharge from the completed project (e.g., wastewater from a newly-constructed chemical plant), coverage under another permit(s) must be obtained for those discharges.

1.3.C.2 *Prohibition on Discharges Mixed With Non-Storm Water.* Storm water discharges that are mixed with non-storm water sources, other than those identified in and complying with the permit. Non-storm water discharges that are authorized under a different NPDES permit may be commingled with discharges authorized under this permit.

1.3.C.3 *Discharges Covered by Another Permit.* Storm water discharges associated with construction activity that are covered under an individual permit or discharges required to be covered under an alternative general permit.

1.3.C.4 *Attainment of Water Quality Standards.* Federal regulations at 40 CFR §122.4(d) provide that no permit may be issued if the "conditions cannot ensure compliance with the applicable water quality requirements." Unlike individual permits that include requirements tailored to site-specific considerations, general permits, while tailored to specific industrial processes or types of discharges (e.g. offshore oil and gas or storm water), do not contain site-specific requirements that address the water quality conditions of the waters receiving the discharge. Therefore, general permits rely on permittees to certify that they meet the eligibility conditions and implement requirements that will ensure compliance with the conditions of the permit. The permit requirements are intended to ensure that those seeking coverage under this general permit select, install, implement, and maintain BMPs at their construction site that will be adequate and sufficient to meet water quality standards for all pollutants of concern.

For the CGP, eligibility provisions do not hinge on the operator making a determination of compliance with applicable water quality standards. Rather, the permit limits operators from obtaining coverage under this permit if EPA makes such a determination. In those instances when EPA does make such a determination, EPA may require the operator to obtain coverage under an individual permit or may allow coverage under the CGP provided that the operator includes appropriate controls and implementation procedures in its SWPPP. As is required in Subpart 4.5 of the CGP, operators are required to select, install, implement, and maintain BMPs that minimize pollutants in the discharge. Except where specifically required by EPA to perform additional measures, these BMPs will be considered as stringent as necessary to ensure that discharges do not cause or contribute to an excursion above any applicable state water quality standard. As such, EPA expects that compliance with the terms of the general permit will ensure compliance with water quality standards.

1.3.C.5 *Discharging into Receiving Waters With an EPA Approved or Established Total Maximum Daily Load (TMDL) Analysis.*

A Total Maximum Daily Load (TMDL) is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. Under current regulations and EPA program guidance (40 CFR §130.2 and §130.7), states establish TMDLs that include wasteload allocations from point sources, and load allocations from non-point sources and natural background conditions. Wasteload allocations are defined as the portion of a receiving water's loading capacity that is allocated to point sources dischargers. TMDLs are established at levels necessary to attain and maintain the applicable narrative and numerical water quality standards with seasonal variations and a margin of safety that take into account any lack of knowledge concerning the relationship between effluent limitations and water quality. TMDLs are developed on a pollutant- and waterbody-specific basis. In some instances, TMDLs may combine multiple pollutants into one set of TMDL documents; however, the specific TMDL wasteload and load allocations are to be pollutant-specific. States are responsible for establishing TMDLs, which EPA approves. In some instances, EPA establishes the TMDLs. Once established or approved by EPA, TMDLs are implemented through water quality management plans and through NPDES permits. NPDES regulations, at 40 CFR §122.44(d)(1)(vii)(B), require that EPA ensure that NPDES permit limits are consistent with the assumptions and requirements of any available wasteload allocation pursuant to 40 CFR §130.7. Generally, this requires EPA to ensure that NPDES permits incorporate applicable assumptions and requirements detailed in TMDLs approved or established by EPA.

Those seeking coverage under the CGP are responsible for determining whether specific conditions, over and above other requirements of the CGP, have been identified by the TMDL authority as necessary to ensure consistency with the assumptions and requirements of TMDLs approved or established by EPA. There may be

documents accompanying the TMDL (e.g., an implementation plan) or other documents that indicate the TMDL writer's intent to allocate a load for an individual discharger or for a class of dischargers. To the extent such documents are available, the operator should consider these materials when determining whether your discharge will be consistent with the TMDL. EPA encourages the operator to contact the authority that established the TMDL -- in most cases, the states -- to seek clarification if significant concerns exist over whether its activity will be consistent with a TMDL.

Consistent with EPA regulations and guidance, the CGP requires that the operator determine whether an EPA approved or established TMDL exists that specifically addresses its discharge and if so, take necessary actions to be consistent with the assumptions and requirements of that approved TMDL. To make this determination, the operator will need to (1) determine the waterbody into which it discharges, (2) identify if there is an approved TMDL for that waterbody, (3) determine if that TMDL includes specific requirements (e.g., wasteload allocation or load allocation) applicable to its construction site, and (4) if so incorporate those requirements into the SWPPP and implement necessary steps to comply with them. EPA generally agrees that construction activities should not be delayed because the TMDL authority failed to specify all sources of loading in the TMDL. EPA is not requiring that construction activities be delayed until such time as a TMDL can be revised. EPA has utilized a framework that allows the construction site operator to obtain clarification from the TMDL authority on discharge provisions that would allow authorization under the CGP. EPA established a website at www.epa.gov/npdes/stormwater/cgp that includes links to state TMDL information and contacts. EPA expects that permittees can access that website and identify either (1) the steps needed to be consistent with the assumptions and requirements of the TMDL or (2) a state or regional contact for making this determination. The operator may access that site or contact their state environmental agency or EPA region directly to make this determination. For construction activity authorized by EPA Region 8, TMDL information and contacts are available at: www.epa.gov/region08/water/stormwater/index.html. For more information on EPA's National TMDL program, including state and regional contacts, state maps showing impaired waterbodies, and example TMDLs, visit: www.epa.gov/owow/tmdl.

EPA recognizes that TMDLs vary in the complexity of their assumptions and quantification. In the process of determining whether or not an operator is consistent with the TMDL, the state or regional TMDL contact may request additional information. The TMDL may include details regarding recommended implementation activities that include certain narrative provisions such as implementation of specific BMPs; specified inspection, discharge monitoring or characterization, education, tracking or reporting requirements; or some combination of these or other conditions. In addition, some States may include implementation provisions in their TMDLs, although EPA regulations do not require this, and EPA does not approve or disapprove TMDLs based on these implementation provisions. However, any implementation language included in the TMDL that applies to construction general permit discharges should be considered part of the TMDL for the purposes of determining consistency of the SWPPP with the TMDL. Further, EPA is clarifying that if the TMDL includes load allocations that the permitting jurisdiction later determines is for a discharge subject to this permit, then the load allocation is considered to be a wasteload allocation, and the SWPPP needs to demonstrate consistency with any specific requirements implementing this load allocation.

As described in the permit, EPA will begin with the general assumption that where EPA has approved a TMDL that does not include a specific allocation for storm water discharges, or where the TMDL authority clarifies that it did not include a specific allocation for storm water or for construction activities, adherence to a SWPPP that meets the requirements of the CGP will be consistent with the assumptions and requirements of such TMDLs. Inferring that the TMDL authority did not intend to make it impossible to permit storm water discharges in the absence of any discussion on this topic in the TMDL is reasonable because both construction activity and rainfall are so ubiquitous that it is unlikely that a policymaker would make such a significant decision consciously through silence. EPA will generally assume that such discharges were accounted for by the author of the TMDL, even if such discharges are not addressed specifically. Therefore, in the situation where an EPA approved or established TMDL has not specified a wasteload allocation for construction storm water discharges, but has not specifically excluded these discharges, compliance with a SWPPP that meets the requirements of the CGP will generally be assumed to be consistent with the approved TMDL. Similarly, where an EPA approved or established TMDL has specified a general wasteload allocation for construction storm water discharges, but no specific requirements for individual construction sites have been identified, either in the TMDL, a watershed plan, or other similar document, then compliance with a SWPPP that meets the requirements of the CGP 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. In selecting this approach, EPA is trying to balance the need to include permit conditions consistent with TMDLs with the need to clearly define permittee responsibilities.

1.3.C.6 *Endangered and Threatened Species and Critical Habitat Protection*. Before submitting an NOI, the operator must ensure and document that discharges are not likely to jeopardize the continued existence of any Federally-listed endangered or threatened species or result in the adverse modification or destruction of habitat that is Federally-designated as critical under the Endangered Species Act (ESA).

The U. S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) are responsible for administration of the ESA and as such are responsible for maintaining a list of protected species and critical habitat. Once listed as endangered or threatened, a species is afforded the full range of protections available under the ESA, including prohibitions on killing, harming or otherwise taking a species. In certain instances, FWS or NMFS may establish a critical habitat for a threatened or endangered species as a means to further protect those species. Critical habitat are areas determined to be essential for the conservation of a species and may not necessarily be in an area currently occupied by the species. Some, but not all, listed species have designated critical habitat. Exact locations of such critical habitat are provided in the Services regulations at 50 CFR Parts 17 and 226.

EPA has developed a four-step process (Appendix C) to make this determination. The project "owner" or developer performs the endangered species analysis during the planning stages of a project (i.e., before construction is scheduled to begin). By design, this effort should not have to be repeated by the contractors, homebuilders, utilities, etc., whose involvement in the project will not happen until later. See Appendix C of the permit for the ESA Review Procedures to determine eligibility prior to submittal of the NOI. EPA strongly recommends that the operator follow the Appendix C procedures at the earliest possible stage to ensure that measures to protect listed threatened and endangered species and designated critical habitat are incorporated early in the planning process. At a minimum, the operator must document fully the procedures used to determine eligibility prior to submittal of the NOI.

This permit provides for the possibility of multiple permittees at a construction site. Operators should be aware that in many cases they can meet the CGP eligibility requirements by relying on another operator's certification of eligibility as specified in Criterion F under Subpart 1.3.C.6 of the CGP.

By certifying eligibility under Criterion F of Subpart 1.3.C.6, the operator agrees to comply with any measures or controls upon which the other operator's certification under Criterion A, B, C, D, or E of Subpart 1.3.C.6 was based. This situation will typically occur where a developer or primary contractor, conducts a comprehensive assessment of effects on listed species and critical habitat for the entire construction project, certifies eligibility under Criterion A, B, C, D, or E and that certification is relied upon by other operators (i.e., contractors) at the site. However, operators that consider relying on another operator's certification should carefully review that certification and any supporting information, and assess whether there is any reason to believe that listed species or designated critical habitat not considered in the prior certification may be present or located in the project area (due, for example, to a new species listing or critical habitat designation). If an operator does not believe that the other operator's certification provides adequate coverage for the operator's storm water discharges and storm water discharge-related activities or for the operator's particular project area, the operator must provide its own independent certification under Criterion A, B, C, D, or E.

The project area will vary with the size and structure of the construction activity, the nature and quantity of the storm water discharges, the storm water discharge-related activities and the type of receiving water. Given the number of construction activities potentially covered by the CGP, no specific method to determine whether listed species may be located in the project area is required for coverage under the CGP.

It is important to note that discussion or formal or informal consultation with FWS and/or NMFS should begin prior to submission of a permit application if the applicant is unclear about whether he or she can satisfy Appendix C without FWS and/or NMFS input.

The operator also has an independent ESA obligation to ensure that its activities do not result in any prohibited "takes" of listed species.³ Many of the measures required in the CGP and in these instructions to protect species may also assist operators in ensuring that their construction activities do not result in a prohibited take of species in violation of section 9 of the ESA. Operators who plan construction activities in areas that harbor endangered and threatened species are advised to ensure that they are protected from potential takings liability under ESA section 9 by obtaining either an ESA section 10 permit or by requesting formal consultation under ESA section 7 (as described in more detail in Step Four of the ESA Review Procedures in Appendix C of the CGP). Operators

³ Section 9 of the ESA prohibits any person from "taking" endangered wildlife (e.g., harassing or harming it). See ESA Sec 9; 16 U.S.C. §1538. The FWS has extended generally that prohibition to threatened wildlife by regulation at 50 CFR §17.31. This prohibition applies generally to all entities including private individuals, businesses, and governments. Section 9(a)(2) details the prohibited acts relating to endangered plants, which primarily apply on federal lands or to actions prohibited by State law.

who seek protection from takings liability should be aware that it is possible that some specific construction activities may be too unrelated to storm water discharges to be afforded incidental take coverage through an ESA section 7 consultation that is performed to meet the eligibility requirements for CGP coverage. In such instances, operators should apply for an ESA section 10 permit. Where operators are not sure whether to pursue a section 10 permit or a section 7 consultation for takings protection, they should confer with the appropriate FWS or NMFS office.

EPA received concurrence from FWS under section 7 of the Endangered Species Act on the construction general permit in a letter dated June 4, 2003 and received concurrence from NMFS in a letter dated June 20, 2003. In addition to ESA, the 1996 amendments to the Magnuson-Stevens Fishery Conservation and Management Act set forth a number of new mandates for NMFS, regional fishery management councils, and Federal agencies to identify and protect important marine and anadromous fish habitat. Regional fishery management councils, with assistance from NMFS, are required to delineate Essential Fish Habitat (EFH).

The Magnuson-Stevens Act requires that Federal agencies consult with NMFS on all actions undertaken by the agency, including permit issuance, which may adversely affect EFH. Final revised regulations addressing such consultations were promulgated by NMFS on January 17, 2002 (67 Fed. Reg. 2343). The term "adverse effect" is defined in the NMFS regulations at 50 CFR §600.910 as any impact that "reduces quality and/or quantity of EFH", and may include "direct or indirect physical, chemical or biological alternations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat and other ecosystem components."

This permit controls storm water discharges from small construction activities in addition to continuing to cover large construction activities. As noted earlier, the permit requires the development and implementation of a SWPPP to control pollutants in the discharges. This SWPPP must protect water quality in the affected waters, including designated aquatic life uses in those waters. Since the SWPPPs adequately protect water quality, including aquatic life, EPA has determined that the permit issuance will not adversely affect EFH. As such, in accordance with 50 CFR §600.920, EPA is not consulting with NMFS concerning this action.

1.3.C.7 Historic Properties. [Reserved] Operators are reminded that they must comply with applicable state, tribal, and local laws concerning the protection of historic properties and places. EPA is continuing discussions with the Advisory Council on Historic Preservation and may modify the CGP at a later date based on those discussions.

1.4 Waivers for Small Construction Activities.

Phase II extends the requirements of the storm water program from construction sites disturbing five or more acres (large construction) to sites disturbing between one and five acres (small construction), although EPA may also waive small construction sites that do not have adverse water quality impacts. To receive a waiver, the operator of a small construction activity must certify to a low predicted rainfall erosivity or lack of water quality impacts. See Part VI of the fact sheet for more information on waivers.

A low predicted rainfall erosivity exists during the period of construction activity resulting in a period when the value of the rainfall erosivity factor is less than 5. If the construction activity extends past the dates specified in the waiver certification, the operator must recalculate the waiver using the original start date and a new ending date. If the R-Factor is still under 5, a new waiver certification form must be submitted. If the recalculated R-Factor is greater than 5, an NOI must be submitted prior to the end of the waiver period for the operator to be covered by the permit. Details of procedures for determining eligibility for the low predicted rainfall erosivity waiver are provided in Appendix D.

A determination that storm water controls are not necessary may also be based on a total maximum daily load (TMDL) approved or established by EPA that addresses the pollutant(s) of concern or, for non-impaired waters that do not require TMDLs, an equivalent analysis that determines allocations for small construction sites for the pollutant(s) of concern or that determines that such allocations are not needed to protect water quality based on consideration of existing in-stream concentrations, expected growth in pollutant contributions from all sources, and a margin of safety. The operator must certify that the construction activity and the drainage area are addressed by the TMDL or equivalent analysis. Details of procedures for determining eligibility for these waivers are provided in Appendix D.

2. Authorizations for Discharges of Storm Water From Construction Activity

Operators of construction sites greater than one acre, or those designated by EPA, are required to submit Notices of Intent (NOI) to obtain permit coverage (40 CFR §122.28(b)(2)). Submission of a complete and accurate NOI eliminates the need to apply for an individual permit for a regulated discharge, unless EPA specifically notifies the discharger that an individual permit application must be submitted.

Only NOI forms provided by EPA (or photocopies thereof) are valid. Applicants must be aware that by signing and dating the form they certify that they understand and are willing to comply with all terms and conditions of the NPDES permit for which they have applied, namely the Construction General Permit. These conditions include those found in Subpart 1.3 (Permit Eligibility) of the permit.

It is acceptable to fill in information that will be the same for every project (e.g., a company's name, address) and make copies of the partially completed form for future use; however, an original signature is required to be included on each form submitted to EPA. An electronic copy of the NOI form is available on EPA's NPDES website at: (www.epa.gov/npdes/stormwater/cgp).

EPA is presently in the process of developing an electronic NOI system that will allow you to complete and submit your NOI to EPA electronically. If EPA makes that, or other NOI options available, you may take advantage of those options to satisfy the NOI use requirements. Information on the availability of that system is found at www.epa.gov/npdes/stormwater/cgp.

Each entity considered an operator of large or small construction activity, must submit an NOI. The definition of "operator" and the existing regulatory definitions of "owner or operator" and "facility or activity" have been included in the permit.

EPA believes there exist situations where a utility company installing service lines meets the definition of operator and must get permit coverage, although most of the time a utility would be considered a "subcontractor" (i.e., non-permittee). If a utility company is constructing a project for itself (e.g., main transmission line, transformer station) it must obtain permit coverage. Otherwise, as a non-permittee working at construction site, EPA encourages utility companies (as it does any subcontractor) to abide by the site's SWPPP provisions and minimize its impacts on storm water controls.

2.1 Authorization to Discharge Date

This permit is considered to be issued on the date it is noticed in the *Federal Register* and will be effective for five years from that date, ending at midnight on the anniversary of publication. Operators are authorized to discharge storm water from construction activities under the terms and conditions of this permit after submission of a complete and accurate NOI to EPA. The specific date of your authorization, however, is dependent upon your date and mode of submission.

- A. The first 90 days following the effective date of the CGP is the period during which ongoing or new construction operators transition to coverage under the new permit. There will be a 7 day waiting period, commencing on the date of postmark of the mailed NOI form, after which discharges associated with construction activities can commence, unless otherwise notified as per Subpart 2.1.C. The 7-day waiting period provides EPA, FWS and NMFS an opportunity to evaluate NOIs, and possibly delay authorization, for potential permit eligibility concerns (see Part 1.3), as part of a commitment to increase oversight of dischargers.
- B. For NOIs submitted after the 90-day transition period, there will be a 7-day waiting period (see Subpart 2.1.A of this fact sheet), commencing on the date the NOI is posted in EPA's NOI database (signifying a complete NOI was received by EPA), unless otherwise notified as per Subpart 2.1.C. By this time, eNOI submittal will be available. At the end of the 7-day review period, the NOI database will indicate if authorization has been delayed.

Submitting an NOI via EPA's electronic filing system will be the easiest and quickest way to obtain permit coverage because the system will automatically process the information, disallow incomplete submissions, and flag certain entries as possibly incorrect. Shortly after transmission of an eNOI to EPA, the database can be accessed to verify receipt and posting of information. The 7-day NOI review period will typically begin the day a complete eNOI is transmitted. To submit eNOIs and access the NOI database, go to www.epa.gov/npdes/stormwater/cgp. When using eNOI submittal, EPA will not separately mail you a notification regarding permit status, except as per Subpart 2.1.C.

After the initial 90-day permit term, for NOIs that are mailed to EPA, the 7-day review period commences only after EPA manually inputs your complete and accurate NOI information into the NOI database. While EPA will attempt to post NOIs in the database as timely as possible, the Agency cannot provide a set turn-around time for doing so, due to the unpredictable nature of the mail and the varying volume of forms submitted. An incomplete NOI will require EPA to mail a notification of incompleteness and will cause further delay. As with previous permits, a letter will be sent to the operator acknowledging receipt of a complete NOI and the date of posting in the database. Seven days following the date the NOI was posted in the database, NOI status can

be viewed on-line (the preferred way). Authorization status can also be obtained from the EPA Storm Water Notice Processing Center via email (epanoi@ctgusa.com), or telephone (866-352-7755), but EPA cannot guarantee a timely reply due to potential volume of inquiries. In lieu of this time-consuming process, EPA recommends use of eNOI submittal and NOI database queries.

- C. During the 7-day NOI review period following either NOI submittal (for the initial 90 days of the permit), or NOI posting in the NOI database (for post 90 day submittals), EPA may notify the NOI submitter that additional action must be taken before discharge authorization is obtained, based on concerns regarding eligibility as described in Subpart 1.3. When the NOI database is operational, all notifications of delays will be posted on the website by the seventh day, and will be followed by a mailed notification. For non-eNOI submissions, EPA will attempt to contact the NOI submitter directly with information about delays as soon as possible (telephone, fax, email), in addition to the database posting, but it is the submitter's responsibility to ensure that authorization has been granted.

Actions to be taken depend on the nature of the eligibility concerns (e.g. water quality, impaired receiving waters, endangered species). Additional actions may include a request to review the SWPPP, endangered species documentation or other information; the need for consultation with FWS or NMFS; a requirement to make revisions to the SWPPP; or having to submit an application for an individual permit as per Subpart 4.2. For sake of expediency in obtaining coverage, any requests should be complied with as soon as possible. When so notified that additional actions must be taken, discharges are not authorized until notified of such by EPA.

2.2 Notice of Intent Contents

An NOI must be submitted by all operators seeking authorization for storm water discharges from a construction site under the CGP. Those required to obtain an individual storm water permit may not use an NOI, but must instead use the forms as described in Subpart 4.2 of the permit.

The NOI form requires the following information (instructions are on the NOI form):

- The applicable permit number for which coverage is being requested. This is the number from Appendix B of the CGP that correlates to the authorities of EPA to regulate discharges in the operator's State.
- The operator's, name, address, telephone number and U.S. Internal Revenue Service (IRS) Employer Identification Number (EIN). Generally, an EIN, also known as the taxpayer ID number, is required for all persons that have employees or operate a business as a corporation or partnership. More details are available from the IRS.
- The name (or other identifier), address (description of location if street address is unavailable), county or similar governmental subdivision, and the latitude/longitude of the construction site (e.g., "Jackson Acres Subdivision, 123 South St., Anyburg, Our County, NH" or "1 mile south of Anyburg, NH, on County Road No. 1; Anyburg, Our County, NH"). Help with finding latitudes and longitudes is provided in the instructions to the NOI form. For operators with multiple projects, purchase of a portable Global Positioning System (GPS) unit that provides read-outs of the latitude and longitude may be useful. GPS units designed for recreational use (e.g., boating, hiking) can cost less than \$100.
- Whether the site is located in Indian country, and, if so, the name of the Reservation where the project is located. For lands that are not part of a Reservation, the tribal affiliation is not required to be provided.
- Verification that the SWPPP has been prepared in advance of filing the NOI and the location of where the plan can be viewed.
- The name(s) of the water of the United States to which construction activities discharge. For discharges through a municipal separate storm sewer system (MS4), the NOI must include the name of the water to which the MS4 discharges.
- An indication whether the discharge is consistent with the assumptions and requirements of applicable EPA established or approved TMDLs (consistent with the discussion regarding eligibility provisions for Subpart 1.3.C.5).
- An estimate of project start date and completion date and an estimate of the number of acres (to the nearest quarter acre) of the site on which soil will be disturbed. Note that the project start and end dates need not be exact. EPA recognizes that many factors, often beyond the permittee's control, contribute to whether a project will actually start or end on the estimated dates. The end date should be when final

stabilization is expected to be attained. Acreage may be determined by dividing square footage by 43,560, as demonstrated in the following example:

Convert 100,000 ft² to acres:

- ▶ Divide 100,000 ft² by 43,560 square feet per acre:
 - ▶ $100,000 \text{ ft}^2 \div 43,560 \text{ ft}^2/\text{acre} = 2.30 \text{ acres}$. Report 2.25 acres on the NOI Form.
- Whether any listed threatened or endangered species or designated critical habitat, described in more detail in Appendix C of the permit, are in proximity to the construction project and which of the listed criteria enables the operator to claim eligibility for permit coverage (see Appendix C for instructions).
 - A signature block is provided following a certification statement that everything on the NOI form is correct. Also, the NOI must include the name and title of the authorized representative and date of signature. The NOI must be signed and certified in accordance with the signatory requirements of 40 CFR §122.22. A complete description of these signatory requirements is provided in Appendix G of the general permit.

2.3 Submission Deadlines

- A. Operators of new projects (i.e., construction activity commenced after the effective date of this permit) must submit the NOI form at least seven days prior to commencement of construction activities. For the first 90 days after the issuance date of this permit, NOIs must be submitted at least seven days prior to commencement of construction based on the postmark date. For NOIs submit after the first 90 days, coverage cannot commence until seven days after the NOI is posted on EPA's NOI processing website. In both instances, EPA may, including upon notice from FWS or NMFS, delay authorization simply by notifying the operator of such a delay. In these instances, authorization is not granted until the operator is re-notified by EPA of eligibility.

EPA modified the submission deadline for NOIs from two days in advance of commencement of construction activity to seven days prior to commencement of construction activity. The 7-day waiting period provides EPA, FWS and NMFS with the opportunity to scrutinize NOIs for potential permit eligibility concerns, as part of these Agencies' commitment to increase oversight of dischargers. Two days did not provide time to review these submissions. Operators are still responsible for submitting complete and accurate NOIs (including eligibility of permit coverage) and are not authorized if the NOI is incomplete or inaccurate. An informal review of existing state NPDES construction general permits found that a large number of states do have a delay established in the NOI review process. This leads EPA to believe that construction activities can, in fact, operate successfully under a regulatory review process that will delay permit coverage by a period of seven days or more.

During the 7-day NOI review period following either NOI submittal (for the initial 90 days of the permit), or NOI information posting in the NOI database (for the post 90-day submittals), EPA may notify an applicant that some additional action must be taken before discharge authorization is obtained, based on eligibility concerns. Actions to be taken depend on the nature of the concerns (e.g. water quality, impaired receiving waters, endangered species, historic property). Additional actions may include a request to review an applicant's SWPPP, endangered species documentation or other information; the need for individual consultation with FWS or NMFS; making revisions to the SWPPP; or having to submit an application for an individual permit as per Subpart 4.2. For sake of expediency in obtaining coverage, the applicant should comply with any request as soon as possible. When notified that authorization to discharge will be delayed, an applicant cannot discharge until given explicit notice by EPA that the delay has been lifted.

- B. EPA is allowing operators of construction projects that received authorization under one of the 1998 CGPs 90 days after the effective date of this permit to submit an NOI for coverage under the 2003 CGP. If the operator is eligible to submit an NOT (e.g., the construction activities are completed and the site is finally stabilized) within 90 days after the effective date of this permit, a new NOI is not required to be submitted provided that the NOT is submitted consistent with the requirements of the 1998 CGP. In addition, the 2003 CGP provides these existing large construction operators 90 days to update their SWPPPs as necessary to comply with the terms of the 2003 CGP. These operators are required to comply with the terms of the 1998 CGP during this 90 day period.
- C. EPA is requiring operators of construction projects that commenced operation prior to the effective date of this permit but that did not receive authorization to discharge under the 1998 CGP, to prepare and comply with an interim SWPPP consistent with the applicable requirements of the 1998 CGP. Operators of these ongoing projects are required to submit an NOI for coverage under the 2003 CGP no later than 90 days after the

effective date of this permit. In addition, the 2003 CGP requires these operators to update their interim SWPPP prior to the submission of the NOI such that the SWPPP is consistent with the 2003 CGP at the time of NOI submission. If the operator is eligible to submit a NOT (e.g., construction is finished and final stabilization has been achieved) prior to NOI submission, the interim SWPPP is not required to be updated.

The Agency anticipates that submitting NOIs via EPA's electronic filing system will be the easiest and quickest way to obtain permit coverage because the system will automatically process the information, disallow incomplete submissions, and may flag certain entries that could be incorrect. A short time after an eNOI is transmitted to EPA, applicants can access the database to see if their NOI was received and the information was properly posted. The 7-day NOI review period (explained in Subpart A above) will typically begin the day a complete NOI is transmitted. To submit eNOIs and access the NOI database, go to www.epa.gov/npdes/stormwater/cgp.

For those choosing to submit NOIs by mailing, the 7-day evaluation period commences after EPA receives a complete and accurate NOI form and the information is manually input into the NOI database. While EPA will strive to post an applicant's NOI information in the database as timely as possible, the Agency cannot provide a set turn-around time for doing so, owing to the vagaries of mailing and possible volume of forms submitted. An incomplete NOI may require EPA to mail a notification of incompleteness. Only after an applicant's complete NOI information set is input to the database can the 7-day review period commence. As with previous permits, a letter will be sent acknowledging receipt of a complete NOI, the date the NOI information was posted in the database, and the authorization tracking number. In lieu of this time-consuming process, EPA recommends applicants avail themselves of eNOI submittal.

In any of the above situations, permit coverage may be delayed past the 7-day waiting period upon notification as per Subpart 2.4C.

- D. If an NOI is submitted after construction activity has begun, the operator is authorized for discharges consistent with the authorization to discharge and submission deadlines detailed in Subparts 2.1 and 2.3 of the CGP but in no cases less than seven days after submission of a complete and accurate NOI to EPA. The Agency may seek enforcement action for any unpermitted discharges or permit non-compliance that occur between the time construction begins and discharge authorization.

2.4 Where to Submit

EPA operates a Storm Water Notice Processing Center that handles all NOIs and NOTs submitted as a requirement of this permit. Complete and accurate NOIs and NOTs must be sent to the following address:

Regular U.S. Mail Delivery

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

Overnight/Express Mail Delivery

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

EPA believes with the advent of the electronic NOI (eNOI) system, expected to be available 90 days after effective date of this permit, mailing hard copies of NOI forms will be the least favored method to acquire permit coverage. With the eNOI system, all complete NOIs submitted will be automatically input into an NOI database which can be accessed by any interested party. Benefits of electronic NOI submittals include quicker processing of applicant information and the capability for missing or, in some cases, incorrect entries to be detected more quickly, thereby helping to prevent non-authorization or delays in authorization. To submit eNOIs and access the NOI database, go to www.epa.gov/npdes/stormwater/cgp.

3. Storm Water Pollution Prevention Plans (SWPPPs)

3.1 Storm Water Pollution Prevention Plan Framework

The SWPPP focuses on two major requirements: (1) Providing a site description that identifies sources of pollution to storm water discharges associated with industrial activity on site; and (2) identifying and implementing appropriate measures to reduce pollutants in storm water discharges to ensure compliance with the terms and conditions of this permit. All SWPPPs must be developed in accordance with sound engineering practices and must be developed specific to the site. Recognizing that much of the plan will likely be very similar from project to project, EPA recommends use of model plans or templates that can be easily adapted for individual projects to

minimize the burden of plan preparation. For coverage under this permit, the SWPPP must be prepared before commencement of construction and then updated as appropriate.

The permit also clarifies that once a definable area of the site has been finally stabilized, no further SWPPP requirements apply to that portion of the site as long as the SWPPP has been updated accordingly to identify that portion of the site as complete. You are required to implement the SWPPP during construction activity, that EPA defines as from commencement of construction activity until final stabilization. EPA defines both of these terms in Appendix A of the CGP.

3.2 Requirements for Different Types of Operators

The term "operator" may be defined as one with operational control over construction plans and specifications or one with control over the day-to-day activities of the site. Operators may also only have control over a portion of a larger project and several operators are then responsible for separate portions of the entire construction project.

A. Operators with Operational Control Over Construction Plans and Specifications.

If an operator falls within this category, he or she must ensure that the SWPPP indicates the areas of the project where operational control over project specifications, including the ability to make modifications to plans and specifications occur. The operator must ensure that all other permittees implementing portions of the SWPPP impacted by any changes made to the plan are notified of such modifications in a timely manner and ensure that the SWPPP contains the appropriate information indicating who has operational control.

B. Operators with Control Over Day-to-Day Activities.

If an operator is responsible for the day-to-day operational control of the activities at a project site necessary to ensure compliance with the SWPPP, he or she must ensure the SWPPP meets the minimum requirements of Part 3 of the permit. The operator must also identify those responsible for implementation of control measures required in the SWPPP, ensure the SWPPP indicates areas of the project where operational control of day-to-day activities are maintained, and identify the parties responsible for implementation of control measures identified in the plan.

C. Operators with Control Over a Portion of a Larger Project

If an operator is responsible for only a portion of a larger construction project he or she must maintain compliance with all applicable terms and conditions of this general permit for that portion of the project. This includes protection of endangered species and historic properties as well as implementation of BMPs and controls required by the SWPPP. Operators have the option of developing and implementing either a comprehensive SWPPP, that covers all operators at the construction site, or an individual SWPPP, covering only an individual operator's portion of the site (provided reference is made to the other operators of the site). Operators are encouraged to develop a comprehensive SWPPP to enhance cost sharing and coordination of BMPs. If operators choose to develop individual plans, cooperation between the permittees is encouraged to ensure storm water discharge controls are consistent between the sites. Regardless of development of an individual or comprehensive SWPPP, operators must ensure that individual activities do not negatively impact another operator's pollution controls.

3.3 Pollution Prevention Plan Contents: Site and Activity Description

A. Identification of Operators. The SWPPP must identify all operators of the project site, and the areas of the site over which each operator has control. This information should identify clearly the boundaries of each operator's responsibility.

B. Site Description. The SWPPP must be based on an accurate assessment of the potential for generating and discharging pollutants from the site. Hence, the permit requires a description of the site and intended construction activities in the SWPPP (to provide a better understanding of site runoff characteristics). At a minimum, the SWPPP must describe the nature of the construction activity, including:

- The function of the project (e.g., low-density residential, shopping mall, highway, etc.);
- The intended significant activities, presented sequentially, that disturb soil over major portions of the site (e.g., grubbing, excavation, grading);
- Estimates of the total area of the site and the total area of the site that is expected to be disturbed by excavation, grading or other activities, including off-site borrow/fill areas. It may be preferable to separately describe portions of the site as they are disturbed at different stages of the construction process; and

- A general location map able to identify the location of the activity and the waters of the United States within one mile of the activity.
- C. **Legible Site Map.** The SWPPP must contain a legible site map indicating: (1) Anticipated drainage patterns and slopes after major grading activities; (2) areas of soil disturbance and areas that will not be disturbed; (3) locations of major structural and nonstructural controls identified in the plan; (4) locations of planned stabilization measures; (5) off-site locations of equipment storage, material storage, waste storage and borrow/fill areas; (6) locations of surface waters (including wetlands); and (7) locations of discharge points to surface waters; and (8) if applicable, locations where final stabilization has been accomplished and no further construction-phase permit requirements apply. Site maps should also include other major features and potential pollutant sources, such as locations of impervious structures and soil storage piles.
- D. **Other Industrial Activities.** The SWPPP must provide a description of any discharge associated with industrial activity other than construction (including storm water discharges from dedicated asphalt plants, concrete plants, etc.) and the location of that activity on the construction site.

3.4 Pollution Prevention Plan Contents: Controls to Reduce Pollutants

- A. The SWPPP must describe the practices that will be used to reduce the pollutants in storm water discharges from the site and assure compliance with the terms and conditions of the permit.

The SWPPP must describe the intended sequence of major storm water control activities and when, in relation to the construction process, they will be implemented. EPA recognizes that many factors can impact the actual construction schedule, so the permittee need not include specific dates (e.g. plan could say install silt fence for area "A" before rough grading, rather than put up silt fences on August 15). Good site planning and preservation of mature vegetation are imperative for controlling pollution in storm water discharges both during and after construction activities. Properly staging major earth disturbing activities can also dramatically decrease the costs of sediment and erosion controls.

- B. **Stabilization practices are critical to preventing erosion.** The SWPPP must include a description of interim and permanent stabilization practices, including a schedule of their implementation. The permittee should ensure that existing vegetation is preserved wherever possible and that disturbed portions of the site are stabilized as quickly as practicable. Stabilization practices include seeding of temporary vegetation, seeding of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, preservation of trees and mature vegetative buffer strips, and other appropriate measures. Temporary stabilization can be the single most important factor in reducing erosion at construction sites.

Stabilization also involves preserving and protecting selected trees on the site prior to development. Mature trees have extensive canopy and root systems, which help to hold soil in place. Shade trees also keep soil from drying rapidly and becoming susceptible to erosion. Measures taken to protect trees can vary significantly, from simple ones such as installing tree armoring and fencing around the drip line, to more complex measures such as building retaining walls and tree wells.

- C. The SWPPP requires that specific construction dates be documented and maintained as a way for the construction operator as well as EPA to determine applicability and implementation status of SWPPP requirements. Important dates include when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated.
- D. The SWPPP must include a description of structures built to divert flows from exposed soils, and store or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Structural controls may be necessary because vegetative controls cannot be employed where soil is continually disturbed and because of the lag time before vegetation becomes effective. Options for such controls include silt fences, earth dikes, drainage swales, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, sediment traps, reinforced soil retaining systems, gabions and temporary or permanent sediment basins. Placement of structural controls in flood plains should be avoided.
- E. The SWPPP must include a description of any post-construction storm water management measures. This permit, however, addresses only the installation of these measures; not the ongoing operation and maintenance of them after cessation of construction activities and final stabilization. Permittees are responsible only for the installation and maintenance of storm water management measures until final stabilization of the site. When selecting storm water management measures, the operator should consider the amount of required maintenance and whether there will be adequate resources for maintaining them over the longer term.

Some discharges of pollutants from post-construction storm water management structures may need to be authorized under an NPDES permit (e.g., the construction project was an industrial facility in a sector covered by the NPDES multi-sector general permit). The owner/operator of such discharges may ask EPA if this requirement applies to them.

Storm water management measures installed during the construction process can control the volume and velocity of runoff, as well as reduce the quantity of pollutants discharged post-construction. Reductions in peak discharge velocity and volume can reduce pollutant loads as well as diminish physical impacts such as stream bank erosion and stream bed scour. Storm water management measures that mitigate changes to pre-development runoff characteristics assist in protecting and maintaining the physical and biological characteristics of receiving streams and wetlands.

Structural measures should be installed on upland areas to the extent feasible. The installation of such measures may be subject to section 404 of the CWA if they will be located in wetlands or other waters of the United States.

Options for storm water management measures that should be evaluated when you develop plans include:

- On-site infiltration of precipitation;
- Flow attenuation by use of open vegetated swales and natural depressions;
- Storm water retention/detention structures (including wet ponds); and
- Sequential systems using multiple methods.

The SWPPP should include an explanation of the technical basis used to select control measures, where flows exceed pre-development levels. This explanation should address how a number of factors were evaluated, including the pollutant removal efficiencies of the measures, costs of the measures, site-specific factors that will affect the utility of the measures, whether the measure is economically achievable at a particular site and any other relevant factors.

Although not a limitation or performance standard in the permit, EPA anticipates that storm water management measures at many sites will be able to achieve removal of at least 80 percent of total suspended solids. A number of storm water management measures can be used to achieve this level of control, including:

- Properly designed and installed wet ponds;
- Infiltration trenches and basins;
- Sand filter systems;
- Manmade storm water wetlands; and
- Multiple pond systems.

The pollutant removal efficiencies of various storm water management measures can be estimated from a number of sources, including "Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices," U.S. EPA, 1992, and "A Current Assessment of Urban Best Management Practices" prepared for U.S. EPA by Metropolitan Washington Council of Governments, March 1992. Additional information on BMPs is available from EPA in an on-line document entitled, "National Menu of Best Management Practices for Storm Water Phase II" and found on the Internet at www.epa.gov/npdes/menuofbmps/menu.htm and from an on-line database entitled, "National Stormwater Best Management Practices (BMP) Database" sponsored by EPA and the American Society of Civil Engineers (ASCE) and available on the Internet at www.bmpdatabase.org.

In selecting storm water management measures, the permittee should consider the impacts of each method on other water resources, such as ground water. Although SWPPPs focus primarily on storm water management of post-construction flow, EPA encourages sites to avoid creating groundwater pollution problems. For example, if the water table is high in an area or soils are especially porous, an infiltration pond may contaminate the groundwater unless special preventive measures are taken. In fact, certain storm water control practices may meet EPA's definition of underground injection, triggering responsibilities under the Safe Drinking Water Act, as codified in 40 CFR Parts 144-146. Storm water controls, such as wet ponds, should also be designed to have minimal safety risks, especially to children.

- F. Other controls to be addressed in SWPPPs for construction activities are for compliance with the requirement that solid materials, including building material wastes, not be discharged at the site except as authorized by a section 404 permit.
- G. The SWPPP must describe measures to minimize vehicular tracking of soil off-site to paved surfaces and the generation of dust. Dust and dirt-tracking can be minimized by measures such as providing gravel or paving at entrance/ exit drive paths, parking areas and unpaved transit ways on the site carrying significant amounts of traffic (for example, more than 25 vehicles per day); providing entrance wash racks or stations for trucks; and performing street sweeping.
- H. The SWPPP must also contain a description of practices to reduce pollutants from construction-related materials which are stored on site, including a description of said construction materials (with updates as appropriate). The plan should include a description of pollutant sources from areas untouched by construction and a description of controls and measures which will be implemented in those areas.
- I. The SWPPP must also contain a description of pollutant sources from areas other than construction (including storm water discharges from dedicated asphalt plants and dedicated concrete plants), and a description of controls and measures that will be implemented at those sites to minimize pollutant discharges.

3.5 Non-Storm Water Discharge Management

The SWPPP must identify appropriate pollution prevention measures for each of the eligible non-storm water components of the discharge covered by this permit when combined with storm water discharges associated with construction activity. The eligible non-storm water discharges are discussed in section V.1.3.B. of this Fact Sheet.

3.6 Maintenance of Controls

Erosion and sediment controls can become ineffective if they are damaged or not properly maintained. The SWPPP requires all erosion and sediment control measures to be maintained in effective operating condition. If site inspections identify BMPs that are not operating effectively, maintenance must be performed before the next storm event whenever practicable. If maintenance before the next storm event is impracticable, maintenance must be completed as soon as practicable. The permit also requires that the operator remove sediment from sediment traps or sedimentation ponds when design capacity of that device has been reduced by 50 percent or more.

3.7 Documentation of Permit Eligibility Related to Endangered Species

An operator's SWPPP must contain documentation of permit eligibility regarding the protection of endangered species and critical habitat. Documentation must include:

- information on whether federally-listed or endangered or threatened species or critical habitat are located near the site;
- whether such species or habitat may be adversely affected by the storm water discharges or related activities coming from the site;
- the results of the screening determination from Appendix C of the permit;
- 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;
- any correspondence for any stage of project planning between the operator and FWS, EPA, or NMFS regarding listed species and critical habitat, including any notification that delays authorization to discharge; and
- a description of any measures necessary to protect endangered or threatened species or critical habitat. Failure to implement these measures will result in ineligibility of coverage under this permit.

3.8 Copy of Permit Requirements

Copies of the CGP, the signed and certified NOI submitted to EPA, and a copy of the letter from EPA's Storm Water Notice Processing Center indicating that a complete NOI has been received must be included in the SWPPP. This condition in the permit is intended to stress the importance of these documents for operators to understanding permit responsibilities.

3.9 Applicable State, Tribal, or Local Programs

Many states, tribes, municipalities and counties have developed sediment and erosion control requirements for construction activities. A significant number have also developed storm water management requirements. The CGP requires that SWPPPs for sites that discharge storm water associated with construction activities be consistent with procedures and requirements of state/tribal and local sediment and erosion control plans and storm water management plans. The construction site's SWPPP may incorporate portions of a state, tribe, or local program's pollution prevention plan if these requirements are at least as strict as the CGP. If a construction site is located in an area covered by such a local program, then compliance with various aspects of the local program would constitute compliance with these aspects of the CGP.

The ability to reference other programs in the SWPPP is intended to reduce confusion between overlapping and similar requirements, while still providing for both local and national regulatory coverage of the construction site.

3.10 Inspections

- A. Permittees must inspect designated areas on the site regularly. For purposes of this part, EPA defines "regularly" to mean either (1) at least once every 7 calendar days or (2) at least once every 14 calendar days and within 24 hours after any storm event of 0.5 inches or greater. EPA also recommends that permittees perform a "walk through" inspection of the construction site before anticipated storm events (or series of events such as intermittent showers over a period of days) that could potentially yield a significant amount of runoff. Depending on local rainfall patterns, it is possible that either more or fewer inspections would be required under the option described in Subpart 3.10.A.1 as compared to the option provided in Subpart 3.10.A.2. In exchange for committing to more frequent inspections, the operator could plan and budget for one inspection per week and would not have to deal with uncertainties associated with an unknown number of additional inspections triggered by rain events and the need to have inspectors on standby. This flexibility would be especially valuable for unmanned locations. Proper operation and maintenance of storm water BMPs is independently required by Subpart 3.6 of the permit, so either inspection schedule is expected to provide adequate environmental protection.
- B. For sites that have undergone stabilization (temporary or final) or experience seasonal aridity (average annual rainfall of 0 to 10 inches) or semi-aridity (annual rainfall of 10 to 20 inches), inspections must be conducted at least once a month. Where construction activity has been halted due to frozen conditions, inspections are not required until one month before thawing is expected (i.e., snowmelt runoff would commence).
- C. In areas of the country where frozen conditions are anticipated to continue for extended periods of time (i.e., more than one month), and land disturbance activities are suspended during these times, Subpart 3.10.A and 3.10.B requirements are waived. This waiver is granted until one month before thawing conditions are expected to result in a storm water discharge from the site. The beginning and ending dates of the waiver period must be documented in the SWPPP.
- D. Inspections must be performed by qualified personnel; either the operator's own personnel or consultants hired to perform the inspections. The inspectors must be knowledgeable and possess the skills to assess conditions at the construction site that could impact storm water quality and assess the effectiveness of sedimentation and erosion control measure chosen to control the quality of the sites storm water discharges. EPA is not specifying any inspector license or certification requirements at this time.
- E. Visual inspections must comprise, at a minimum:
 - Disturbed areas;
 - Areas used for storage of materials exposed to precipitation;
 - Sediment and erosion control measures; and
 - Locations where vehicles enter or exit the site.

Where discharge points are accessible, they must be inspected to ascertain whether erosion control measures are effective in preventing impacts to waters of the U.S. This can be done by inspecting the waters for evidence of erosion or sediment introduction. If discharge points are inaccessible, the permit requires that nearby downstream locations be inspected, if practicable.

Inspectors must determine whether erosion control measures are effective in preventing impacts to the receiving water and look for evidence of or the potential for pollutants entering the drainage system.

- F. For linear construction activities (e.g., utility line installation, pipeline construction), representative inspections are acceptable and allow for inspection of the project 0.25 miles 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 construction site. This is to limit additional disturbance to soils that may increase the erosion potential resulting from vehicles compromising stabilized areas.
- G. Once an inspection has been performed, a report must be retained with the SWPPP for up to three years after the permit expires or is terminated. The report should include:
- The inspection date,
 - Name, title, and qualifications of personnel conducting the inspection,
 - Weather information for the period since the last inspection (or since commencement of construction activity if the first inspection performed) including a best estimate of the beginning of each storm event, the duration of each storm event, and the approximate amount of rainfall for each storm event (in inches),
 - Weather information and a description of any discharges occurring at the time of the inspection,
 - Location(s) of discharges of sediment or other pollutants from the site;
 - Location(s) of BMPs that need to be maintained;
 - Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location; and
 - Location(s) where additional BMPs are needed that did not exist at the time of the inspection.

The report must also identify any actions taken in accordance with Part 3 SWPPP requirements and must identify any incidents of non-compliance with permit conditions. If no incidents of non-compliance were found, the report must contain a certification that the site is in compliance with the SWPPP and this permit. Finally, the report must be signed in accordance with the signatory requirements in section 11 of Appendix G of the CGP.

3.11 Maintaining an Updated Plan

Storm water pollution prevention plans must be revised whenever a change in design, construction method, operation, maintenance procedure, etc., may cause a significant effect on the discharge of pollutants to surface waters or municipal separate storm sewer systems.

The plan must also be amended if inspections or investigations by site staff, or by local, state, tribal, or federal officials determine that the SWPPP is ineffective in eliminating or significantly minimizing pollutants in storm water discharges from the construction site.

Also, if an inspection reveals inadequacies, the site description and pollution prevention measures identified in the SWPPP must be revised. All necessary modifications to the SWPPP must be made within seven calendar days following the inspection. If existing BMPs need to be modified or if additional BMPs are necessary, implementation must be completed consistent with Subpart 3.6.B of the permit. Specifically, these changes must be completed before the next storm event whenever practicable. If implementation before the next storm event is impracticable, this situation should be documented in the SWPPP and the changes must be implemented as soon as practicable.

3.12 Signature, Plan Review, and Making Plans Available

- A. A copy of the SWPPP must be kept at the construction site from the date of project initiation to the date of final stabilization. Permittees with day-to-day operational control over the plan's implementation must keep a copy of the plan readily available whenever they are on site (a central location accessible by all on-site operators is sufficient). 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. A copy of the SWPPP must be readily available to authorized inspectors during normal business hours.
- B. A notice about the permit and SWPPP must be posted conspicuously near the main entrance of the site. If display near the main entrance is infeasible, the notice can be posted in a local public building such as the town hall or public library. For linear projects, the 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). The permit notice must include the following information:

- A copy of the completed Notice of Intent as submitted to EPA;
- The current location of the SWPPP (if different than that submitted to EPA in the NOI)
- The current contact person and telephone number for scheduling times to view the SWPPP (if different than that submitted to EPA in the NOI).

The permit does not require that the general public have access to the construction site nor does it require that copies of the plan be available or mailed to members of the public. However, EPA strongly encourages permittees to provide public access to SWPPPs at reasonable hours. Upon request, EPA intends to assist members of the public in obtaining access to permitting information, including SWPPPs. EPA believes this approach will create a balance between the public's need for information on projects potentially impacting their water bodies and the site operator's need for safe and unimpeded work conditions.

- C. Permittees must make SWPPPs available, upon request, to EPA, state, tribal or local agencies approving sediment and erosion plans, grading plans or storm water management plans; local government officials; the operator of a MS4 receiving discharges from the site; and representatives of the FWS or the NMFS. Also, the operator must make SWPPPs available to EPA or its authorized representative for review and copying during any on-site inspection.
- D. The SWPPP must be signed and certified in accordance with the signatory requirements in the Standard Permit Conditions section of the permit (Appendix G).

3.13 Management Practices

- A. Control measures must be properly selected and installed in accordance with sound engineering practices and relevant manufacturers specifications.
- B. Off-site accumulations of sediment must be regularly removed to minimize impacts.
- C. Litter, construction debris, and construction chemicals must be prevented from entering a receiving water.
- D. It is imperative that stabilization be employed as soon as practicable in critical areas. The CGP requires that, except in three situations, stabilization measures must be instituted on disturbed areas as soon as practicable, but no more than 14 days after construction activity has temporarily or permanently ceased on any portion of the site. The three exceptions to this requirement are the following:
- When construction activities will resume on a portion of the site within 14 days from suspension of previous construction activities;
 - When the initiation of stabilization measures is precluded by snow cover or frozen ground, in which case they must be initiated as soon as practicable; and
 - In arid areas (areas with an average annual rainfall of 0 to 10 inches), semi-arid areas (10 to 20 inches) and areas experiencing droughts; where the initiation of perennial vegetative stabilization measures is precluded by seasonal arid conditions. In this instance, stabilization measures must be initiated as soon as practicable.
- E. A combination of sediment and erosion control measures should be used to achieve maximum pollutant removal.

For sites with more than 10 disturbed acres at a time, all of which are served by a common drainage location, a sediment basin providing 3,600 cubic feet of storage per acre drained, or equivalent control measures (such as suitably-sized dry wells or infiltration structures), must be provided where practicable until final stabilization of the site has been accomplished. In lieu of the default 3,600 cubic feet/acre, the permittee can calculate the basin size based on the expected runoff volume from the local two-year, 24-hour storm event and local runoff coefficient. Flows from off-site or on-site areas that are undisturbed or have undergone final stabilization, may be diverted around both the sediment basin and the disturbed area. These diverted flows can be ignored when designing the sediment basin.

For the drainage locations that serve more than 10 disturbed acres at a time and where a sediment basin designed according to the above guidelines is not feasible, smaller sediment basins or traps should be used. At a minimum, silt fences, vegetative buffer strips or equivalent sediment controls are required for all down-slope and appropriate mid-slope boundaries of the construction area. Diversion structures should be used on upland boundaries of disturbed areas to prevent run-on from impacting disturbed areas. EPA does not intend to imply that silt fences or vegetative buffer strips on down-slope boundaries are the only BMPs that need to

be used to protect water quality. EPA encourages the use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal.

For drainage locations serving 10 or less acres, smaller sediment basins or sediment traps should be used and, at a minimum, silt fences or equivalent sediment controls are required for all down slope and appropriate mid-slope boundaries of the construction area. Alternatively, the permittee may install a sediment basin providing storage for 3,600 cubic feet (or the alternative calculated volume) of storage per acre drained. Diversion structures should be installed on upland boundaries of disturbed areas to prevent run-on. EPA does not intend to imply that silt fences or vegetative buffer strips on down-slope boundaries are the only BMPs that need to be used to protect water quality. EPA encourages the use of a combination of sediment and erosion control measures in order to achieve maximum pollutant removal.

- F. Land development can significantly increase storm water runoff volume and peak velocity if appropriate storm water management measures are not implemented. In addition, post-development storm water discharges will typically contain higher levels of pollutants, including total suspended solids (TSS), heavy metals, nutrients and high oxygen-demand components.

The evaluation of whether the pollutant loadings and the hydrologic conditions (the volume of discharge) of flows exceed pre-development levels can be based on hydrologic models that consider conditions such as the natural vegetation endemic to the area.

Increased discharge velocities can greatly accelerate erosion near the outlet of structural measures. To mitigate these effects, velocity dissipation devices should be placed at discharge points and along the length of a runoff conveyance, as necessary, to provide a non-erosive flow. Velocity dissipation devices help protect a water body's natural, pre-construction physical and biological uses and characteristics (e.g., hydrologic conditions such as the hydro period and hydrodynamics).

3.14 Documentation of Permit Eligibility Related to Total Maximum Daily Loads

Subpart 1.3.C.5 of the CGP requires that operators determine if any discharges from the site are consistent with the assumptions and requirements of applicable EPA established or approved TMDLs for the receiving water into which they discharge. To make such a determination, operators can access EPA's NPDES website at www.epa.gov/npdes/stormwater/cgp or contact the state environmental agency directly. Subpart 3.14 of the permit requires documentation of this determination.

If EPA has approved or established a TMDL for the waterbody into which you discharge, you must document if the TMDL requires actions on your part, over and above any requirements of the CGP, necessary to be consistent with the assumptions and requirements of such TMDL. In certain instances, the TMDL may specifically identify each discharger contributing (or that will be contributing) pollutants to the receiving stream and the controls that are necessary for each discharger to meet the established waste load allocation. More likely for construction activities, the TMDL will identify a category of dischargers (e.g., construction activity or new development) and will identify the types of controls necessary to meet the cumulative waste load allocation for the group of dischargers. If the TMDL specifically identifies measures or controls, the operator must incorporate these in to its SWPPP. If specific measures or controls are not required in the TMDL, the operator should document this in the SWPPP. Operators should access EPA's website at www.epa.gov/npdes/stormwater/cgp to find CGP-specific TMDL information for all states and EPA regions covered by the CGP. This approach should identify any BMPs and/or other controls that ensure those discharges will be consistent with the provisions of the EPA approved or established TMDL. The operator must document the rationale for the selected approach.

4. Special Conditions, Management Practices and Other Non-numeric Limitations

4.1 Continuation of the Expired General Permit

The permit specifies procedures for continued coverage under a general permit if the permit expires prior to a replacement permit being issued. In short, the expired permit would remain in full force and effect in accordance with the Administrative Procedures Act. Any permittee granted coverage prior to the permit's expiration date will automatically remain covered by the continued permit until the earliest of:

- The permit being reissued or replaced;
- The permittee terminating coverage by submitting a Notice of Termination;
- Issuance of an individual permit for the permittee's discharges; or

- A formal decision by EPA not to reissue the general permit, at which time the permittee must seek coverage under an alternative general permit or an individual permit.

However, should the permit expire prior to a replacement permit being issued, the existing permit will only cover those operators that submitted a complete and accurate NOI and met all the eligibility requirements prior to the expiration date of the permit. New construction projects requiring permit coverage after the expiration date of this permit are not eligible for coverage until a replacement permit is issued.

4.2 Requiring an Individual Permit or an Alternative General Permit

Based upon a number of different situations (e.g., applicable numeric effluent limitations resulting from a TMDL, or a determination that the operator has the potential to cause or contribute to a water quality standard excursion), EPA may determine that coverage under an individual permit is necessary. If a permittee is currently discharging under this general permit and EPA determines that individual coverage is required, written notification of this required change in permit coverage, including reasoning for this decision, an application form, and a deadline for filing the application, will be provided to the permittee by EPA.

Additionally, any permittee may apply for an individual permit rather than apply for coverage under this general permit. An individual application must be submitted for coverage under such a permit with reasoning supporting the request. If such reasoning is considered adequate by EPA, the request will be granted and an individual permit issued. If an individual permit or alternative NPDES permit is issued to the permittee currently covered under this general permit, coverage under the general permit is terminated on the effective date of the new permit. Alternatively, if a permittee, currently covered under the general permit, seeks coverage under an individual or alternative NPDES permit and is denied, coverage under the general permit is terminated on the date of such denial, unless otherwise specified by EPA.

4.3 Releases in Excess of Reportable Quantities

The construction general permit requires the operator to prevent the discharge of hazardous substances or oil from a site in accordance with the SWPPP. Furthermore, if a permitted discharge contains a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under 40 CFR 110, 40 CFR 117, or 40 CFR 302, during a 24-hour period, the National Response Center (NRC) must be notified (dial 800-424-8802 or 202-426-2675 in the Washington, DC area). Also, within 14 calendar days of knowledge of the release, the SWPPP must be modified to include the date and description of the release, the circumstances leading to the release, responses to be employed for such releases, and measures to prevent the reoccurrence of such releases. This approach is necessary because of statutory requirements that make a clear distinction between hazardous substances typically found in storm water discharges and spilled hazardous substances that are not (See 40 CFR §117.12(d)(2)(i)).

4.4 Spills

Discharge of a hazardous substance or oil caused by a spill (e.g., a spill of oil into a separate storm sewer) are not authorized by this permit. The construction site must have the capacity to control, contain, and remove such spills if they are to occur. Spills in excess of reportable quantities, as described in Subpart 4.3, must still be reported as required under 40 CFR 110. Also Section 311 of the CWA and certain provisions of Sections 301 and 402 of the CWA are also applicable.

4.5 Attainment of Water Quality Standards After Authorization

NPDES regulations at 40 CFR §122.44(d) state that permits must contain conditions to achieve water quality standards. When EPA determines a discharge will cause or contribute to an excursion above WQS, including failure to protect and maintain existing designated uses of receiving waters, EPA will require the operator to take one of three actions:

- Develop a supplemental BMP action plan describing SWPPP modifications to respond to the identified water quality concerns;
- Submit to EPA valid and verifiable data and information that are representative of ambient conditions and indicate that the receiving water is attaining WQS; or
- Cease discharges from construction activity and apply for an individual permit according to Subpart 4.2 of the permit.

If a supplemental BMP action plan is required, EPA expects the operator to vigilantly and in-good-faith follow and document the process for BMP selection, installation, implementation and maintenance, and cooperate to eliminate the identified problem within a time frame stipulated by EPA.

EPA does not typically review information and data about specific discharges prior to authorization under the CGP. Instead, a general permittee determines whether its discharges are eligible for authorization under the general permit and, if so, certifies to that determination and develops a SWPPP according to requirements in the general permit. The permit language is included to ensure that those seeking coverage under this general permit select, install, implement, and maintain BMPs at their construction site that will be adequate and sufficient to meet water quality standards for all pollutants of concern. Based on EPA's 1996 *Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits (EPA 833-D-96-001)*, EPA has determined that BMPs, when properly selected, installed, implemented, and maintained do provide effluent quality that can meet WQS. However, because proper selection, installation, implementation, and maintenance are so critical to the success of BMP effectiveness, simply "installing BMPs" at a construction site will often not provide adequate water quality protection. Therefore the CGP requires operators to select, install, implement, and maintain BMPs that minimize pollutants in the discharge. Unless notified otherwise by EPA, compliance with this requirement will be assumed to be as stringent as necessary to ensure that discharges do not cause or contribute to an excursion above any applicable water quality standard.

5. Termination of Coverage

Permittees must submit a completed Notice of Termination (NOT) that is signed and certified according to Appendix G, Section 11 of the permit when one or more of the conditions contained in Subpart 5.1 of the permit have been met. NOTs must be submitted using the form provided by EPA (found in Appendix F of the permit), or a photocopy thereof, and sent to the address specified in the CGP. NOTs provide EPA with a useful mechanism to track the status of projects which are actively covered by the permit.

The NOT includes:

- Your NPDES permit tracking number for the storm water discharge;
- Your basis for submission of the NOT, including: final stabilization has been achieved on all portions of the site for which you are responsible; another operator/permittee has assumed control 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;
- Your name, address, telephone number and U.S. Internal Revenue Service (IRS) Employer Identification Number (EIN);
- The name of the project and street address (or a description of location if no street address is available) of the construction site for which the notification is submitted; and
- A certification statement, signed and dated by an authorized representative as defined in Appendix G, Section 11 and the name and title of that authorized representative.

The NPDES permit tracking number is not the same number that was reported on the NOI form. The NOI contains the NPDES permit number as identified in the CGP (e.g., NHR100000) while the NPDES permit tracking number is that number provided by the EPA Storm Water Notice Processing Center acknowledging receipt of a complete NOI. The permit tracking numbers are assigned sequentially as NOIs are received by the EPA Storm Water Notice Processing Center (e.g., NHR1000001, NHR1000002, etc).

The NOI also requests that the operator provide a fax number and an E-mail address. While these two fields are not required to be completed, EPA anticipates that this information provides the most efficient means for corresponding with permittees. Finally, EPA is in the process of developing an electronic NOT system that will allow you to complete and submit your NOT to EPA electronically. If EPA makes that, or other NOT options available, you may take advantage of those options to satisfy the NOT use requirements. Information on the availability of that system is found at www.epa.gov/npdes/stormwater/cgp.

The NOT must be filed within 30 days after cessation of construction activities and final stabilization of the permittee's portion of the site (or temporary stabilization for residential construction where a homeowner is assuming control of a property). You must submit an NOT within 30 days after another operator assumes your liabilities. That new operator must submit an NOI for coverage consistent with Subpart 2.2.D. If you submit and are covered by a low erosion potential or TMDL waiver, continued compliance with the permit is not necessary nor is submittal of an NOT.

You may face enforcement action if an NOT is submitted without meeting one of the requirements in Subpart 5.1 of the permit unless there has been authorization under an alternative permit or a waiver for coverage under this permit has been approved.

The NOT must be submitted to the address listed in Subpart 5.3 of the permit.

6. Retention of Records

The permit requires that all records and reports required by the CGP be retained, including SWPPPs and information used to complete the NOI, for at least three years from the termination of coverage or expiration of the permit. This period may be extended by request of EPA.

7. Re-opener Clause

This permit contains a re-opener clause allowing the permit to be re-opened and modified during the term of the permit consistent with the Federal regulations at 40 CFR §122.62, §122.63, §122.64, and §124.5. Generally, this would be triggered by a water quality concern, a change in NPDES statutes, or to incorporate new procedures or requirements developed by the EPA regarding such things as endangered and threatened species and critical habitat protection (e.g., based on consultation with FWS or NMFS) or historic preservation requirements to provide for additional consideration of effects to properties either listed or eligible for listing in the National Register of Historic Places. Indication that a permittee is contributing to a water quality concern or generally not fulfilling his or her obligations under this permit, may result in a review of the permit and requirement to obtain an individual permit or alternative general permit, or have the limitations and/or requirements under this permit be modified.

8. Standard Permit Conditions

The Federal regulations require all NPDES permits to contain the standard conditions specified at 40 CFR §122.41. This section of the permit references those conditions in Appendix G of the CGP.

9. Permit Conditions Applicable to Specific States, Indian Country or Territories

Section 401 of the CWA (See also 40 CFR §122.44(d)(3)) and §124.53(a)) provides that no Federal license or permit, including NPDES permits, to conduct any activity that may result in any discharge into navigable waters shall be granted until the State/Tribe in which the discharge originates certifies that the discharge will comply with the applicable provisions of sections 301, 302, 303, 306, and 307 of the CWA. The section 401 certification process has been completed for this permit. Similarly, the Coastal Zone Management Act (CZMA) (See 40 CFR §122.49(d)) requires that all Federal licensing and permitting actions be reviewed for consistency with each approved State coastal zone management plan. This permit also includes the results of that effort.

State Coastal Zone Management Act (CZMA) certification was not received from Massachusetts in time for that state to be included in this permit. As such, large construction activities in Massachusetts covered under the 1998 CGP will continue to be covered under that permit. EPA will reissue the CGP for Massachusetts for large and small construction activities at a later date, and will include any state-specific modifications or additions as part of the State's CZMA certification process.

Permit conditions that apply only to construction projects located in a specific state, Indian country or other area are in Part 9 of the permit. These conditions are modifications or additions to analogous conditions in Parts 1 through 8 of the CGP, and reflect additional requirements arising from the state section 401 or CZMA certification processes.

VI. Appendices

1. Definitions and Acronyms

The permit contains definitions of statutory, regulatory and other terms important for understanding the permit and its requirements. Several definitions were added to this permit that were not included in the 1998 permit. In addition, several terms that were defined in the body or one of the appendices of the 1998 permit were moved to the definition section. New terms defined in this permit include: eligible, federal facility, Indian country, large construction activity, municipal separate storm sewer system, new project, ongoing project, project area, receiving water, site, small construction activity, storm water discharge-related activity, and total maximum daily load. Definitions of these terms were added for clarity of permit conditions. The permit also contains a list of acronyms found in the permit which aids in the understanding of the permit and its requirements.

2. Small Construction Waivers and Instructions

Regulations for Phase II of the NPDES Storm Water Program were published on December 8, 1999 (64 FR 68722). Phase II was in response to the Congressional mandate at Clean Water Act § 402(p)(6) that the Agency "...shall issue regulations...which designate storm water discharges...to be regulated to protect water quality and ...establish a comprehensive program to regulate such designated sources." Under Phase II, EPA designated small construction projects disturbing at least one but less than five acres, but by providing for two types of waivers acknowledged that not every construction project in the 1-5 acre range would pose a potential threat to water quality⁴.

EPA adopted two types of waivers within the definition of small construction at 40 CFR §122.26(b)(15). The Rainfall-Erosivity Waiver at 40 CFR §122.26(b)(15)(i)(A) is based on the "R" factor from the Revised Universal Soil Loss Equation (RUSLE) and applies to projects where (and when) negligible rainfall/runoff-erosivity is expected. The Water Quality Waivers at 40 CFR §122.26(b)(15)(i)(B) are essentially based on an analysis that storm water discharges from small construction activities would not be expected to cause or contribute to exceedances of WQS. The water quality waivers anticipated that the analysis would demonstrate that storm water controls for small construction were not needed based on 1) a Total Maximum Daily Load for impaired waters or 2) for non-impaired waters that do not require a TMDL, an equivalent analysis that either determined pollutant load allocations for small construction or determined that such load allocations were not necessary.

While the criteria for the Rainfall-Erosivity Waiver were built into the definition of "storm water discharge associated with small construction activity" itself, only the broad outline of the Water Quality Waivers was included in the rule. The details of the Water Quality Waivers were expected to be included in a water quality analysis that would take place independently. Information on use of the waivers is presented in Appendix D of the CGP.

3. Standard Permit Conditions

Duty To Comply

The operator must comply with all conditions of this permit. An operator not fulfilling his or her obligations, as agreed upon by signing the NOI, is considered in violation of the Clean Water Act and is grounds for injunctive relief, substantial monetary penalties, incarceration, changes or terminations to the permit, or denial of permit renewal.

Duty to Reapply

The operator, after expiration of the permit, must reapply for and obtain a new permit to continue activities. For general permit coverage, this requires the operator to comply with the terms of the reissued permit regarding follow-on permit coverage.

Need to Halt or Reduce Activity Not a Defense

The operator may not use as a defense for an enforcement action the reasoning that compliance could only be achieved by halting or reducing the permitted activity.

⁴For more background on designation of small construction activity and available waivers, see discussion on "Discharges Associated with Small Construction Activity" starting on page 68771 of the December 8, 1999, Federal Register (64 FR 68771)

Duty to Mitigate

The operator must take all reasonable steps to prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

Proper Operation and Maintenance

The operator must properly operate and maintain all equipment and treatment systems used for compliance with the terms of the permit. This includes sediment and erosion controls installed at the site used to achieve compliance with the terms of the permit and the SWPPP. The operator must provide appropriate laboratory controls and quality assurance procedures as necessary. Backup systems are required when needed to ensure compliance.

Permit Actions

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

Property Rights

The operator does not convey any property rights or privileges through issuance of this permit or coverage of activity under this permit. Injury to private property or invasion of personal rights are also not authorized under this permit nor any infringement of Federal, State, or local laws or regulations.

Duty to Provide Information

The operator must transmit any information needed to determine compliance with the permit or to modify the permit.

Inspection and Entry

The operator must, upon presentation of valid credentials by EPA or its representative, allow entry into the premises where the regulated activity and/or records are present. EPA must have access to view and to be able to make copies of any required records, inspect facilities, practices, operations, and equipment, and sample or monitor at reasonable times.

Monitoring and Records

Samples must be representative of the monitored activity. Records must be retained for 3 years subject to extension by EPA. Monitoring records must identify the sampling dates and personnel, the sample location and time, the analytical techniques used, and corresponding results. Wastewater and sludge measurements must be conducted in accordance with 40 CFR Parts 136 or 503 or other specified procedures. Falsification of results is a violation.

Signatory Requirements

Applications, reports, NOIs, NOTs, or other information submitted to EPA must be signed and certified by a responsible officer, a general partner or proprietor of a partnership, or a principal executive officer or ranking elected official for a municipality, state, federal, or other public agency. Knowingly making false statement, representations, or certifications is subject to penalties. Other than for applications and NOIs, these reports may be signed by a duly authorized representative. A person is considered a duly authorized representative only if the authorization is made in writing by such person and submitted to EPA. A duly authorized representative may be either a named individual or any individual occupying a named position. The duly authorized representative is not the same as an operator, but the legally bound representative of the operator.

Reporting Requirements

- Planned changes. Notice must be given to EPA as soon as possible of any planned physical alterations and/or additions to the site. This notice is required if the site changes to meet the criteria for a new source or the nature and concentration of pollutants are affected.
- Anticipated noncompliance. The operator must give advance notice of any conditions that may result in noncompliance.
- Permit Transfers. The permit is not transferable except after written notice to EPA. EPA may require modification or revocation and reissuance as necessary.

- Monitoring reports. Reports must be submitted on a DMR or on an EPA-specified form. In addition, more frequent monitoring must be reported. Calculations requiring averaging must use an arithmetic mean, except for fecal coliform. Monitoring results must be reported at the frequency specified in the permit.
- Compliance schedules. Reports required by a compliance schedule in the permit must be submitted within 14 days of the due date.
- Twenty-four hour reporting. The operator must report any noncompliance that may endanger human health or the environment within 24 hours after becoming aware of the circumstance. Within 5 days, you must provide a written submission containing the information outlined in 40 CFR §122.41(l)(6)(ii) unless the requirement is waived by EPA.
- Other noncompliance. The operator must report all instances of noncompliance not reported under other specific reporting requirements at the time monitoring reports are submitted.
- Other information. Where the operator becomes aware of a failure to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to EPA, the operator must promptly submit such facts or information.

Bypass

Intentional diversions of untreated waste streams from any portion of a treatment facility are prohibited unless (1) the bypass does not cause effluent to exceed limits, and (2) the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage, and there was no feasible alternative, and the proper notification was submitted.

Upset

An upset can be used as an affirmative defense in actions brought to the permittee for noncompliance. The operator (who has the burden of proof) must have operational logs or other evidence that shows (1) when the upset occurred and its cause, (2) that the facility was being operated properly, (3) proper notification was made, and (4) remedial measures were taken.

APPENDIX B
PROJECT MAPS

MAPS NOT INCLUDED

APPENDIX C

NOTICE OF INTENT AND NOTICE OF TERMINATION

NPDES
Form



United States Environmental Protection Agency
Washington, DC 20460

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

Submission of this Notice of Intent (NOI) constitutes notice that the party identified in Section II of this form requests authorization to discharge pursuant to the NPDES Construction General Permit (CGP) permit number identified in Section I of this form. Submission of this NOI also constitutes notice that the party identified in Section II of this form meets the eligibility requirements of the CGP for the project identified in Section III of this form. Permit coverage is required prior to commencement of construction activity until you are eligible to terminate coverage as detailed in the CGP. To obtain authorization, you must submit a complete and accurate NOI form. Refer to the instructions at the end of this form.

I. Permit Number

II. Operator Information

Name: _____

IRS Employer Identification Number (EIN): _____ - _____

Mailing Address:

Street: _____

City: _____ State: _____ Zip Code: _____ - _____

Phone: _____ - _____ - _____ Fax (optional): _____ - _____ - _____

E-mail (optional): _____

III. Project/Site Information

Project/Site Name: _____

Project Street/Location: _____

City: _____ State: _____ Zip Code: _____ - _____

County or similar government subdivision: _____

Latitude/Longitude (Use one of three possible formats, and specify method)

- Latitude 1. ___° ___' ___" N (degrees, minutes, seconds) Longitude 1. ___° ___' ___" W (degrees, minutes, seconds)
2. ___° ___' ___" N (degrees, minutes, decimal) 2. ___° ___' ___" W (degrees, minutes, decimal)
3. ___° N (decimal) 3. ___° W (decimal)

Method: U.S.G.S. topographic map EPA web site GPS Other:
• If you used a U.S.G.S. topographic map, what was the scale: _____

Project Located in Indian country? Yes No

If so, name of Reservation or if not part of a Reservation, put "Not Applicable": _____

Estimated Project Start Date: _____ / _____ / _____
Month Date Year

Estimated Project Completion Date: _____ / _____ / _____
Month Date Year

Estimated Area to be Disturbed (to the nearest quarter acre): _____ . _____

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

NPDES Form

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, 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 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 (if you would like 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,

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

NPDES Form

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

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

fax number (optional), and e-mail address (optional) 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 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 and title 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.

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.

Instructions for Completing EPA Form 3510-13
**Notice of Termination (NOT) of Coverage Under an NPDES General Permit for
Storm Water 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 Storm Water 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 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

Enter the existing NPDES Storm Water General Permit Tracking Number assigned to the project by EPA's Storm Water Notice Processing Center. If you do not know the permit tracking number, refer to www.epa.gov/npdes/stormwater/cgp or contact the Storm Water 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 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 and telephone number of the operator. *Optional:* enter the fax number and e-mail address 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 and title 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.

APPENDIX D

MATERIAL SAFETY DATA SHEETS

(To be added by EPC Contractor)

APPENDIX E

CONSTRUCTION MATERIALS AND WASTES/REPORTABLE
RELEASES

CONSTRUCTION MATERIALS AND WASTES

Product	Typical On-hand Volumes (gallons)	Storage
Diesel Fuel	<10,000	Steel skid tanks in secondary containment. Drums in polyethylene containment skids or secondary containment, 100-gallon storage in pickup truck, etc.
Gasoline	<5,000	
Kerosene	55	
Engine Oil	<500	Drums in polyethylene containment skids or secondary containment, 100-gallon storage in pickup truck, etc.
Hydraulic Oil	<500	
Ethylene Glycol	<100	Equipment cooling systems. Drums in polyethylene containment skids or secondary containment.
Methanol	2,000	Portable tank.

Reportable Releases – Federal

Using the Reportable Quantities Table

The following table lists the various substances and the Reportable Quantities specified for each by the U.S. Environmental Protection Agency. Many states also rely on the EPA standards in their own versions of the Emergency Planning and Community Right-to-Know Act – refer to the state Reportable Quantities table.

The headings in the table are:

Hazardous Substance: This is the common name for the substance.

CASRN: Refers to the Chemical Abstracts Service Registry Numbers for each hazardous substance.

Regulatory Synonyms: Other names by which each hazardous substance is identified in other statutes and their implementing regulations appear in this column.

Code: Indicates the statutory source for designating each substance as a CERCLA hazardous substance.

1 indicates that the statutory source is Section 311(b)(4) of the Clean Water Act.

2 indicates the source is Section 307(a) of the Clean Water Act.

3 indicates that the source is Section 112 of the Clean Water Act.

4 indicates that the source is Section 3001 of the Resource Conservation and Recovery Act.

EHS indicates an Extremely Hazardous Substance.

RCRA Waste Number: Provides the waste identification numbers assigned to the various substances by RCRA regulations.

Category: List the code letters X, A, B, C, and D, which are associated with reportable quantities of 1, 10, 100, 1000, and 5000 pounds, respectively.

RQ – Pounds (Kg): Provides the final reportable quantity adjusted for each hazardous substance in pounds and kilograms. These numbers designate the amount that has to be released to trigger reporting requirements.

Other notations appear in the Table:

† Indicates the statutory source as defined in Codes 1, 2, 3, or 4 above.

†† No reporting of release of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 100 micrometers (0.004 inches).

††† The RQ for asbestos is limited to friable forms of asbestos (e.g., eroded, crumbling, damaged, etc.)

§ The adjusted **RQs** for Radionuclides may be found in Appendix B to 40 CFR 302.4.

** Indicates that no **RQ** is being assigned to the generic or broad class.

Note: If there are questions about the current **RQs**, contact RCRA/Superfund Hotline at (800) 424-9346; in Washington D.C. area at (703) 920-9810.

Hazardous Substance ¹	CASRN	Regulatory Synonyms	Codes	RCRA Waste #	Category	RQ-Pounds (Kg)
Acetone	67641	2-Propanone	4	U002	D	5000 (2270)
Aroclor 1016	12674112	POLYCHLORINATED BIPHENYLS (PCBs)	1,2,3		X	1 (0.454)
Aroclor 1221	11104282		1,2,3			
Aroclor 1232	11141165		1,2,3			
Aroclor 1242	53469219		1,2,3			
Aroclor 1248	12672296		1,2,3			
Aroclor 1254	11097691		1,2,3			
Aroclor 1280	11096825		1,2,3			
Asbestos †††	1332214					
Benzene	71432		1,2,3,4	U109	A	10 (4.54)
2-Butanone	78933	Methyl ethyl ketone (MEK)	3,4	U159	D	5000 (2270)
Calcium Hypochlorite	7778543		1		A	10 (4.54)
Chlorine	7782505		1,3		A	10 (4.54)
Diethanolamine	111422		3		B	100 (45.4)
Ethane, 1,2-dichloro-	107062	Ethylene dichloride 1,2-Dichloroethane	1,2,3,4	U077	B	100 (45.4)
Ethane, 1,1,1-trichloro-	71556	Methyl chloroform 1,1,1-Trichloroethane	2,3,4	U226	C	1000 (454)
Ethane, 1,1,2-trichloro-	79005	1,1,2-Trichloroethane	2,3,4	U227	B	100 (45.4)
Ethene, 1,1-dichloro-	75354	Vinylidene chloride 1,1-Dichloroethylene	1,2,3,4	U078	B	100 (45.4)
Ethene, 1,2-dichloro- (E)	156605	1,2-Dichloroethylene Tetrachloroethane Tetrachloroethylene	2,4	U079	C	1000 (454)
Ethene, trichloro-	79016	Trichloroethene Trichloroethylene	1,2,3,4	U228	B	100 (45.4)
Ethylbenzene	100414		1,2,3		C	1000 (454)
Ethylene glycol	107211		3		D	5000 (2270)
Hexane	110543		3		D	5000 (2270)
Hexane	110543	Louisiana	3			1000 (454)
Hydrogen sulfide	7783064	Hydrogen sulfide (H ₂ S)	1,4	U135	B	100 (45.4)
Hydrogen sulfide H ₂ S	7783064	Hydrogen sulfide	1,4	U135	B	100 (45.4)
Lead ††	7439921		2		A	10 (4.54)
Lead ††	7439921	Louisiana	2			1 (0.454)
LEAD AND COMPOUNDS	N.A.		2,3			**
Mercury	7439976		2,3,4	U151	X	1 (0.454)
MERCURY AND COMPOUNDS	N.A.		2,3			**
Methane, dichloro-	75092	Methylene chloride	2,3,4	U080	C	1000 (454)
Methane, tetrachloro	56235	Carbon tetrachloride	1,2,3,4	U211	A	10 (4.54)
Methanol	67561	Methyl alcohol	3,4	U154	D	5000 (2270)
Methyl chloroform	71556	Ethane, 1,1,1-trichloro- 1,1,1-Trichloroethane	2,3,4	U226	C	1000 (454)
Methyl ethyl ketone (MEK)	78933	2-Butanone	3,4	U159	D	5000 (2270)

Hazardous Substance ¹	CASRN	Regulatory Synonyms	Codes	RCRA Waste #	Category	RQ-Pounds (Kg)
Methyl ethyl ketone (MEK)	78933	Louisiana	3,4	U159	D	1000 (454)
Methylmercaptan	74931	Methanethiol / Thiomethanol	1,4	U153	B	100 (45.4)
Methylmercaptan	74931	Louisiana	1,4	U153		1000 (454)
PCBs	1336363	Aroclors / Polychlorinated biphenyls	1,2,3		X	1 (0.454)
Pyridine	110861		4	U196	C	1000 (454)
RADIONUCLIDES	N.A.		3			§
SELENIUM AND COMPOUNDS	N.A.		2,3			**
SELENIUM AND COMPOUNDS	N.A.	Louisiana	2,3			10 (4.54)
Sodium hydroxide	1310732		1		C	1000 (454)
Sodium hydrochlorite	7681529 10022705		1		B	100 (45.4)
Sulfur dioxide	7446095				EHS	500 (227)
Tetrachloroethene	127184	Ethene, tetrachloro-Perchloroethylene Tetrachloroethylene	2,3,4	U210	B	100 (45.4)
Toluene	108883	Benzene, methyl-	1,2,3,4	U220	C	1000 (454)
1,1,1-Trichloroethane	71556	Ethane, 1,1,1-trichloro-Methyl chloroform	2,3,4	U226	C	1000 (454)
1,1,2-Trichloroethane	79005	Ethane, 1,1,2-trichloro-	2,3,4	U227	B	100 (45.4)
Unlisted Hazardous Wastes Characteristics of Corrosivity	N.A.		4	D002	B	100 (45.4)
Unlisted Hazardous Wastes Characteristics:	N.A.		4			
Unlisted Hazardous Wastes Characteristic of Ignitability (D001)	N.A.		4	D001	B	100 (45.4)
Unlisted Hazardous Wastes Characteristic of Reactivity (D003)	N.A.		4	D003	B	100 (45.4)
Characteristics of Toxicity: Arsenic (D004)	N.A.		4	D004	X	1 (0.454)
Barium (D005)	N.A.		4	D005	C	1000 (454)
Benzene (D018)	N.A.		1,2,3,4	D018	A	10 (4.54)
Cadmium (D006)	N.A.		4	D006	A	10 (4.54)
Chromium (D007)	N.A.		4	D007	A	10 (4.54)
Lead (D008)	N.A.		4	D008	A	10 (4.54)
Lead (D008)	N.A.	Louisiana	4	D008	A	1 (0.454)
Mercury (D009)	N.A.		4	D009	X	1 (0.454)
Methyl ethyl ketone	N.A.		4	D035	D	5000 (2270)

Hazardous Substance ¹	CASRN	Regulatory Synonyms	Codes	RCRA Waste #	Category	RQ-Pounds (Kg)
(D035)						
Selenium (D010)	N.A.		4	D010	A	10 (4.54)
Tetrachloroethylene (D039)	N.A.		2,4	D039	B	100 (45.4)
Trichloroethylene (D040)	N.A.		1,2,4	D040	B	100 (45.4)
Vanadium oxide V205	1314621	Vanadium pentoxide	1,4	P120	C	1000 (454)
Vanadium pentoxide	1314621	Vanadium oxide V205	1,4	P120	C	1000 (454)
Xylene	1330207	Benzene, dimethyl - Xylene (mixed), Xylenes (isomers and mixture)	1,3,4	U239	B	100 (45.5)
m-Xylene	108383	Benzene, m-dimethyl-	3		C	1000 (454)
o-Xylene	95476	Benzene, o-dimethyl-	3		C	1000 (454)
p-Xylene	106423	Benzene, p-dimethyl-	3		B	100 (45.4)
Zinc††	7440666		2		C	1000 (454)
ZINC AND COMPOUNDS	N.A.		2			**
F001 The following spent halogenated solvents used in degreasing; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents (CERCLA list) or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.			4	F001	A	10 (4.54)
(a) Tetrachloroethylene	127184		2,4	U210	B	100 (45.4)
(b) Trichloroethylene	79016		1,2,4	U228	B	100 (45.4)
(c) Methylene chloride	75092		2,4	U080	C	1000 (454)
(d) 1,1,1-Trichloroethane	71556		2,4	U226	C	1000 (454)
(e) Carbon tetrachloride	56235		1,2,4	U211	A	10 (4.54)
(f) Chlorinated fluorocarbons	N.A.				D	5000 (2270)

Hazardous Substance ¹	CASRN	Regulatory Synonyms	Codes	RCRA Waste #	Category	RQ-Pounds (Kg)
F002 The following spent halogenated solvents; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.			4	F001	A	10 (4.54)
(a) Tetrachloroethylene	127184		2,4	U210	B	100 (45.4)
(b) Methylene chloride	75092		2,4	U080	C	1000 (454)
(c) Trichloroethylene	79016		1,2,4	U228	B	100 (45.4)
(d) 1,1,1-Trichloroethane	71556		2,4	U226	C	1000 (454)
(e) Chlorobenzene	108907		1,2,4	U037	B	100 (45.4)
(f) 1,1,2-Trichloro-1,2,2-	76131				D	5000 (2270)
(g) o-Dischlorobenzene	95501		1,2,4	U070	B	100 (45.4)
(h) Trichloroflouromethane	75694		4	U121	D	5000 (2270)
(i) 1,1,2-Thrichloroethane	79005		2,4	U227	B	100 (45.4)
F003 The following spent non-halogenated solvents and the still bottoms from the recovery of these solvents:	[q]		4	F003	B	100 (45.4)
(a) Xylene	1330207				C	1000 (454)
(b) Acetone	67641				D	5000 (2270)
(c) Ethyl acetate	141786				D	5000 (2270)
(d) Ethylbenzene	100414				C	1000 (454)
(e) Ethyl ether	60297		4	F003	B	100 (45.4)
(f) Methyl isobutyl ketone	108101				D	5000 (2270)
(g) n-Butyl alcohol	71363				D	5000 (2270)

Hazardous Substance ¹	CASRN	Regulatory Synonyms	Codes	RCRA Waste #	Category	RQ-Pounds (Kg)
(h) Cyclohexanone	108941				D	5000 (2270)
(i) Methanol	67561				D	5000 (2270)

1. The above list has been formulated to address products/constituents that are commonly used at pipeline facilities. The complete CERCLA list contains many more substances.

APPENDIX F

INSPECTION FORMS

To be added by EPC Contractor – Examples Provided

EXAMPLE PRE-CONSTRUCTION SITE INSPECTION FORM

Inspector (print name)

Date of Inspection

a. Resource Protection

Yes No NA

- Are construction limits clearly flagged or fenced?
- Important trees and associated rooting zones, existing vegetated areas suitable for filter strips, especially in perimeter areas, etc. have been flagged for protection.
- Creek crossings installed prior to land-disturbing activity, including clearing and blasting.

b. Surface Water Protection

Yes No NA

- Clean stormwater runoff has been diverted from areas to be disturbed.
- Bodies of water located either on site or in the vicinity of the site have been identified and protected.
- Appropriate practices to protect on-site or downstream surface water are installed.

c. Stabilized Construction Entrance

Yes No NA

- A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
- Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
- Sediment tracked onto public streets is removed or cleaned on a regular basis.

d. Perimeter Sediment Controls

Yes No NA

- Silt fence material and installation comply with the standard drawing and specifications.
- Silt fences are installed at appropriate spacing intervals
- Sediment/detention basin was installed as first land disturbing activity.
- Sediment traps and barriers are installed

CONSTRUCTION DURATION INSPECTIONS

These Inspection Forms will be filled out during the entire construction phase of the project.

Inspector (print name)

Date of Inspection

Check one of the following:

_____ **Weekly Inspection or,**

_____ **Rain Event Inspection**(greater than 0.5 inches in 24 hour period)

Date of Rain Event _____

Amount of Rain _____ inches

Stage of Construction(% complete) _____%

On a plan/sketch below that represents the project area, or on an attached site map:

1. Indicate the extent of all disturbed site areas and drainage pathways;
2. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;
3. Indicate all areas of the site that have undergone temporary or permanent stabilization;
4. Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;

SITE PLAN/SKETCH

CONSTRUCTION DURATION INSPECTIONS (Continued)

a. General Housekeeping

Yes No NA

- Is there an increase in turbidity that will cause a substantial visible contrast to natural conditions?
- Is there residue from oil and floating substances, visible oil film, or globules or grease?
- Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
- Is construction impacting the adjacent property?
- Is dust adequately controlled?

b. Excavation Dewatering

Yes No NA

- Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
- Sediment laden water from work area is being discharged to a silt-trapping device.
- Constructed upstream berm with one-foot minimum freeboard.

c. Vegetative Filter Strips

Yes No NA

- Vegetation is dense and there are no signs of erosion.
- Width of filter strip is per the approved plan.
- Ground slope of filter strip is between 1% and 5%.

d. Level Spreader

Yes No NA

- Installed per plan.
- Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
- Flow sheets out of level spreader without erosion on downstream edge.

e. Interceptor Dikes and Swales

Yes No NA

- Installed per plan with minimum side slopes 2H: 1V or flatter.
- Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
- Sediment-laden runoff directed to sediment trapping structure

f. Sediment Control

Yes No NA

- Sediment control practices are located and installed correctly.
- BMPs are maintained per specifications
- Stockpiles are stabilized and contained.

g. Adverse Impacts or Off-Site Degradation

Yes No NA

- Work is within the limits of the approved plans, including clearing

Adverse impacts -- ponds and wetlands are free of sediment from site
CONSTRUCTION DURATION INSPECTIONS (Continued)

h. Stabilized Construction Entrance

Yes No NA

- Stone is clean enough to effectively remove mud from vehicles.
- Installed per standards and specifications?
- Does all traffic use the stabilized entrance to enter and leave site?
- Is adequate drainage provided to prevent ponding at entrance?

i. Reinforced Silt Fence

Yes No NA

- Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
- Joints constructed by wrapping the two ends together for continuous support.
- Installed steel posts, downstream side of flow, maximum 6 foot intervals with 6 x 6 inch 14 gage wire.
- Fabric buried 6 inches minimum.
- Posts are stable, fabric is tight and without rips or frayed areas.
- Sediment accumulation is _ % of design capacity.

MAINTENANCE SCHEDULES

Stabilization

Area	Date since last disturbed	Date of next disturbance	Stabilized? (Yes/No)	Stabilized with	Condition

APPENDIX G

FERC UPLAND EROSION CONTROL, REVEGETATION,
AND MAINTENANCE PLAN

&

FERC WETLAND AND WATERBODY CONSTRUCTION
AND MITIGATION PROCEDURES

**FERC STAFF'S UPLAND EROSION CONTROL, REVEGETATION, AND
MAINTENANCE PLAN**

**UPLAND EROSION CONTROL, REVEGETATION, AND
MAINTENANCE PLAN**

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FERC STAFF'S UPLAND EROSION CONTROL, REVEGETATION, AND MAINTENANCE PLAN

I. APPLICABILITY

A. The intent of this Plan is to assist applicants by identifying baseline mitigation measures for minimizing erosion and enhancing revegetation. The project sponsors should specify in their applications for a FERC Certificate (Certificate) any individual measures in this Plan they consider unnecessary, technically infeasible, or unsuitable due to local conditions and to fully describe any alternative measures they would use. Applicants should also explain how those alternative measures would achieve a comparable level of mitigation.

Once a project is certificated, further changes can be approved. Any such changes from the measures in this Plan (or the applicant's approved plan) will be approved by the Director of the Office of Energy Projects (Director), upon the applicant's written request, if the Director agrees that an alternative measure:

1. provides equal or better environmental protection;
2. is necessary because a portion of this Plan is infeasible or unworkable based on project-specific conditions; or
3. is specifically required in writing by another Federal, state, or Native American land management agency for the portion of the project on its land or under its jurisdiction.

Any requirements in this Plan to file material with the Secretary of the FERC (Secretary) do not apply to projects undertaken under the provisions of the blanket certificate program. This exemption does not apply to a request for alternative measures. Project-related impacts on wetland and waterbody systems are addressed in the staff's Wetland and Waterbody Construction and Mitigation Procedures (Procedures).

II. SUPERVISION AND INSPECTION

A. ENVIRONMENTAL INSPECTION

1. At least one Environmental Inspector is required for each construction spread during construction and restoration (as defined by section V). The number and experience of Environmental Inspectors assigned to each construction spread should be appropriate for the length of the construction spread and the number/significance of resources affected.
2. Environmental Inspectors shall have peer status with all other activity inspectors.

3. Environmental Inspectors shall have the authority to stop activities that violate the environmental conditions of the Certificate, state and Federal environmental permit conditions, or landowner requirements; and to order appropriate corrective action.

B. RESPONSIBILITIES OF ENVIRONMENTAL INSPECTORS

At a minimum, the Environmental Inspector(s) shall be responsible for:

1. Ensuring compliance with the requirements of this Plan, the Procedures, the environmental conditions of the Certificate authorization, the mitigation measures proposed by the applicant (as approved and/or modified by the Certificate), other environmental permits and approvals, and environmental requirements in landowner easement agreements;
2. Identifying, documenting, and overseeing corrective actions, as necessary to bring an activity back into compliance;
3. Verifying that the limits of authorized construction work areas and locations of access roads are properly marked before clearing;
4. Verifying the location of signs and highly visible flagging marking the boundaries of sensitive resource areas, waterbodies, wetlands, or areas with special requirements along the construction work area;
5. Identifying erosion/sediment control and soil stabilization needs in all areas;
6. Ensuring that the location of dewatering structures and slope breakers will not direct water into known cultural resources sites or locations of sensitive species;
7. Verifying that trench-dewatering activities do not result in the deposition of sand, silt, and/or sediment near the point of discharge into a wetland or waterbody. If such deposition is occurring, the dewatering activity shall be stopped and the design of the discharge shall be changed to prevent reoccurrence;
8. Ensuring that subsoil and topsoil are tested in agricultural and residential areas to measure compaction and determine the need for corrective action;
9. Advising the Chief Construction Inspector when conditions (such as wet weather) make it advisable to restrict construction activities to avoid excessive rutting;
10. Ensuring restoration of contours and topsoil;
11. Verifying that the soils imported for agricultural or residential use have been certified as free of noxious weeds and soil pests, unless otherwise approved by the landowner;
12. Determining the need for and ensuring that erosion controls are properly installed, as

necessary to prevent sediment flow into wetlands, waterbodies, sensitive areas, and onto roads;

13. Inspecting and ensuring the maintenance of temporary erosion control measures at least:
 - a. on a daily basis in areas of active construction or equipment operation;
 - b. on a weekly basis in areas with no construction or equipment operation; and
 - c. within 24 hours of each 0.5-inch of rainfall;
14. Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification;
15. Keeping records of compliance with the environmental conditions of the FERC certificate, and the mitigation measures proposed by the project sponsor in the application submitted to the FERC, and other Federal or state environmental permits during active construction and restoration; and
16. Identifying areas that should be given special attention to ensure stabilization and restoration after the construction phase.

III. PRECONSTRUCTION PLANNING

The project sponsor shall do the following before construction:

A. CONSTRUCTION WORK AREAS

1. Identify all construction work areas (*e.g.*, construction right-of-way, extra work space areas, pipe storage and contractor yards, borrow and disposal areas, access roads, etc.) that would be needed for safe construction. The project sponsor must ensure that appropriate cultural resources and biological surveys have been conducted.
2. Project sponsors are encouraged to consider expanding any required cultural resources and endangered species surveys in anticipation of the need for activities outside of certificated work areas.

B. DRAIN TILE AND IRRIGATION SYSTEMS

1. Attempt to locate existing drain tiles and irrigation systems.
2. Contact landowners and local soil conservation authorities to determine the locations of future drain tiles that are likely to be installed within 3 years of the authorized construction.

3. Develop procedures for constructing through draitiled areas, maintaining irrigation systems during construction, and repairing drain tiles and irrigation systems after construction.
4. Engage qualified drain tile specialists, as needed to conduct or monitor repairs to drain tile systems affected by construction. Use drain tile specialists from the project area, if available.

C. GRAZING DEFERMENT

Develop grazing deferment plans with willing landowners, grazing permittees, and land management agencies to minimize grazing disturbance of revegetation efforts.

D. ROAD CROSSINGS AND ACCESS POINTS

Plan for safe and accessible conditions at all roadway crossings and access points during construction and restoration.

E. DISPOSAL PLANNING

Determine methods and locations for the disposal of construction debris (*e.g.*, timber, slash, mats, garbage, drilling fluids, excess rock, etc). Off-site disposal in other than commercially operated disposal locations is subject to compliance with all applicable survey, landowner permission, and mitigation requirements.

F. AGENCY COORDINATION

The project sponsor must coordinate with the appropriate local, state, and Federal agencies as outlined in this Plan and in the Certificate.

1. Obtain written recommendations from the local soil conservation authorities or land management agencies regarding permanent erosion control and revegetation specifications.
2. Develop specific procedures in coordination with the appropriate agency to prevent the introduction or spread of noxious weeds and soil pests resulting from construction and restoration activities.

G. STORMWATER POLLUTION PREVENTION PLAN

Make available on each construction spread the Stormwater Pollution Prevention Plan prepared for compliance with the U.S. Environmental Protection Agency's National Stormwater Program General Permit requirements.

IV. INSTALLATION

A. APPROVED AREAS OF DISTURBANCE

1. Project-related ground disturbance shall be limited to the construction right-of-way, extra workspace areas, pipe storage yards, borrow and disposal areas, access roads, and other areas approved in the Certificate. Any project-related ground disturbing activities outside these Certificated areas, except those needed to comply with the Plan and Procedures (*e.g.*, slope breakers, energy-dissipating devices, dewatering structures, drain tile system repairs) will require prior Director approval. All construction or restoration activities outside of the Certificated areas are subject to all applicable survey and mitigation requirements.
2. The construction right-of-way width for a project shall not exceed 75 feet or that described in the FERC application unless otherwise modified by a Certificate condition. However, in limited, non-wetland areas, this construction right-of-way width may be expanded by up to 25 feet without Director approval to accommodate full construction right-of-way topsoil segregation and to ensure safe construction where topographic conditions (such as side-slopes) or soil limitations require it. Twenty-five feet of extra construction right-of-way width may also be used in limited, non-wetland or non-forested areas for truck turnarounds where no reasonable alternative access exists.

Project use of these additional limited areas is subject to landowner approval and compliance with all applicable survey and mitigation requirements. When such additional areas are used, each one should be identified and the need explained in the weekly or biweekly construction reports to the FERC, if required. The following material should be included in the reports:

- a. the location of each additional area by station number and reference to a previously filed alignment sheet, or updated alignment sheets showing the additional areas;
- b. identification of where the Commission's records contain evidence that the additional areas were previously surveyed; and
- c. a statement that landowner approval has been obtained and is available in project files.

Prior written approval of the Director is required when the Certificated construction right-of-way width would be expanded by more than 25 feet.

B. TOPSOIL SEGREGATION

1. Unless the landowner or land management agency specifically approves otherwise, prevent the mixing of topsoil with subsoil by stripping topsoil from either the full work area or from the trench and subsoil storage area (ditch plus spoil side method) in:

- a. actively cultivated or rotated croplands and pastures;
- b. residential areas;
- c. hayfields; and
- d. other areas at the landowner's or land managing agency's request.

2. In residential areas importation of topsoil is an acceptable alternative to topsoil segregation.

3. In deep soils (more than 12 inches of topsoil), segregate at least 12 inches of topsoil. In soils with less than 12 inches of topsoil make every effort to segregate the entire topsoil layer.
4. Where topsoil segregation is required, maintain separation of salvaged topsoil and subsoil throughout all construction activities.
5. Segregated topsoil may not be used for padding the pipe.

C. DRAIN TILES

1. Mark locations of drain tiles damaged during construction.
2. Probe all drainage tile systems within the area of disturbance to check for damage.
3. Repair damaged drain tiles to their original or better condition. Do not use filter covered drain tiles unless the local soil conservation authorities and the landowner agree. Use qualified specialists for testing and repairs.
4. For new pipelines in areas where drain tiles exist or are planned, ensure that the depth of cover over the pipeline is sufficient to avoid interference with drain tile systems. For adjacent pipeline loops in agricultural areas, install the new pipeline with at least the same depth of cover as the existing pipeline(s).

D. IRRIGATION

Maintain water flow in crop irrigation systems, unless shutoff is coordinated with affected parties.

E. ROAD CROSSINGS AND ACCESS POINTS

1. Maintain safe and accessible conditions at all road crossings and access points during construction.
2. If crushed stone access pads are used in residential or active agricultural areas, place the stone on synthetic fabric to facilitate removal.

F. TEMPORARY EROSION CONTROL

Install temporary erosion controls immediately after initial disturbance of the soil. Temporary erosion controls must be properly maintained throughout construction (on a daily basis) and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration is complete.

1. Temporary Slope Breakers

- a. Temporary slope breakers are intended to reduce runoff velocity and divert water off the construction right-of-way. Temporary slope breakers may be constructed of materials such as soil, silt fence, staked hay or straw bales, or sand bags.
- b. Install temporary slope breakers on all disturbed areas, as necessary to avoid excessive erosion. Temporary slope breakers must be installed on slopes greater than 5 percent where the base of the slope is less than 50 feet from waterbody, wetland and road crossings at the following spacing (closer spacing should be used if necessary):

<u>Slope (%)</u>	<u>Spacing (feet)</u>
5 – 15	300
>15 – 30	200
>30	100

- c. Direct the outfall of each temporary slope breaker to a stable, well vegetated area or construct an energy-dissipating device at the end of the slope breaker and off the construction right-of-way.
- d. Position the outfall of each temporary slope breaker to prevent sediment discharge into wetlands, waterbodies, or other sensitive resources.

2. Sediment Barriers

- a. Sediment barriers are intended to stop the flow of sediments and to prevent the deposition of sediments into sensitive resources. They may be constructed of materials such as silt fence, staked hay or straw bales,

compacted earth (*e.g.*, driveable berms across travel ways), sand bags, or other appropriate materials.

- b. At a minimum, install and maintain temporary sediment barriers across the entire construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody, wetlands or road crossing until revegetation is successful as defined in this Plan. Leave adequate room between the base of the slope and the sediment barrier to accommodate ponding of water and sediment deposition.
- c. Where wetlands or waterbodies are adjacent to and downslope of construction work areas, install sediment barriers along the edge of these areas, as necessary to prevent sediment flow into the wetland or waterbody.

3. Mulch

- a. Apply mulch on all slopes (except in actively cultivated cropland) concurrent with or immediately after seeding, where necessary to stabilize the soil surface and to reduce wind and water erosion. Spread mulch uniformly over the area to cover at least 75 percent of the ground surface at a rate of 2 tons/acre of straw or its equivalent, unless the local soil conservation authority, landowner, or land managing agency approves otherwise in writing.
- b. Mulch can consist of weed-free straw or hay, wood fiber hydromulch, erosion control fabric, or some functional equivalent.
- c. Mulch before seeding if:
 - (1) final grading and installation of permanent erosion control measures will not be completed in an area within 20 days after the trench in that area is backfilled (10 days in residential areas), as required in section V.A.1; or
 - (2) construction or restoration activity is interrupted for extended periods, such as when seeding cannot be completed due to seeding period restrictions.
- d. If mulching before seeding, increase mulch application on all slopes within 100 feet of waterbodies and wetlands to a rate of 3 tons/acre of straw or equivalent.
- e. If wood chips are used as mulch, do not use more than 1 ton/acre and add the equivalent of 11-lbs/acre available nitrogen (at least 50 percent of which is slow release).

- f. Ensure that mulch is adequately anchored to minimize loss due to wind and water.
- g. When anchoring with liquid mulch binders, use rates recommended by the manufacturer. Do not use liquid mulch binders within 100 feet of wetlands or waterbodies.
- h. Install erosion control fabric on waterbody banks at the time of final bank recontouring. Anchor the erosion control fabric with staples or other appropriate devices.

V. RESTORATION

A. CLEANUP

1. Commence cleanup operations immediately following backfill operations. Complete final grading, topsoil replacement, and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas). If seasonal or other weather conditions prevent compliance with these time frames, maintain temporary erosion controls (temporary slope breakers and sediment barriers) until conditions allow completion of cleanup.

The project sponsor should file with the Secretary for the review and written approval of the Director, a winterization plan if construction will continue into the winter season when conditions could delay successful decompaction, topsoil replacement, or seeding until the following spring.

2. A travel lane may be left open temporarily to allow access by construction traffic if the temporary erosion control structures are installed as specified in section IV.F. and inspected and maintained (as specified in sections II.B.12 through 14). When access is no longer required, the travel lane must be removed and the right-of-way restored.
3. Rock excavated from the trench may be used to backfill the trench only to the top of the existing bedrock profile. Rock that is not returned to the trench should be considered construction debris, unless approved for use as mulch or for some other use on the construction work areas by the landowner or land managing agency.
4. Remove excess rock from at least the top 12 inches of soil in all actively cultivated or rotated cropland and pastures, hayfields, and residential areas, as well as other areas at the landowner's request. The size, density, and distribution of rock on the construction work area should be similar to adjacent areas not disturbed by construction. The landowner may approve other provisions in writing.
5. Grade the construction right-of-way to restore pre-construction contours and leave the soil in the proper condition for planting.

6. Remove construction debris from all construction work areas unless the landowner or land managing agency approves otherwise.
7. Remove temporary sediment barriers when replaced by permanent erosion control measures or when revegetation is successful.

B. PERMANENT EROSION CONTROL DEVICES

1. Trench Breakers

- a. Trench breakers are intended to slow the flow of subsurface water along the trench. Trench breakers may be constructed of materials such as sand bags or polyurethane foam. Do not use topsoil in trench breakers.
- b. An engineer or similarly qualified professional shall determine the need for and spacing of trench breakers. Otherwise, trench breakers shall be installed at the same spacing as and upslope of permanent slope breakers.
- c. In agricultural fields and residential areas where slope breakers are not typically required, install trench breakers at the same spacing as if permanent slope breakers were required.
- d. At a minimum, install a trench breaker at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from a waterbody or wetland and where needed to avoid draining a waterbody or wetland.

2. Permanent Slope Breakers

- a. Permanent slope breakers are intended to reduce runoff velocity, divert water off the construction right-of-way, and prevent sediment deposition into sensitive resources. Permanent slope breakers may be constructed of materials such as soil, sand bags, or some functional equivalent.
- b. Construct and maintain permanent slope breakers in all areas, except cultivated areas and lawns, using spacing recommendations obtained from the local soil conservation authority or land managing agency. In the absence of written recommendations, use the following spacing unless closer spacing is necessary to avoid excessive erosion on the construction right-of-way:

<u>Slope (%)</u>	<u>Spacing (feet)</u>
5 – 15	300
>15 – 30	200
>30	100

- c. Construct slope breakers to divert surface flow to a stable area without

causing water to pool or erode behind the breaker. In the absence of a stable area, construct appropriate energy-dissipating devices at the end of the breaker.

- d. Slope breakers may extend slightly (about 4 feet) beyond the edge of the construction right-of-way to effectively drain water off the disturbed area. Where slope breakers extend beyond the edge of the construction right-of-way, they are subject to compliance with all applicable survey requirements.

C. SOIL COMPACTION MITIGATION

1. Test topsoil and subsoil for compaction at regular intervals in agricultural and residential areas disturbed by construction activities. Conduct tests on the same soil type under similar moisture conditions in undisturbed areas to approximate preconstruction conditions. Use penetrometers or other appropriate devices to conduct tests.
2. Plow severely compacted agricultural areas with a paraplow or other deep tillage implement. In areas where topsoil has been segregated, plow the subsoil before replacing the segregated topsoil. Alternatively, make arrangements with the landowner to plant and plow under a "green manure" crop, such as alfalfa, to decrease soil bulk density and improve soil structure. If subsequent construction and cleanup activities result in further compaction, conduct additional tilling.
3. Perform appropriate soil compaction mitigation in severely compacted residential areas.

D. REVEGETATION

1. General
 - a. The project sponsor is responsible for ensuring successful revegetation of soils disturbed by project-related activities, except as noted in section V.D.1.b.
 - b. Restore all turf, ornamental shrubs, and specialized landscaping in accordance with the landowner's request, or compensate the landowner. Restoration work must be performed by personnel familiar with local horticultural and turf establishment practices.
2. Soil Additives

Fertilize and add soil pH modifiers in accordance with written recommendations obtained from the local soil conservation authority, land management agencies, or landowner. Incorporate recommended soil pH modifier and fertilizer into the top 2 inches of soil as soon as possible after application.
3. Seeding Requirements

- a. Prepare a seedbed in disturbed areas to a depth of 3 to 4 inches using appropriate equipment to provide a firm seedbed. When hydroseeding, scarify the seedbed to facilitate lodging and germination of seed.
- b. Seed disturbed areas in accordance with written recommendations for seed mixes, rates, and dates obtained from the local soil conservation authority or as requested by the landowner or land management agency. Seeding is not required in actively cultivated croplands unless requested by the landowner.
- c. Perform seeding of permanent vegetation within the recommended seeding dates. If seeding cannot be done within those dates, use appropriate temporary erosion control measures discussed in section IV.F. and perform seeding of permanent vegetation at the beginning of the next recommended seeding season. Lawns may be seeded on a schedule established with the landowner.
- d. In the absence of written recommendations from the local soil conservation authorities, seed all disturbed soils within 6 working days of final grading, weather and soil conditions permitting, subject to the specifications in section V.D.3.a-c.
- e. Base seeding rates on Pure Live Seed. Use seed within 12 months of seed testing.
- f. Treat legume seed with an inoculant specific to the species using the manufacturer's recommended rate of inoculant appropriate for the seeding method (broadcast, drill, or hydro).
- g. In the absence of written recommendations from the local soil conservation authorities, landowner, or land managing agency to the contrary, a seed drill equipped with a cultipacker is preferred for seed application. Broadcast or hydroseeding can be used in lieu of drilling at double the recommended seeding rates. Where seed is broadcast, firm the seedbed with a cultipacker or imprinter after seeding. In rocky soils or where site conditions may limit the effectiveness of this equipment, other alternatives may be appropriate (*e.g.*, use of a chain drag) to lightly cover seed after application, as approved by the Environmental Inspector.

VI. OFF-ROAD VEHICLE CONTROL

To each owner or manager of forested lands offer to install and maintain measures to control unauthorized vehicle access to the right-of-way. These measures may include:

- A. Signs;
- B. Fences with locking gates;

- C. Slash and timber barriers, pipe barriers, or a line of boulders across the right-of-way; and
- D. Conifers or other appropriate trees or shrubs across the right-of-way.

VII. POST-CONSTRUCTION ACTIVITIES

A. MONITORING AND MAINTENANCE

1. Conduct follow-up inspections of all disturbed areas after the first and second growing seasons to determine the success of revegetation.
2. Revegetation in non-agricultural areas shall be considered successful if upon visual survey the density and cover of non-nuisance vegetation are similar in density and cover to adjacent undisturbed lands. In agricultural areas, revegetation shall be considered successful if crop yields are similar to adjacent undisturbed portions of the same field. Continue revegetation efforts until revegetation is successful.
3. Monitor and correct problems with drainage and irrigation systems resulting from pipeline construction in active agricultural areas until restoration is successful.
4. Restoration shall be considered successful if the right-of-way surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless requested otherwise by the land owner or land managing agency), revegetation is successful, and proper drainage has been restored.
5. Routine vegetation maintenance clearing shall not be done more frequently than every 3 years. However, to facilitate periodic corrosion and leak surveys, a corridor not exceeding 10 feet in width centered on the pipeline may be maintained annually in an herbaceous state. In no case shall routine vegetation maintenance clearing occur between April 15 and August 1 of any year.
6. Efforts to control unauthorized off-road vehicle use, in cooperation with the landowner, shall continue throughout the life of the project. Maintain signs, gates, and vehicle trails as necessary.

B. REPORTING

1. The project sponsor shall maintain records that identify by milepost:
 - a. method of application, application rate, and type of fertilizer, pH modifying agent, seed, and mulch used;
 - b. acreage treated;
 - c. dates of backfilling and seeding;

- d. names of landowners requesting special seeding treatment and a description of the follow-up actions; and
- e. any problem areas and how they were addressed.

2. The project sponsor shall file with the Secretary quarterly activity reports documenting problems, including those identified by the landowner, and corrective actions taken for at least 2 years following construction.

**WETLAND AND WATERBODY CONSTRUCTION AND
MITIGATION PROCEDURES**

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WETLAND AND WATERBODY CONSTRUCTION AND MITIGATION PROCEDURES

I. APPLICABILITY

A. The intent of these Procedures is to assist applicants by identifying baseline mitigation measures for minimizing the extent and duration of project-related disturbance on wetlands and waterbodies. The project sponsors should specify in their applications for a FERC Certificate (Certificate) any individual measures in these Procedures they consider unnecessary, technically infeasible, or unsuitable due to local conditions and to fully describe any alternative measures they would use. Applicants should also explain how those alternative measures would achieve a comparable level of mitigation.

Once a project is certificated, further changes can be approved. Any such changes from the measures in these Procedures (or the applicant's approved procedures) will be approved by the Director of the Office of Energy Projects (Director), upon the applicant's written request, if the Director agrees that an alternative measure:

1. provides equal or better environmental protection;
2. is necessary because a portion of these Procedures is infeasible or unworkable based on project specific conditions; or
3. is specifically required in writing by another Federal, state, or Native American land management agency for the portion of the project on its land or under its jurisdiction.

Any requirements in these Procedures to file material with the Secretary of the FERC (Secretary) do not apply to projects undertaken under the provisions of the blanket certificate program. This exemption does not apply to a request for alternative measures.

Project-related impacts on non-wetland areas are addressed in the staff's Upland Erosion Control, Revegetation, and Maintenance Plan (Plan).

B. DEFINITIONS

1. "Waterbody" includes any natural or artificial stream, river, or drainage with perceptible flow at the time of crossing, and other permanent waterbodies such as ponds and lakes:
 - a. "minor waterbody" includes all waterbodies less than or equal to 10 feet wide at the water's edge at the time of crossing;
 - b. "intermediate waterbody" includes all waterbodies greater than 10 feet wide but less than or equal to 100 feet wide at the water's edge at the time of

crossing; and

c. "major waterbody" includes all waterbodies greater than 100 feet wide at the water's edge at the time of crossing.

2. "Wetland" includes any area that is not in actively cultivated or rotated cropland and that satisfies the requirements of the current Federal methodology for identifying and delineating wetlands.

II. PRECONSTRUCTION FILING

A. The following information shall be filed with the Secretary prior to the beginning of construction:

1. the hydrostatic testing information specified in section VII.B.3. and a wetland delineation report as described in section VI.A.1., if applicable; and
2. a schedule identifying when trenching or blasting would occur within each waterbody greater than 10 feet wide, or within any designated coldwater fishery. The project sponsor shall revise the schedule as necessary to provide FERC staff at least 14 days advance notice. Changes within this last 14-day period must provide for at least 48 hours advance notice.

B. The following site-specific construction plans required by these Procedures must be filed with the Secretary for the review and written approval by the Director:

1. plans for extra work areas that would be closer than 50 feet from a waterbody or wetland;
2. plans for major waterbody crossings;
3. plans for the use of a construction right-of-way greater than 75 feet wide in wetlands; and
4. plans for horizontal directional drill (HDD) "crossings" of wetlands or waterbodies.

III. ENVIRONMENTAL INSPECTORS

A. At least one Environmental Inspector having knowledge of the wetland and waterbody conditions in the project area is required for each construction spread. The number and experience of Environmental Inspectors assigned to each construction spread should be appropriate for the length of the construction spread and the number/significance of resources affected.

B. The Environmental Inspector's responsibilities are outlined in the Upland Erosion Control, Revegetation, and Maintenance Plan (Plan).

IV. PRECONSTRUCTION PLANNING

A. A copy of the Stormwater Pollution Prevention Plan (SWPPP) prepared for compliance with the U.S. Environmental Protection Agency's (EPA) National Stormwater Program General Permit requirements must be available in the field on each construction spread. The SWPPP shall contain Spill Prevention and Response Procedures that meet the requirements of state and Federal agencies.

1. It shall be the responsibility of the project sponsor and its contractors to structure their operations in a manner that reduces the risk of spills or the accidental exposure of fuels or hazardous materials to waterbodies or wetlands. The project sponsor and its contractors must, at a minimum, ensure that:

- a. all employees handling fuels and other hazardous materials are properly trained;
- b. all equipment is in good operating order and inspected on a regular basis;
- c. fuel trucks transporting fuel to on-site equipment travel only on approved access roads;
- d. all equipment is parked overnight and/or fueled at least 100 feet from a waterbody or in an upland area at least 100 feet from a wetland boundary. These activities can occur closer only if the Environmental Inspector finds, in advance, no reasonable alternative and the project sponsor and its contractors have taken appropriate steps (including secondary containment structures) to prevent spills and provide for prompt cleanup in the event of a spill;
- e. hazardous materials, including chemicals, fuels, and lubricating oils, are not stored within 100 feet of a wetland, waterbody, or designated municipal watershed area, unless the location is designated for such use by an appropriate governmental authority. This applies to storage of these materials and does not apply to normal operation or use of equipment in these areas; and
- f. concrete coating activities are not performed within 100 feet of a wetland or waterbody boundary, unless the location is an existing industrial site designated for such use.

2. The project sponsor and its contractors must structure their operations in a manner that provides for the prompt and effective cleanup of spills of fuel and other hazardous materials. At a minimum, the project sponsor and its contractors must:

- a. ensure that each construction crew (including cleanup crews) has on hand

sufficient supplies of absorbent and barrier materials to allow the rapid containment and recovery of spilled materials and knows the procedure for reporting spills;

b. ensure that each construction crew has on hand sufficient tools and material to stop leaks;

c. know the contact names and telephone numbers for all local, state, and Federal agencies (including, if necessary, the U. S. Coast Guard and the National Response Center) that must be notified of a spill; and

d. follow the requirements of those agencies in cleaning up the spill, in excavating and disposing of soils or other materials contaminated by a spill, and in collecting and disposing of waste generated during spill cleanup.

B. AGENCY COORDINATION

The project sponsor must coordinate with the appropriate local, state, and Federal agencies as outlined in these Procedures and in the Certificate.

V. WATERBODY CROSSINGS

A. NOTIFICATION PROCEDURES AND PERMITS

1. Apply to the U.S. Army Corps of Engineers (COE), or its delegated agency, for the appropriate wetland and waterbody crossing permits.
2. Provide written notification to authorities responsible for potable surface water supply intakes located within 3 miles downstream of the crossing at least 1 week before beginning work in the waterbody, or as otherwise specified by that authority.
3. Apply for state-issued waterbody crossing permits and obtain individual or generic section 401 water quality certification or waiver.
4. Notify appropriate state authorities at least 48 hours before beginning trenching or blasting within the waterbody, or as specified in state permits.

B. INSTALLATION

1. Time Window for Construction

Unless expressly permitted or further restricted by the appropriate state agency in writing on a site-specific basis, instream work, except that required to install or remove equipment bridges, must occur during the following time windows:

- a. coldwater fisheries - June 1 through September 30; and

b. coolwater and warmwater fisheries - June 1 through November 30.

2. Extra Work Areas

- a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from water's edge, except where the adjacent upland consists of actively cultivated or rotated cropland or other disturbed land.
- b. The project sponsor shall file with the Secretary for review and written approval by the Director, a site-specific construction plan for each extra work area with a less than 50- foot setback from the water's edge, (except where the adjacent upland consists of actively cultivated or rotated cropland or other disturbed land) and a site-specific explanation of the conditions that will not permit a 50- foot setback.
- c. Limit clearing of vegetation between extra work areas and the edge of the waterbody to the certificated construction right-of-way.
- d. Limit the size of extra work areas to the minimum needed to construct the waterbody crossing.

3. General Crossing Procedures

- a. Comply with the COE, or its delegated agency, permit terms and conditions.
- b. Construct crossings as close to perpendicular to the axis of the waterbody channel as engineering and routing conditions permit.
- c. If the pipeline parallels a waterbody, attempt to maintain at least 15 feet of undisturbed vegetation between the waterbody (and any adjacent wetland) and the construction rightof-way.
- d. Where waterbodies meander or have multiple channels, route the pipeline to minimize the number of waterbody crossings.
- e. Maintain adequate flow rates to protect aquatic life, and prevent the interruption of existing downstream uses.
- f. Waterbody buffers (extra work area setbacks, refueling restrictions, etc.) must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete.

4. Spoil Pile Placement and Control

- a. All spoil from minor and intermediate waterbody crossings, and upland spoil from major waterbody crossings, must be placed in the construction right-of-way at least 10 feet from the water's edge or in additional extra work areas as described in section V.B.2.
- b. Use sediment barriers to prevent the flow of spoil or heavily silt-laden water into any waterbody.

5. Equipment Bridges

- a. Only clearing equipment and equipment necessary for installation of equipment bridges may cross waterbodies prior to bridge installation. Limit the number of such crossings of each waterbody to one per piece of clearing equipment.
- b. Construct equipment bridges to maintain unrestricted flow and to prevent soil from entering the waterbody. Examples of such bridges include:
 - (1) equipment pads and culvert(s);
 - (2) equipment pads or railroad car bridges without culverts;
 - (3) clean rock fill and culvert(s); and
 - (4) flexi-float or portable bridges.

Additional options for equipment bridges may be utilized that achieve the performance objectives noted above. Do not use soil to construct or stabilize equipment bridges.

- c. Design and maintain each equipment bridge to withstand and pass the highest flow expected to occur while the bridge is in place. Align culverts to prevent bank erosion or streambed scour. If necessary, install energy dissipating devices downstream of the culverts.
- d. Design and maintain equipment bridges to prevent soil from entering the waterbody.
- e. Remove equipment bridges as soon as possible after permanent seeding unless the COE, or its delegated agency, authorizes it as a permanent bridge.
- f. If there will be more than 1 month between final cleanup and the beginning of permanent seeding and reasonable alternative access to the right-of-way is available, remove equipment bridges as soon as possible after final cleanup.

6. Dry-Ditch Crossing Methods

a. Unless approved otherwise by the appropriate state agency, install the pipeline using one of the dry-ditch methods outlined below for crossings of waterbodies up to 30 feet wide (at the water's edge at the time of construction) that are state-designated as either coldwater or significant coolwater or warmwater fisheries.

b. Dam and Pump

(1) The dam-and-pump method may be used without prior approval for crossings of waterbodies where pumps can adequately transfer streamflow volumes around the work area, and there are no concerns about sensitive species passage.

(2) Implementation of the dam-and-pump crossing method must meet the following performance criteria:

- (i) use sufficient pumps, including onsite backup pumps, to maintain downstream flows;
- (ii) construct dams with materials that prevent sediment and other pollutants from entering the waterbody (e.g., sandbags or clean gravel with plastic liner);
- (iii) screen pump intakes;
- (iv) prevent streambed scour at pump discharge; and
- (v) monitor the dam and pumps to ensure proper operation throughout the waterbody crossing.

c. Flume Crossing

The flume crossing method requires implementation of the following steps:

- (1) install flume pipe after blasting (if necessary), but before any trenching;
- (2) use sand bag or sand bag and plastic sheeting diversion structure or equivalent to develop an effective seal and to divert stream flow through the flume pipe (some modifications to the stream bottom may be required in to achieve an effective seal);
- (3) properly align flume pipe(s) to prevent bank erosion and streambed scour;

(4) do not remove flume pipe during trenching, pipelaying, or backfilling activities, or initial streambed restoration efforts; and

(5) remove all flume pipes and dams that are not also part of the equipment bridge as soon as final cleanup of the stream bed and bank is complete.

d. Horizontal Directional Drill (HDD)

To the extent they were not provided as part of the pre-certification process, for each waterbody or wetland that would be crossed using the HDD method, provide a plan that includes:

(1) site-specific construction diagrams that show the location of mud pits, pipe assembly areas, and all areas to be disturbed or cleared for construction;

(2) a description of how an inadvertent release of drilling mud would be contained and cleaned up; and

(3) a contingency plan for crossing the waterbody or wetland in the event the directional drill is unsuccessful and how the abandoned drill hole would be sealed, if necessary.

7. Crossings of Minor Waterbodies

Where a dry-ditch crossing is not required, minor waterbodies may be crossed using the open-cut crossing method, with the following restrictions:

a. except for blasting and other rock breaking measures, complete instream construction activities (including trenching, pipe installation, backfill, and restoration of the streambed contours) within 24 hours. Streambanks and unconsolidated streambeds may require additional restoration after this period;

b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and

c. equipment bridges are not required at minor waterbodies that do not have a state-designated fishery classification (e.g., agricultural or intermittent drainage ditches). However, if an equipment bridge is used it must be constructed as described in section V.B.5.

8. Crossings of Intermediate Waterbodies

Where a dry-ditch crossing is not required, intermediate waterbodies may be crossed

using the open-cut crossing method, with the following restrictions:

- a. complete instream construction activities (not including blasting and other rock breaking measures) within 48 hours, unless site-specific conditions make completion within 48 hours infeasible;
- b. limit use of equipment operating in the waterbody to that needed to construct the crossing; and
- c. all other construction equipment must cross on an equipment bridge as specified in section V.B.5.

9. Crossings of Major Waterbodies

Before construction, the project sponsor shall file with the Secretary for the review and written approval by the Director a detailed, site-specific construction plan and scaled drawings identifying all areas to be disturbed by construction for each major waterbody crossing (the scaled drawings are not required for any offshore portions of pipeline projects). This plan should be developed in consultation with the appropriate state and Federal agencies and should include extra work areas, spoil storage areas, sediment control structures, etc., as well as mitigation for navigational issues. The Environmental Inspector may adjust the final placement of the erosion and sediment control structures in the field to maximize effectiveness.

10. Temporary Erosion and Sediment Control

Install sediment barriers (as defined in section IV.F.2.a. of the Plan) immediately after initial disturbance of the waterbody or adjacent upland. Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan; however, the following specific measures must be implemented at stream crossings:

- a. install sediment barriers across the entire construction right-of-way at all waterbody crossings, where necessary to prevent the flow of sediments into the waterbody. In the travel lane, these may consist of removable sediment barriers or driveable berms. Removable sediment barriers can be removed during the construction day, but must be re-installed after construction has stopped for the day and/or when heavy precipitation is imminent;
- b. where waterbodies are adjacent to the construction right-of-way, install

sediment barriers along the edge of the construction right-of-way as necessary to contain spoil and sediment within the construction right-of-way; and

c. use trench plugs at all waterbody crossings, as necessary, to prevent diversion of water into upland portions of the pipeline trench and to keep any accumulated trench water out of the waterbody.

11. Trench Dewatering

Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in heavily silt-laden water flowing into any waterbody. Remove the dewatering structures as soon as possible after the completion of dewatering activities.

C. RESTORATION

1. Use clean gravel or native cobbles for the upper 1 foot of trench backfill in all waterbodies that contain coldwater fisheries.
2. For open-cut crossings, stabilize waterbody banks and install temporary sediment barriers within 24 hours of completing instream construction activities. For dry-ditch crossings, complete streambed and bank stabilization before returning flow to the waterbody channel.
3. Return all waterbody banks to preconstruction contours or to a stable angle of repose as approved by the Environmental Inspector.
4. Application of riprap for bank stabilization must comply with COE, or its delegated agency, permit terms and conditions.
5. Unless otherwise specified by state permit, limit the use of riprap to areas where flow conditions preclude effective vegetative stabilization techniques such as seeding and erosion control fabric.
6. Revegetate disturbed riparian areas with conservation grasses and legumes or native plant species, preferably woody species.
7. Install a permanent slope breaker across the construction right-of-way at the base of slopes greater than 5 percent that are less than 50 feet from the waterbody, or as needed to prevent sediment transport into the waterbody. In addition, install sediment barriers as outlined in the Plan. In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the waterbody.

8. Sections V.C.3. through V.C.6. above also apply to those perennial or intermittent streams not flowing at the time of construction.

D. POST-CONSTRUCTION MAINTENANCE

1. Limit vegetation maintenance adjacent to waterbodies to allow a riparian strip at least 25 feet wide, as measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way.

However, to facilitate periodic pipeline corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be maintained in a herbaceous state. In addition, trees that are located within 15 feet of the pipeline that are greater than 15 feet in height may be cut and removed from the permanent right-of-way.

2. Do not use herbicides or pesticides in or within 100 feet of a waterbody except as allowed by the appropriate land management or state agency.

VI. WETLAND CROSSINGS

A. GENERAL

1. The project sponsor shall conduct a wetland delineation using the current Federal methodology and file a wetland delineation report with the Secretary before construction. This report shall identify:

- a. by milepost all wetlands that would be affected;
- b. the National Wetlands Inventory (NWI) classification for each wetland;
- c. the crossing length of each wetland in feet; and
- d. the area of permanent and temporary disturbance that would occur in each wetland by NWI classification type.

The requirements outlined in this section do not apply to wetlands in actively cultivated or rotated cropland. Standard upland protective measures, including workspace and topsoiling requirements, apply to these agricultural wetlands.

2. Route the pipeline to avoid wetland areas to the maximum extent possible. If a wetland cannot be avoided or crossed by following an existing right-of-way, route the new pipeline in a manner that minimizes disturbance to wetlands. Where looping an existing pipeline, overlap the existing pipeline right-of-way with the new construction right-of-way. In addition, locate the loop line no more than 25 feet away from the existing pipeline unless sitespecific constraints would adversely affect the stability of the existing pipeline.

3. Limit the width of the construction right-of-way to 75 feet or less. Prior written approval of the Director is required where topographic conditions or soil limitations require that the construction right-of-way width within the boundaries of a federally delineated wetland be expanded beyond 75 feet. Early in the planning process the project sponsor is encouraged to identify site-specific areas where existing soils lack adequate unconfined compressive strength that would result in excessively wide ditches and/or difficult to contain spoil piles.
4. Wetland boundaries and buffers must be clearly marked in the field with signs and/or highly visible flagging until construction-related ground disturbing activities are complete.
5. Implement the measures of sections V. and VI. in the event a waterbody crossing is located within or adjacent to a wetland crossing. If all measures of sections V. and VI. cannot be met, the project sponsor must file with the Secretary a site-specific crossing plan for review and written approval by the Director before construction. This crossing plan shall address at a minimum:
 - a. spoil control;
 - b. equipment bridges;
 - c. restoration of waterbody banks and wetland hydrology;
 - d. timing of the waterbody crossing;
 - e. method of crossing; and
 - f. size and location of all extra work areas.
6. Do not locate aboveground facilities in any wetland, except where the location of such facilities outside of wetlands would prohibit compliance with U.S. Department of Transportation regulations.

B. INSTALLATION

1. Extra Work Areas and Access Roads

- a. Locate all extra work areas (such as staging areas and additional spoil storage areas) at least 50 feet away from wetland boundaries, except where the adjacent upland consists of actively cultivated or rotated cropland or other disturbed land.
- b. The project sponsor shall file with the Secretary for review and written approval by the Director, a site-specific construction plan for each extra work area with a less than 50- foot setback from wetland boundaries (except where

adjacent upland consists of actively cultivated or rotated cropland or other disturbed land) and a site-specific explanation of the conditions that will not permit a 50- foot setback.

c. Limit clearing of vegetation between extra work areas and the edge of the wetland to the certificated construction right-of-way.

d. The construction right-of-way may be used for access when the wetland soil is firm enough to avoid rutting or the construction right-of-way has been appropriately stabilized to avoid rutting (e.g., with timber riprap, prefabricated equipment mats, or terra mats).

In wetlands that cannot be appropriately stabilized, all construction equipment other than that needed to install the wetland crossing shall use access roads located in upland areas. Where access roads in upland areas do not provide reasonable access, limit all other construction equipment to one pass through the wetland using the construction right-of-way.

e. The only access roads, other than the construction right-of-way, that can be used in wetlands without Director approval, are those existing roads that can be used with no modification and no impact on the wetland.

2. Crossing Procedures

a. Comply with COE, or its delegated agency, permit terms and conditions

b. Assemble the pipeline in an upland area unless the wetland is dry enough to adequately support skids and pipe.

c. Use "push-pull" or "float" techniques to place the pipe in the trench where water and other site conditions allow.

d. Minimize the length of time that topsoil is segregated and the trench is open.

e. Limit construction equipment operating in wetland areas to that needed to clear the construction right-of-way, dig the trench, fabricate and install the pipeline, backfill the trench, and restore the construction right-of-way.

f. Cut vegetation just aboveground level, leaving existing root systems in place, and remove it from the wetland for disposal.

g. Limit pulling of tree stumps and grading activities to directly over the trenchline. Do not grade or remove stumps or root systems from the rest of the construction right-of-way in wetlands unless the Chief Inspector and

Environmental Inspector determine that safety related construction constraints require grading or the removal of tree stumps from under the working side of the construction right-of-way.

h. Segregate the top 1 foot of topsoil from the area disturbed by trenching, except in areas where standing water is present or soils are saturated or frozen. Immediately after backfilling is complete, restore the segregated topsoil to its original location.

i. Do not use rock, soil imported from outside the wetland, tree stumps, or brush riprap to support equipment on the construction right-of-way.

j. If standing water or saturated soils are present, or if construction equipment causes ruts or mixing of the topsoil and subsoil in wetlands, use low-ground-weight construction equipment, or operate normal equipment on timber riprap, prefabricated equipment mats, or terra mats.

k. Do not cut trees outside of the approved construction work area to obtain timber for riprap or equipment mats.

l. Attempt to use no more than two layers of timber riprap to support equipment on the construction right-of-way.

m. Remove all project-related material used to support equipment on the construction right-of-way upon completion of construction.

3. Temporary Sediment Control

Install sediment barriers (as defined in section IV.F.2.a. of the Plan) immediately after initial disturbance of the wetland or adjacent upland. Sediment barriers must be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench). Except as noted below in section VI.B.3.c., maintain sediment barriers until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. Temporary erosion and sediment control measures are addressed in more detail in the Plan.

a. Install sediment barriers across the entire construction right-of-way at all wetland crossings where necessary to prevent sediment flow into the wetland. In the travel lane, these may consist of removable sediment barriers or driveable berms. Removable sediment barriers can be removed during the construction day, but must be re-installed after construction has stopped for the day and/or when heavy precipitation is imminent

b. Where wetlands are adjacent to the construction right-of-way and the right-of-way slopes toward the wetland, install sediment barriers along the edge of the construction right-of-way as necessary to prevent sediment flow into the wetland.

c. Install sediment barriers along the edge of the construction right-of-way as necessary to contain spoil and sediment within the construction right-of-way through wetlands. Remove these sediment barriers during right-of-way cleanup.

4. Trench Dewatering

Dewater the trench (either on or off the construction right-of-way) in a manner that does not cause erosion and does not result in heavily silt laden water flowing into any wetland. Remove the dewatering structures as soon as possible after the completion of dewatering activities.

C. RESTORATION

1. Where the pipeline trench may drain a wetland, construct trench breakers and/or seal the trench bottom as necessary to maintain the original wetland hydrology.

2. For each wetland crossed, install a trench breaker at the base of slopes near the boundary between the wetland and adjacent upland areas. Install a permanent slope breaker across the construction right-of-way at the base of a slopes greater than 5 percent where the base of the slope is less than 50 feet from the wetland, or as needed to prevent sediment transport into the wetland. In addition, install sediment barriers as outlined in the Plan. In some areas, with the approval of the Environmental Inspector, an earthen berm may be suitable as a sediment barrier adjacent to the wetland.

3. Do not use fertilizer, lime, or mulch unless required in writing by the appropriate land management or state agency.

4. Consult with the appropriate land management or state agency to develop a project-specific wetland restoration plan. The restoration plan should include measures for re-establishing herbaceous and/or woody species, controlling the invasion and spread of undesirable exotic species (e.g., purple loosestrife and phragmites), and monitoring the success of the revegetation and weed control efforts. Provide this plan to the FERC staff upon request.

5. Until a project-specific wetland restoration plan is developed and/or implemented, temporarily revegetate the construction right-of-way with annual ryegrass at a rate of 40 pounds/acre (unless standing water is present).

6. Ensure that all disturbed areas successfully revegetate with wetland herbaceous and/or woody plant species.
7. Remove temporary sediment barriers located at the boundary between wetland and adjacent upland areas after upland revegetation and stabilization of adjacent upland areas are judged to be successful as specified in section VII.A.5. of the Plan.

D. POST-CONSTRUCTION MAINTENANCE

1. Do not conduct vegetation maintenance over the full width of the permanent right-of-way in wetlands. However, to facilitate periodic pipeline corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be maintained in a herbaceous state. In addition, trees within 15 feet of the pipeline that are greater than 15 feet in height may be selectively cut and removed from the permanent right-of-way.
2. Do not use herbicides or pesticides in or within 100 feet of a wetland, except as allowed by the appropriate land management agency or state agency.
3. Monitor and record the success of wetland revegetation annually for the first 3 years after construction or until wetland revegetation is successful. At the end of 3 years after construction, file a report with the Secretary identifying the status of the wetland revegetation efforts. Include the percent cover achieved and problem areas (weed invasion issues, poor revegetation, etc.). Continue to file a report annually until wetland revegetation is successful.
4. Wetland revegetation shall be considered successful if the cover of herbaceous and/or woody species is at least 80 percent of the type, density, and distribution of the vegetation in adjacent wetland areas that were not disturbed by construction. If revegetation is not successful at the end of 3 years, develop and implement (in consultation with a professional wetland ecologist) a remedial revegetation plan to actively revegetate the wetland. Continue revegetation efforts until wetland revegetation is successful.

VII. HYDROSTATIC TESTING

A. NOTIFICATION PROCEDURES AND PERMITS

1. Apply for state-issued water withdrawal permits, as required.
2. Apply for National Pollutant Discharge Elimination System (NPDES) or state-issued discharge permits, as required.
3. Notify appropriate state agencies of intent to use specific sources at least 48 hours before testing activities unless they waive this requirement in writing.

B. GENERAL

1. Perform non-destructive testing of all pipeline section welds or hydrotest the pipeline sections, before installation under waterbodies or wetlands.
2. If pumps used for hydrostatic testing are within 100 feet of any waterbody or wetland, address the operation and refueling of these pumps in the project's Spill Prevention and Response Procedures.
3. The project sponsor shall file with the Secretary before construction a list identifying the location of all waterbodies proposed for use as a hydrostatic test water source or discharge location.

C. INTAKE SOURCE AND RATE

1. Screen the intake hose to prevent entrainment of fish.
2. Do not use state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate Federal, state, and/or local permitting agencies grant written permission.
3. Maintain adequate flow rates to protect aquatic life, provide for all waterbody uses, and provide for downstream withdrawals of water by existing users.
4. Locate hydrostatic test manifolds outside wetlands and riparian areas to the maximum extent practicable.

D. DISCHARGE LOCATION, METHOD, AND RATE

1. Regulate discharge rate, use energy dissipation device(s), and install sediment barriers, as necessary, to prevent erosion, streambed scour, suspension of sediments, or excessive stream flow.
2. Do not discharge into state-designated exceptional value waters, waterbodies which provide habitat for federally listed threatened or endangered species, or waterbodies designated as public water supplies, unless appropriate Federal, state, and local permitting agencies grant written permission.

Appendix H

Spill Prevention Control and Countermeasures Plan (SPCC)

APPENDIX H

SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN

1.1 General Description of SPCC Plan

GPLNG Terminal (GPLNG) has prepared a Spill Prevention Control and Countermeasure (SPCC) Plan which addresses preparedness, prevention, and countermeasures (i.e. clean-up) provisions during the shore and marine based activities. The GPLNG SPCC Plan meets all federal, state, and local emergency response programs. The Plan is designed to minimize hazards to human health and/or the environment from any unplanned sudden or non-sudden releases of oil, gas, lubricants or other potential pollutant materials during construction of the terminal. Pollution prevention and spill prevention, control, and countermeasures which pertain to the operation of the terminal and offloading vessels will be governed by US EPA and by U.S. Coast Guard (USCG) regulations. Prior to operations, GPLNG will develop operations spill response plans and procedures in accordance with all federal and state regulations such as, but not limited to, US EPA 40 CFR 110, 112, USCG 33 CFR 127, 153, and 154.

The specific elements addressed in this Plan include:

- Procedures to identify the type and quantity of material handled for this project;
- Spill and leak prevention and preparedness measures;
- Oil and hazardous material spill prevention and response training;
- Emergency response equipment
- Construction Equipment Pollution Prevention Measures
- Spill notification procedures pursuant to 33 CFR 153

1.2 Material and Waste Inventory

Prior to construction, contractors will complete a Material and Waste Inventory Table (Table 1). This table will present a list of locations, sources and quantities of materials used or stored on GPLNG premises with the potential of causing environmental degradation or endangerment of public health or safety through accidental releases. This list includes nutrients, such as fertilizers and sanitary wastes; solid waste, such as scrap metals, masonry products and other construction raw materials and debris; construction chemicals, such as paints, soil additives and acids for cleaning; petroleum products, such as fuels and lubricants; and other materials.

Material Safety Data Sheets (MSDS) for all hazardous substances listed in Table 1 will be included in Appendix D of the SWPPP.

1.3 Spill and Leak Prevention and Preparedness

1.3.1 Prevention and Preparedness

Contractor will be required to take the following precautions to prevent an onshore or marine spill from occurring and to be prepared in the event that a spill does occur.

Containers

- All containers shall be stored on pallets and surrounded with temporary containment.
- Incompatible materials shall not be stored in the same containment area.
- Storage areas that will hold more than six 55-gallon drums will include impermeable liners such as polyethylene lined earthen berms. Smaller areas, storing less than six 55-gallon drums, will use containment as above or a portable manufactured rack with a containment feature.
- Containment areas shall be capable of containing 110% of the volume of material stored in these areas.
- All container storage areas shall be inspected by environmental inspectors daily for leaks and deterioration.
- Leaking and/or deteriorated containers shall be replaced as soon as the condition is first detected.
- No storage area shall be unattended for periods longer than one (1) day.

Tanks

- Contractors shall operate only tanks for fuel and material storage which meet the approval of GPLNG environmental inspectors. Single wall tanks shall be provided with temporary containment.
- Self-supporting tanks shall be constructed of carbon steel or other materials compatible with the contents of each tank.
- All tanks will be elevated a maximum of two (2) feet above grade.
- All tanks shall be inspected daily for leaks and deterioration.
- Vehicle-mounted tanks shall be equipped with flame/spark arrestors on all vents to ensure that ignition does not occur.
- Tanks will not be used to store incompatible materials in sequence unless first thoroughly decontaminated.
- Any tank utilized at different construction locations will be thoroughly decontaminated between locations.

Loading/Unloading Areas

- Transferring of liquids and onshore base refueling shall only occur in predesignated locations at least 100 feet from all waterbodies and wetlands and 200 feet from any water well. Marine refueling operations shall be attended with hose connections over spill containment devices.
- All loading/unloading areas will be attended and closely monitored to prevent leaks and spills, and ensure immediate response in the event of a spill.
- All hose connections shall be inspected for leaks. If leaks should occur, the operation shall cease until the leak is repaired and a containment pan is placed under the leaking connection.
- Any service vehicle or vessel used to transport lubricants and fuel must be equipped with an emergency response kit. At a minimum, this kit will include:
 - 10, 48" x 3" oil socks,
 - 5, 17" x 17" oil pillows,
 - 1, 10' x 4" oil boom,
 - 20, 24" x 24" x 3/8" oil mats,
 - Garden size, 6 mil, polyethylene bags,
 - 10 pair of latex gloves, and
 - 1, 55-gallon polyethylene open-head drum.
 - In addition, if chemical transfer is involved, a smaller chemical response kit shall be available which contains:
 - 1 bag of loose chemical pulp,
 - 2 to 3, 17" x 17" chemical pillows,
 - 2, 48" x 3" chemical socks,
 - 5, 18" x 18" x 3/8" adsorbent mats,
 - garden size, 6 mil, polyethylene bags,
 - 10 pair of latex gloves, and
 - 1, 30-gallon polyethylene open-head drum, and hazardous waste labels.

Each onshore refueling vehicle shall have a sufficient number of shovels, brooms, 10-mil polyethylene sheeting, and fire protection equipment to contain a moderate oil/fuel spill. The area beneath loading/unloading location shall be inspected for spills before and after each use.

Concrete Coating Areas for Field Joints

Concrete coating of pipeline field joints for road, rail, waterbody, and wetland crossings shall be performed at least 100 feet from the edge of all waterbodies. Where topographic conditions

and/or workspace limitations necessitate application of concrete coating within 100 feet of a waterbody, the following containment measures shall be performed:

- Concrete coating materials shall be temporarily stored in an earthen berm with polyethylene underling of sufficient mil thickness, or in a portable containment tray constructed of steel plate measuring a minimum of four (4) feet square by one (1) foot deep.
- Portable-mechanical mixing equipment, if required, shall be operated within a containment area constructed of temporary earthen berms and polyethylene underling of sufficient mil thickness.
- Manual mixing of concrete materials in a portable container (such as a 55 gallon drum cut in half, or equivalent) shall be performed within an earthen berm with polyethylene underling of sufficient mil thickness, or within a portable containment tray constructed of steel plate, measuring a minimum of four (4) feet square by one (1) foot deep.

1.3.2 Training

Contractors are responsible for properly instructing personnel in the operation and maintenance of equipment to prevent the discharge or spill of fuels, oils, lubricants or other hazardous materials. Spill prevention briefings with the construction crew will be scheduled and conducted by contractors to ensure adequate understanding of spill prevention measures. These briefings will highlight:

- The contents of this SPCC plan and applicable federal, state and local laws governing onshore and marine spill prevention and management;
- Precautionary measures to prevent spills;
- Sources of spills, such as equipment failure or malfunction;
- Standard pollution specific response procedures in case of a spill;
- Equipment, materials and supplies available for clean-up of a spill;
- Inspection of spill response kits; and
- A list of known spill events

1.4 Construction Equipment Inspection/Maintenance

The Contractor will inspect and maintain the marine and onshore construction equipment that must be fueled and/or lubricated according to a strict schedule. Such equipment will be maintained so as not to become a source of pollution. GPLNG will require its contractors to provide a copy of their inspection schedule to its environmental inspectors.

1.5 Emergency Response Equipment

Onshore and marine construction sites will have adequate manpower and equipment necessary to divert any shore or deck spills from reaching water bodies or wetland areas. Emergency equipment necessary to contain onshore spills may include, but not be limited to, shovels, oil absorbent booms, pillows, socks and/or mats and chemical absorbent pulp, pillows, socks and/or mats. Spills, which could occur during construction of the marine slip, will be contained and be cleaned-up by contractors with the appropriate equipment such as booms, skimmers, etc.

Contractors shall be required to prepare a written Plan, to be approved by GPLNG environmental inspectors which presents the type, quantity and location of the emergency response equipment and personal protective equipment (see Table 2 as a guide). The Plan will also include a routine inspection and maintenance schedule for the emergency response equipment. Additionally, the Contractor's Plan will identify the response procedures, impact minimization measures, and responsible parties necessary to address a spill, both on and offshore. Contractors' choice of impact minimization measures and equipment will be tailored to meet the characteristics of the affected terrain/waterways, weather at the time of construction, as well as the types and amounts of material that could potentially be spilled.

1.6 Emergency Response Procedures

This section provides a general description of the emergency response procedures to address a potential spill.

1.6.1 Company and Contractor Responsibilities

Contractors and GPLNG on-site personnel share responsibilities for spill prevention, control and countermeasures. The GPLNG Safety, Health, and Environment Department (SHE) will track and confirm contractors' state and/or federal notifications are made.

Both GPLNG and the Contractor will designate an Emergency Coordinator (EC) for the site. Environmental Inspectors will act as the Emergency Coordinator for GPLNG. Table 3 presents some of the key emergency contact names and corresponding telephone numbers.

Contractor/Emergency Coordinator Responsibilities

- Coordinating response to all spills, which occur as a result of its operations.
- All spills (including a sheen created on water) must be reported to a GPLNG environmental inspector.
- Contractors shall supply necessary manpower and equipment to address releases resulting from their operations.
- In the event of a spill, contractors shall:
 - Immediately notify the GPLNG environmental Inspector of any spills.
 - Direct remediation efforts to contain and control releases in accordance with this plan.
 - Document the remedial effort, including taking photographs if possible.

- o Coordinate cleaning and disposal activities.

GPLNG Responsibilities

- GPLNG's Environmental Inspector will act as the Company's EC for the site.
- GPLNG's Environmental Inspector will be responsible for notifying appropriate local agencies of releases.

Spills of oil or hazardous material that may exceed the reportable quantity (RQ) must be contained and reported. Should a release occur which exceeds the RQ, the following steps should be taken:

- GPLNG's environmental inspector will notify the National Response Center immediately at (800) 424-8802
- GPLNG's environmental inspector will notify TCEQ Spill Response center at (512) 463-7727
- GPLNG's environmental inspector will submit a written description of the release to the USEPA Regional Office in Dallas providing the date and circumstances of the release and the preventative measures taken to prevent future releases.
- GPLNG's environmental inspector will add the information to this SPCC Plan.

In the event of a spill the environmental Inspector shall:

- Determine the source, character, amount and extent of the release or incident.
- Assess the potential hazards to the site, environment, and neighboring community due to the incident.
- If necessary, notify the local fire department, law enforcement authority, health authority as appropriate. The following information should be provided:
 - o name of the caller and callback number;
 - o the exact location and nature of the incident;
 - o the extent of any personnel injuries and damage;
 - o the extent of release;
 - o the materials involved, and appropriate safety information.
- Notify the SHE office immediately and the GPLNG **Area Field Construction Office** listed in **Table 3** for releases of:
 - o one pound or more of a solid material;
 - o five gallons or more of a liquid material;
 - o any spill to water, including any sheen on water.

- Contact the **Division Area Office** for any spill of liquids.
- If necessary, contact outside remediation services, in coordination with the SHE, to assist with clean up.
- Commit manpower and equipment for minor incidents, which can be reasonably corrected by GPLNG and contractor personnel.
- Complete Waste Removal Storage and Disposal Record Form (WRSDR Forms to be obtained from the SHE) to track waste generated during this project.
- Complete and distribute a "**Field Spill Report**" (**GPLNG Form**) and transmit the original copy of the report to the SHE.

Safety, Health, and Environment Department Responsibilities

- Upon receiving spill information, Environmental Inspector will be responsible for evaluating the information to determine reporting requirements. If the incident requires reporting, notify the appropriate regulatory agencies. This includes both verbal and written reports.
- Contact outside remediation services, in coordination with the GPLNG Environmental Inspector, to assist with incidents, which require additional resources.
- Arrange for the transport of hazardous waste to an approved disposal facility within the applicable federal and state regulatory requirements.

1.6.2 Spill Clean-Up Procedures

The following identifies the general clean-up and control measures to be utilized in the event of a spill of oil, fuel, or a hazardous substance.

Oil/Fuel Spills

- Small spills and leaks must be remediated as soon as feasible. Use adsorbent pads wherever possible to reduce the amount of contaminated area.
- Restrict the spill by stopping or diverting flow.
- If the release exceeds the containment system capacity, immediately construct or access additional containment. Every effort must be made to prevent the seepage of oil into soils and waterways.
- If a release occurs into a facility drain or nearby stream, immediately pump any floating layer into drums. For high velocity streams, place oil booms or hay bales between the release area and the site boundary. As soon as possible, excavate contaminated soils and sediments.

- If the release occurs in the slip, it will be contained by the deployment of a floating boom barrier and then subsequently removed by appropriate means. If absorbent pads or used they will be removed and stored in sealed containers and disposed in accordance with all federal, state and local regulations.
- After all recoverable oil has been collected and drummed, place oil and containment/cleanup material in containers.
- Label the drum following the procedures required by applicable state and federal waste management regulations.
- Move drum to secure staging or storage area.
- Document and report activities to SHE as soon as feasible.

Hazardous Substance Releases

- Identify the material and quantity released.
- Block off drains and containment areas to limit the extent of the spill. Never wash down a spill with water.
- Ensure that Personal Protective Equipment and containers are compatible with the substance.
- Collect and reclaim as much of the spill as possible using a hand pump or similar device. Containerize contaminated soils and water, if applicable, in appropriate DOT containers. Never place incompatible materials in the same drum.
- Sample the substance for analysis and waste profiling, according to instructions from SHE.
- Decontaminate all equipment in a contained area. Collect and containerize decontamination fluids and materials.
- Label the drum following DOT and local regulations.
- Move the drum to secure staging or storage area.
- Document and report activities to SHE as soon as feasible.

1.6.3 Disposal of Contaminated Materials/Soils

Contractor shall work with the SHE Department to characterize waste generated during this project. All wastes generated as a result of spill response activities will be analyzed to determine if hazardous. Knowledge of the contaminant(s) may be applied to classify the waste/spill materials as determined by Material Safety Data Sheets (MSDS) and the SHE Department.

The Contractor is responsible for the proper disposal of wastes generated during this project. This includes obtaining applicable authorizations and registrations for waste disposal. Spill material would be collected through the use of containment and/or absorbent materials and disposed at an approved location.

1.6.4 Equipment Cleaning/Storage

Upon completion of remedial activities, the Contractor shall be responsible for decontaminating emergency response equipment. The Contractor shall be responsible for replacing all spent emergency response equipment prior to resuming construction activities. Reusable personal protective equipment shall be tested and inventoried by the Contractor prior to being placed back into service.

1.7 Housekeeping Program

The construction area will be maintained in a neat and orderly manner. Solid wastes, such as food wrappings, cigarette butts and packets, styrofoam cups and plates, and similar wastes will be disposed of off-site. Any spills or leaks will be cleaned up as expeditiously as possible. Trash will be routinely collected for off-site disposal. Container storage areas will be maintained in a neat and orderly manner.

1.8 Security

Temporary fencing will be installed around fuel storage areas to prevent tampering by unauthorized personnel during non-operational hours. Alternatively, fuel storage tank valves will be locked during non-operational hours.

1.9 External Factors

There will be no direct effect on the construction site due to a power outage or snowstorm. In the event of a flood or strike, all tanks and containers would be removed from the right-of-way and placed in a secure area.

Table 1. Material and Waste Inventory

Oil/Fuel:

Quantity (Gallons):

Storage Location:

Reportable Quantity:

Commercial Chemicals:

Quantity (Gallons):

Storage Location:

Reportable Quantity:

Hazardous and Non-Hazardous Wastes:

Quantity (Gallons):

Storage Location:

Reportable Quantity:

THIS TABLE TO BE COMPLETED BY EPC CONTRACTOR

Table 2. Emergency Response and Personal Protective Equipment

Spill Response:

Equipment:

Quantity:

Location:

Fire Protection:

Equipment:

Quantity:

Location:

Personnel Protection:

Equipment:

Quantity:

Location:

THIS TABLE TO BE COMPLETED BY EPC CONTRACTOR

CONTRACTOR WILL BE REQUIRED TO PROVIDE ALL SAFETY AND PERSONAL PROTECTION
EQUIPMENT AS REQUIRED BY CODE OR STANDARD AT THE TIME OF CONSTRUCTION

Table 3. Key Emergency Contacts

The list of key personnel who will be contacted in the event of an emergency or spill incident include the following:

- I. GPLNG Emergency Contacts
 - A. GPLNG Emergency Coordinator
 - B. Field Construction Office
 - C. GPLNG Health Environment & Safety Department
(GPLNG to fill in names, address, and phone numbers and check titles)

- II. Contractor Emergency Contact
 - A. Contractor Emergency Coordinator
Not available at this time. Information to be supplied prior to construction.

- III. Local Authorities

Contacts	Number
National Response Center	(800) 424-8802
Texas Emergency Response Center	(800) 832-8224
MSO Port Arthur	(409) 723-6500
EPA Region VI	(214) 665-2220
Texas Department of Public Safety Emergency Management (Austin, TX)	(512) 424-2000
Jefferson County Dispatch	(409) 835-8411
Port Arthur Emergency Management	(409) 983-8600
Port Arthur Police Department	(409) 983-8616
Port Arthur Fire Department	(409) 983-8700 or 983-8734
St. Mary's Hospital	(409) 989-5400

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Golden Pass Pipeline Project

Spill Prevention, Control, and Countermeasures Plan

1.0 PURPOSE

The purpose of this Spill Prevention, Control, and Countermeasures (SPCC) Plan is to avoid or minimize the impact on the environment in the event of spills of fuels, lubricants or hazardous materials within 100 feet of any water body or wetland associated with the construction of the proposed GP Pipeline System. This Plan is only intended for the construction phase of the pipeline, and a separate SPCC Plan, if required, will be prepared for the operation of the pipeline.

2.0 PROJECT DESCRIPTION

This Upland Erosion Control, Revegetation, and Maintenance Plan was developed to minimize impact on soils during construction of the GP Pipeline System. The proposed GP Pipeline System will be designed to deliver an annual average of 2 billion cubic feet per day (BCFD) of regasified natural gas from the GPLNG Terminal to existing Texas and Louisiana intrastate and interstate natural gas pipeline systems. The GP Pipeline System will consist of three pipelines, and associated pipeline support facilities, including pig launchers and receivers, and metering equipment to include:

- Golden Pass Pipeline, an approximately 77-mile, 36-inch diameter pipeline commencing at the proposed GPLNG Terminal's send-out metering station and continuing to a terminus at a new metering and regulating station (M and R station) at an interconnection with an existing Transcontinental Gas Pipeline Corporation (Transco) interstate pipeline near Starks, Louisiana.
- Golden Pass Loop Line, an approximately 43-mile, 36-inch diameter pipeline commencing at the proposed GPLNG Terminal's send-out metering station parallel to and looping the Golden Pass Pipeline as far as the Texoma Pipeline Meter Station in Orange County, Texas.
- Beaumont Lateral, an approximately 2-mile, 24-inch diameter lateral pipeline connecting the Golden Pass Pipeline to Beaumont-Port Arthur industrial customers including the ExxonMobil Beaumont refinery.

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Golden Pass Pipeline Project

Spill Prevention, Control, and Countermeasures Plan

3.0 TRAINING

Training is a key component of assuring that employees and contractors installing the GP Pipeline System are aware of the SPCC Plan and understand how to comply with the Plan. The Project Manager or his designee, and the Environmental Inspector will be responsible for ensuring the requirements of this section are completed.

- All supervisors and any personnel responsible for handling fuel, lubricants, chemicals, or hazardous materials will receive training on the requirements of this plan.
- Handling of fuel, lubricants, chemicals, or hazardous materials will be conducted by personnel who have been trained for the specific task.
- The training specified above will be completed prior to commencing activities or carrying out tasks associated with such materials.

4.0 EQUIPMENT FUELING AND SERVICING

Part of the planning undertaken prior to construction are the detailed preparations made to assure that storage arrangements for any hazardous materials, chemicals, fuels, lubricating oils, or other such materials required for construction tasks are safe and secured in containers manufactured for their designated purpose. Since the operations base will change locations many times over path of the pipeline, the specific precautions taken at each location will vary. This plan will only address a generic scenario and will not attempt to attempt to address specific conditions that will change with each location.

In general, fueling and servicing of construction equipment will be conducted at distances greater than 100 feet from waterways or wetlands. However, there will be times when it is not feasible to meet this distance requirement, e.g. construction across a large expanse of wetlands. To mitigate any potential environmental impacts in these instances, fueling and servicing personnel will be trained for their specific task(s) and on the requirements of this SPCC Plan, and the procedures outlined in this Plan will be followed if an accidental spill occurs.

The SPCC Plan for construction of the proposed GP Pipeline System consists of:

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Golden Pass Pipeline Project

Spill Prevention, Control, and Countermeasures Plan

- Fueling or servicing of mobile equipment will be performed in a controlled manner with suitable drip trays placed beneath the equipment fuel tank nozzle or sump prior to the work commencing. Absorbent materials/pads will be available at the immediate location while fueling or servicing is taking place, and any spillage will be cleaned up on completion of each operation.
- Fueling or servicing of equipment shall not take place within 200 feet of a private water supply well or within 400 feet of a public water supply well.
- When necessary to fuel or service equipment within 100 feet of a perennial stream bank, waterway, or wetland, it will be documented and performed in a designated area agreed upon by the contractor and the environmental inspector. A berm will be constructed between the equipment and the water or wetland, and the area will be lined with an appropriate synthetic liner. Absorbent pads, coils, straw, or skimmers will be placed on the berm-side of the liner.
- When possible, static equipment (static relative to each new operations base) or storage of hazardous substances will be located a minimum distance of 100 feet from any water body or site boundary and placed within a drip tray. During the filling or servicing of static equipment, a supply of absorbent pads will be available adjacent to the equipment location. Static equipment location and fueling/servicing arrangements will be agreed upon by the contractor and the environmental officer and documented. The storage area will be enclosed by a temporary fence that can be locked to restrict access.
- For the GP Pipeline System Construction Project, all equipment must be inspected by the environmental inspector upon arrival to the project and prior to being placed into service. Visual inspections of the equipment will be made each operating shift by the equipment owner to look for indication of leaks.
- Fuel tanks or equipment located on barges will be located over drip trays or within a containment area suitable to collect leaks or spills and to prevent the release of fluids from the barge. Absorbent pads, etc. will be

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Spill Prevention, Control, and Countermeasures Plan

stored in an adjacent location to the equipment during fueling or servicing. The barge will also be equipped with floating booms capable of immediate deployment in the event of a spill that has reached or has a high probability to reach the waterway.

5.0 TYPICAL SPCC MATERIALS

Each contractor is required to provide a material safety data sheet (MSDS) and expected usage quantities for any fuel, lubricant, chemical, or potentially hazardous substance brought to the site. The environmental inspector will review the MSDSs, determine handling, storage, or usage restrictions/requirements, and communicate any restrictions to the contractor.

Typical materials subject to this SPCC Plan include:

- fuels, oils and greases needed for operation and maintenance of construction equipment;
- paints, other protective coatings, and solvents;
- materials for the batching of concrete.

The individual types of materials will be segregated and stored in accordance with manufacturers' recommendations and all State or Federal laws as applicable. The quantities of these materials that will be allowed on site at any one time will be limited to that required as short-term supply. The exact quantities of materials allowed will be determined as part of the pre-construction planning activity.

6.0 SPILL HANDLING PROCEDURE

6.1 LAND-BASED

Drip trays and containment areas will be kept clean of any fuel or oil residues at all times. However, in the event of a spill or fuel/oil leak occurring on land-based equipment outside of the drip tray or containment, the source of the discharge will be identified and immediate steps taken to prevent further discharge. The spread of spilled fuel, etc. will be prevented by containment via the use of absorbent material or via dikes/trenches. Spilled material will be placed in suitable containers for disposal, and soils contaminated by the spill along with

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Spill Prevention, Control, and Countermeasures Plan

absorbent material used to clean up the spill will also be collected and sent for disposal at an approved location.

6.2 WATER-BASED

Spills occurring to water will be contained as quickly as possible by deploying a floating boom at the perimeter of the affected area. Spilled material will be collected with the use of a suction pump, buckets, or absorbent materials and placed into a suitable container(s) for disposal at an approved location. The use of approved chemicals, (e.g. Petro-Clean), will be evaluated as an alternative to degrade spilled material that cannot be feasibly recovered.

7.0 EMERGENCY NOTIFICATION PROCEDURE

The employee or contractor who first discovers the spill is responsible for initiating the spill containment and reporting procedures. The employee/contractor will need to use their best judgment to determine if they can safely contain the spill or whether they will require additional resources to provide safe containment – regardless of the decision, the employee/contractor should notify their supervisor or the environmental inspector as soon as it is feasible to do so. Once the safety of all persons in the area has been ensured or once the environmental response team has taken control of the spill, the employee/contractor will report the spill to the environmental officer, the project management team, and the safety department. This team will then initiate the attached emergency notification procedure for a reportable release of hazardous substances or a spill of oil to Federal and State Agencies.

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Spill Prevention, Control, and Countermeasures Plan

8.0 LICENSED PROFESSIONAL ENGINEER CERTIFICATION

I am a licensed Professional Engineer in the State of Texas, and I certify that I am familiar with the requirements of 40 CFR Part 112. Although I have not visited and examined each operations base that will be established, I do certify that I have discussed this Plan with the Project Environmental Officer, and I am confident that the Project Environmental Officer has a full understanding of the requirements of this Plan. I further certify that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and with the requirements of this part, that procedures for the required inspections and testing have been established, and that this Plan is adequate for the facility. This certification shall in no way relieve the owner or operator of a facility of his duty to prepare and fully implement such Plan in accordance with the requirements of this part.

Certified by: _____

PE Name, PE No.

PE Seal

9.0 SPCC PLAN APPROVAL BY GOLDEN PASS PIPELINE MANAGEMENT

This SPCC Plan has been prepared in accordance with good engineering practices and has management approval for use during construction of the Golden Pass Pipeline Project. By approving the Plan, I am also committing the necessary resources to fully implement the Plan.

Approved by: _____

Manager Name and Title

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Golden Pass Pipeline Project

Spill Prevention, Control, and Countermeasures Plan

Facility Contact List

(Construction Phase)

Title	Name	Phone No.
Responsible Manager		
Construction Project Manager		
Environmental Officer		
Contractor #1		
Contractor #2		
Contractor #3		
Contractor #4		
Environmental Response Team		
National Response Center		800.424.8802
TX Emergency Response Center		800.832.8224
LA State Police (satisfies LA Emergency Response)		877.925.6595 or 225.925.6595
Jefferson County Emergency Management		409.722.4371
Jefferson County Emergency Planning Committee		409.722.4371
Jefferson County Emergency Dispatch		409.835.8411
Port Arthur Emergency Management	Port Arthur Police Non-emergency	409.983-8600
Port Arthur Police Department Emergency Management		409.983.8616
Port Arthur Fire Department		409.983.8700
Port Arthur Fire Department	Chief Steve Curran	409.983.8734
Beaumont Fire and Rescue	Micky Bertrand, Fire Chief	409.880.3901
Beaumont Emergency Management		409.880.3916

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Spill Prevention, Control, and Countermeasures Plan

Title	Name	Phone No.
Beaumont Police Department Emergency Management Assistant Coordinator	Robert "RJ" Smith	409.880.3830
City of Orange Fire Office		409.883.1050
Orange County Emergency Management Coordinator (non- emergency)	Chuck Frazier	409.882.7895
Orange County Sheriff's Department Communications Office (Emergency Dispatch for Police, Ambulance and Fire)		409.883-2612
Newton County Sheriff's Office Courthouse Square Newton, TX 75996		409.379.3636
Calcasieu Parish Police Jury – Department of Homeland Security and Emergency Preparedness	Dick Gremillion, Director	337.437.3512
St. Mary's Hospital 3600 Gates Blvd. Port Arthur, TX		409.989.5400
Doctors Hospital 5500 39th Street Groves, TX		409.962.5733
Memorial Hermann Baptist Beaumont Hospital 3080 College St. Beaumont, TX 77701		409.212.5000
Memorial Hermann Baptist Orange Hospital, 608 Strickland Drive Orange, TX 77630		409.883.9361

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Golden Pass Pipeline Project

Spill Prevention, Control, and Countermeasures Plan

Federal Requirements

Reportable Release of Hazardous Substances or a Spill of Oil

Page 1 of 2

See next page for specific Federal Agency reporting details

Form to use: Release of Hazardous Substances or Spills of Oil

Comments: *Timely notification is critical.* Additional detail can be submitted later.

Incident	Response
<p>Oil Spill Spills into or upon waters of the United States (US). Note: Waters of the US are all surface waters.</p>	<p>Call Immediately:</p> <p style="text-align: center;">National Response Center (NRC) 800.424.8802 (24-hr number)</p>
<p>Pipeline Break – DOT Line Loss of:</p> <ul style="list-style-type: none"> • 50 barrels of petroleum 5 barrels of highly volatile liquid (NGLs) 	<p>Next: Call the number provided in the specific Texas Reportable Spill/Release procedure. Remember that a report to NRC does not meet your requirements to the State of Texas.</p>
<p>Hazardous Substances Release of a reportable quantity (RQ) of hazardous substance to air, water, or land. See the table below or go to the RQ List for chemicals not listed below.</p>	

Reportable Quantities (RQs) for Most Common Hazardous Substances found in the Midstream Business		
Substance	RQ in Pounds	Equivalents
Benzene	10	1.3 gallons; 180 gallons of gasoline (1% benzene)
Butadiene	10	<2.0 gallons liquid. 69 cu.ft. gas at 70°F
Chlorine Gas	10	<1.0 gallon; 53 std. cu.ft.
Diethanolamine	100	11.0 gallons
Ethylene glycol	5000	650 gallons (80% ethylene glycol)
Hexane	5000	9600 gallons of gasoline (9.4% hexane)
Hydrogen Sulfide	100	1116 std. cu.ft. 100 MCF at 1% H ₂ S; 45 MCF at 5% H ₂ S 11.6 MCF at 10% H ₂ S; 5.6 MCF at 20% H ₂ S
Isoprene	500	85 gallons liquid (boils at 93°F)
Mercury	1	<2 fluid ounces
Methanol	5000	754 gallons
PCBs	1	0.75 gallons
Potassium Hydroxide	1000	
Sodium Hydroxide	1000	925 gallons of 10% solution; 150 gallons of 50% solution
Sulfuric Acid	1000	65 gallons of 93% H ₂ SO ₄
Xylene	100	13.5 gallons

Note: Check MSDS forms or product sheets for other chemicals used at the plant being reported.

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Golden Pass Pipeline Project

Spill Prevention, Control, and Countermeasures Plan

Federal Requirements

Reportable Release of Hazardous Substances or a Spill of Oil

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Environmental Incident Type	Detailed Information
Oil Spill – Waters of the US	Call NRC at 800.424.8802
Oil Spill – Outer Continental Shelf	Call NRC and Minerals Management Service District Office (Lake Jackson office, 409.265.7147)
Oil & Gas Release – Gulf of Mexico	Call NRC and MMS Regional Supervisor for Field Operations (for Meter Facility or Pipeline release, 800.200.4853)
Hazardous Liquid Release – DOT Pipeline (includes NGLS and Oil)	Call NRC – See Office of Pipeline Safety Use form “Accident Report – Hazardous Liquid Pipeline”, DOT No. 7000-1
Gas Release – DOT Pipeline	Call NRC – See Office of Pipeline Safety Form for “Incident Report – Gas Transmission and Gathering System – RSPA F7100.2” (see instruction for completing form)
Hazardous Substance Release	Call NRC – See Hazardous Substance
Hazardous Waste Release	Call NRC – See Hazardous Waste
Hazardous Materials Release – Transportation Related	Call NRC – See Hazardous Material Use form for “DOT – Hazardous Material Incident Report”
Excess Air Emissions	See Excess Air Emissions
Wastewater Excursions – Federal NPDES Permits Only	See Wastewater Excursions
SARA – Title III – Release of Reportable Quantity	Call NRC, 800.424.8802
PCB – Release to Environment	See PCBs; Call NRC, 800-424-8802 for 1 lb. released. Call EPA Region VI Office for 10 lbs. released.
EPA Regional Office List	See EPA Regional Office
Coast Guard District List	See Coast Guard District List

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Golden Pass Pipeline Project

Spill Prevention, Control, and Countermeasures Plan

State of Louisiana Requirements

Reportable Release of Hazardous Substances or a Spill of Oil

Form to use: "Uniform Hazardous Materials Reporting Form"

Comments: An immediate response is critical. Additional details can be submitted later. Do not delay reporting while trying to gather data.

Incident	Response	Written Report Follow Up
<p>Emergency: All Media – Land, Water, Air. Immediate Reporting required if:</p> <ol style="list-style-type: none"> 1. Injury requiring hospitalization or fatality occurs. 2. Fire or explosion reasonably expected to affect public safety beyond facility. 3. Release could reasonably be expected to escape beyond facility boundaries and meet the following Reportable Quantities. 4. Any incident, accident, or cleanup which could reasonably be expected to affect public safety beyond the right-of-way (ROW) boundaries or where protective action beyond the ROW boundaries has been initiated. <p>Louisiana Reportable Quantities:</p> <ul style="list-style-type: none"> • Extremely Hazardous Substance or CERCLA Hazardous Substance (See 40 CFR 302.4, Table 302.4) • DOT Hazardous Substance • 1 barrel of oil (42 gallons) • 100 pounds of any flammable gases or liquids • 500 pounds of any liquid requiring a MSDS • 5000 pounds of any other material requiring a MSDS 	<p>Call immediately (within 1 hour)</p> <p>Louisiana State Police (this call also fulfills the requirement for contacting the State Emergency Response Commission) 877.925.6595 or 225.925.6595</p> <p>Also Call Immediately Local Emergency Planning Committee (LEPC) Calcasieu Parish 337.439.9911 fax 337.439.7657</p>	<p>All Media</p> <p>Louisiana Department of Public Safety Office of State Police Transportation & Environmental Safety Section Box 66614 Baton Rouge, LA 70896</p> <p>Mail written report within 5 days to Calcasieu Parish LEPC: Mr. Mason G. Lindsay, Chair c/o Calcasieu Parish Emergency Planning Committee P.O. Box 1391 Lake Charles, LA 70602 Email: mlindsay@safetycouncilswla.org</p>
<p>Discharge of Oil to Surface Water or Off-site Land</p> <ul style="list-style-type: none"> • Sheen on surface water 	<p>Call immediately 225.219.5800</p>	<p>Louisiana Oil Spill Coordinator's Office 625 N. 4th, Room 800 Baton Rouge, LA 70802</p>
<p>Air Releases – Non-Emergency Exceedance of 3-hour or 24-hour RQ</p> <p>Water Release – Non-Emergency Exceedance of RQ</p> <p>Hazardous Waste Release – Non-Emergency Exceedance of RQ</p>	<p>Call with 24 hours 225.342.1234</p> <p>LDEQ 24 hour hotline (Note: Outside of normal business hours, the State Police will answer this call. However, calling this number does not fulfill the requirement for reporting an emergency to the State Police.</p> <p>Single point of contact (DEQ Emergency Response Office) Open M-F 8am-4:30 pm 225.763.3908</p>	<p>Written reports within 7 days to:</p> <p>Louisiana Department of Environmental Quality P.O. Box 82215 Baton Rouge, LA 70884-2215</p> <p>attn: Surveillance Division – SPOC "Unauthorized Discharge Notification Report"</p>

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Golden Pass Pipeline Project

Spill Prevention, Control, and Countermeasures Plan

State of Texas Requirements

Reportable Release of Hazardous Substances or a Spill of Oil

Form to use: Attached, "Initial Discharge/Spill Notification Information Form"

Comments: If in doubt, report. An erroneous report can be corrected with a letter.

Incident	Response	Written Report Follow Up
<p>Reportable discharge or spill. <i>A discharge or spill of oil, petroleum product, used oil, hazardous substance, industrial solid waste, or other substances into the environment in a quantity equal to or greater than a Reportable Quantity (RQ) in any 24-hour period.</i> RQs are listed below.</p>	<p>Call the State Emergency Response Center as soon as possible, but not later than 24 hours after discovery: 800.832.8224</p> <p>Notify affected property owner(s) and resident(s) as soon as possible, but no later than 2 weeks after discovery.</p>	<p>To TCEQ Regional Manager within 30 working days of discovery: Georgie Volz 3870 Eastex Fwy. Beaumont, TX 77703 Written report should describe the details of the discharge or spill and support the adequacy of the response action.</p> <p>Although not required, property owner notification should be made in writing.</p>
<p><i>If the discharge or spill creates an imminent health threat...</i></p>	<p>Immediately notify and cooperate with local emergency authorities, e.g. fire department, law enforcement authorities, health authority, LEPC.</p>	

Reportable Quantities

Discharge to:	Substance:	RQ
Land	Hazardous Substances	See 40 CFR 302.4, Table 302.4 for a full list.
	Oil, petroleum product, used oil	25 gallons (210 gal. from PST exempted facility).
Water	Hazardous Substances	See 40 CFR 302.4, Table 302.4 (if RQ > 100 pounds, use RQ of 100 pounds).
	Oil, petroleum product, used oil Industrial solid waste	Sheen on water. RQ = 100 pounds

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Golden Pass Pipeline Project

Spill Prevention, Control, and Countermeasures Plan

Initial Discharge/Spill Notification Information Form

1. Date / Time of NRC Call ___ / ___ / ___ :NRC Contact: _____
2. Date / Time of State Call ___ / ___ / ___ :State & Contact: _____
3. Name of person reporting _____
4. Address _____
5. Phone No. _____
6. Description or Identification of Substance Spilled _____

7. Estimated Quantity Discharged/Spilled _____
8. Date/Time of Release ___ / ___ / ___ :Duration of the Incident _____
9. Weather Conditions (temperature, wind speed/direction, clear/cloudy/rain) _____

10. Name of the Surface Water Body affected or threatened _____
11. Source of the Discharge/Spill _____
12. Description of the Environmental Impact (e.g. size of affected area, environmentally sensitive area or natural resource, etc.) _____

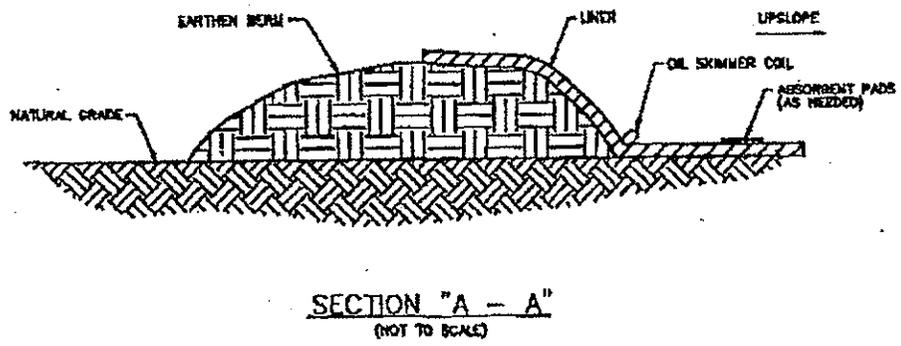
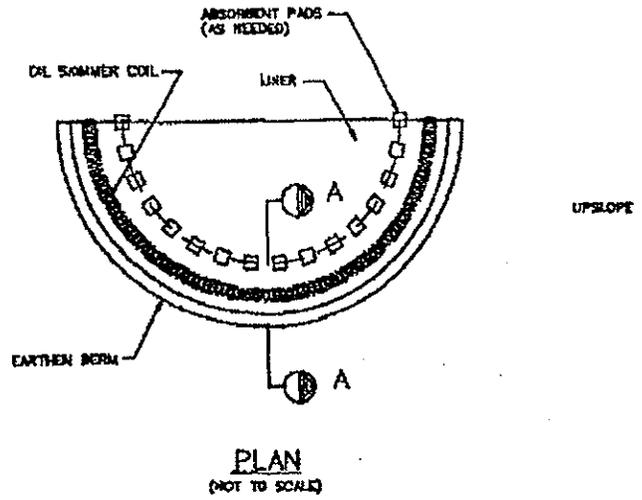
13. Name of Person Responsible for Site _____
14. Address _____ Phone No. _____
15. Name of Site Environmental Contact _____
16. Address _____ Phone No. _____
17. Actions Taken _____
18. Actions Being Taken _____
19. Actions to be Taken _____
20. Known or Anticipated Health Risks _____
21. Identity of any Local, State, or Federal Authorities or 3rd Parties Responding to Spill _____

22. Other Significant Information _____

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Golden Pass Pipeline Project

Spill Prevention, Control, and Countermeasures Plan



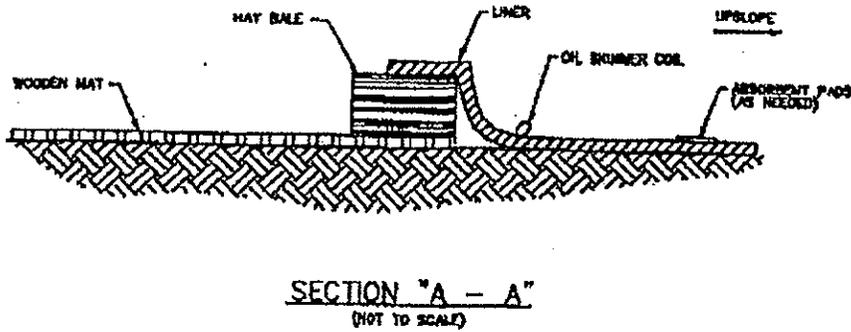
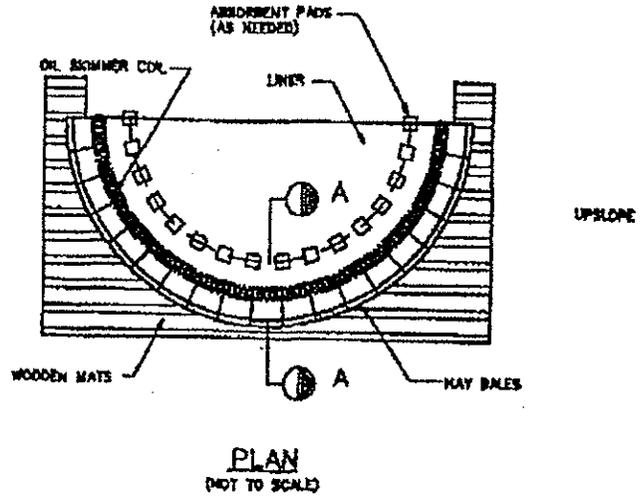
SPCC PLAN FOR VEHICLE MAINTENANCE IN STREAM & WETLANDS

Figure 1

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Golden Pass Pipeline Project

Spill Prevention, Control, and Countermeasures Plan



SPCC PLAN FOR REFUELING OR SERVICING EQUIPMENT IN WETLANDS

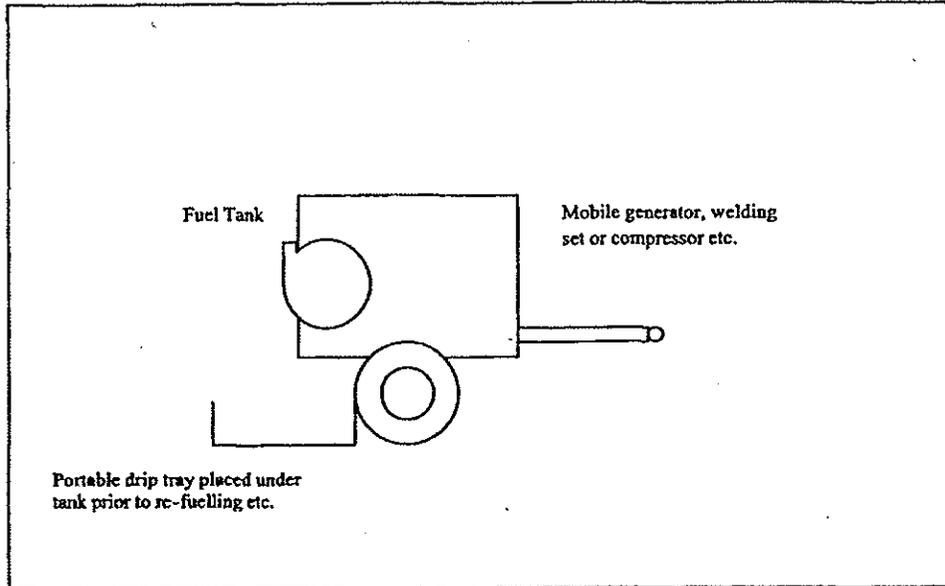
Figure 2

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Golden Pass Pipeline Project

Spill Prevention, Control, and Countermeasures Plan

**SPCC PLAN FOR RE-FUELLING OF MOBILE EQUIPMENT
ON THE WORK SITE**



**SPCC PLAN FOR RE-FUELLING OF STATIC EQUIPMENT
ON THE PROJECT SITE**

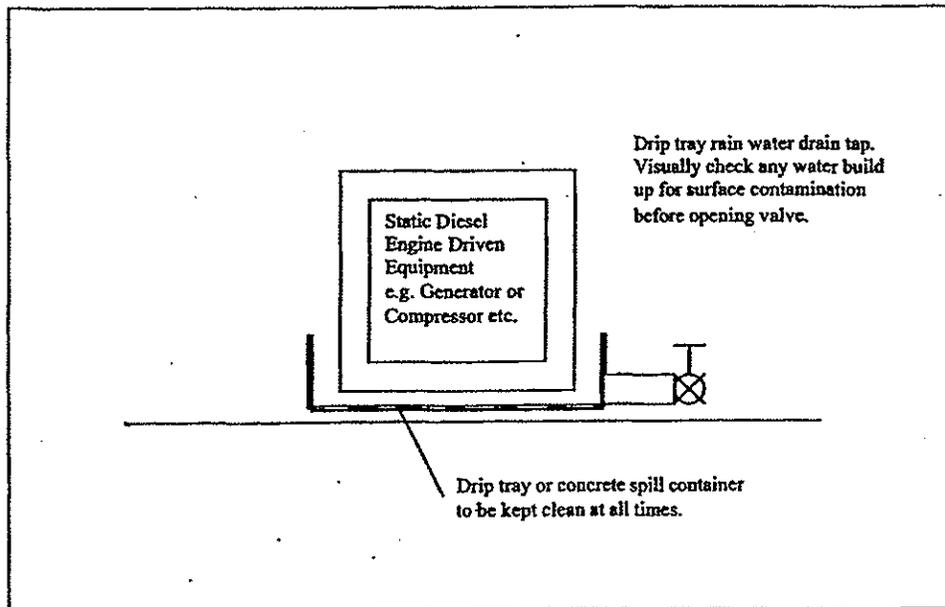


Figure 3

PRELIMINARY
GOLDEN PASS PIPELINE PROJECT
HORIZONTAL DIRECTIONAL DRILL PLAN
SABINE ISLAND WILDLIFE MANAGEMENT AREA
December 2004

HORIZONTAL DIRECTIONAL DRILL PRELIMINARY PLAN

INTRODUCTION

This document describes, the preliminary plan for activity and process for the Horizontal Directional Drilling (HDD) proposed for crossing the Sabine Island Wildlife Management Area (SIWMA) with the proposed 36" diameter Golden Pass Pipeline. The length that will be traversed in this area by two (2) HDDs is 11,195 feet and includes crossing the SIWMA. This crossing is planned to be installed by completing two HDDs drilled in opposite directions under the pipeline centerline from a central HDD entry location. The 5,175-foot west drill exit location is at MP 65.32. The 6,020-foot east drill exit location is at MP 67.44. The central entry point area is located in the area of MP 66.30.

The preliminary pipeline routing for the Golden Pass Pipeline is complete and an application for a certification of public convenience and necessity has been filed and is pending with the Federal Energy Regulatory Commission (FERC).

This document is descriptive in nature and submitted to provide a preliminary overview of current plans to be carried out for the installation of the pipeline for these two (2) HDDs. Complete information for detailed design, a finalized plan or final procedure is not currently available but once this information is obtained, detailed engineering and a final plan and procedure will be completed prior to beginning construction of the two (2) HDDs for this area.

GENERAL HDD INFORMATION

The HDD drill rig will be located at the central entry location and is controlled and monitored from the onsite rig control room. The control room is housed on the hydraulic power unit trailer in a protected cab. The control room is equipped with hydraulic controls used to operate the rig, as well as pull, push, torque, and mud pump pressure gauges, gauges for hydraulic vices, joysticks for rotation and travel, radio communications, and downhole monitoring equipment. Radio contact is maintained with exit location personnel at all times from this location.

A complete drilling fluid (mud) system will be located at the entry hole location. The mud system has pumps, which circulate mud from a slurry mixing tank to the slurry entry point. The return drilling mud flows through the cuttings settlement pit and a cuttings separator before returning to the slurry mixing tank. A second

PRELIMINARY
GOLDEN PASS PIPELINE PROJECT
HORIZONTAL DIRECTIONAL DRILL PLAN
SABINE ISLAND WILDLIFE MANAGEMENT AREA
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mud system will be located on the exit side of the drill, which will be used to circulate the drill mud while pulling back an intermediate reamer.

The pilot hole bit for the pilot hole drilling operation will be steered and monitored while drilling by data received from a Tru-Tracker® or similar guidance system installed for each drill. The guidance system utilizes insulated electrical wire geometrically placed over the proposed HDD drill path. The guidance system may be installed as a continuous system or segmented system depending upon project surface conditions encountered over the drill path. The wire will be placed on the ground surface when possible. When installed in water, the wire may be placed at the water surface and attached to poles, which can be marked with floats and navigation hazard lighting as required for identification to marine traffic. Wires may be installed below the water surface on or as near the bottom as practically possible when required. Low voltage DC current will be applied to the wires periodically and then with reverse polarity, to generate an electromagnetic field for the guidance system. All reasonable, practical precautions will be taken when installing and removing the wires to make the least possible impact to the environment. The guidance system will only be used during the pilot hole drilling.

EQUIPMENT LAYOUT

The rig layout that will be used for this project will be land based at both the entry and exit locations. The central extra workspace required for the equipment for both drills at the entry location at MP 66.30 is planned to be 300 feet by 150 feet. The rig and associated equipment layout at the entry point for the west drill is shown in Attachment 1, the rig and associated equipment layout for the east drill is shown in Attachment 2.

The extra work space for the equipment for the west HDD exit location at MP 65.32, is an odd shaped 1.90 acre extra work space that is planned to accommodate not only the exit location HDD equipment but also will serve as a staging area for material, an extra work space for a foreign pipeline crossing and an extra work space for the road bore of Indian Lake Road. The uses of this extra workspace area are planned to accommodate the activities identified, but which activities will occur simultaneously will be defined in the detailed construction schedule for the project, which will be developed once detailed engineering is completed and construction contractors have been identified. Attachment 3 shows the planned HDD equipment orientation for this exit location.

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The 1.90 acre extra work space area on the east side of Indian Lake Road will be used with an odd shaped extra work space area on the west side of the road of 1.74 acres to weld up, store and bridge the pull string for the west drill across Indian Lake Road. This 1.74-acre extra workspace is adjacent to the construction right of way from MP 64.62 to MP 65.11.

The extra workspace for the equipment for the east HDD exit is located at MP 67.44 and is planned to be 200 feet by 150 feet. Attachment 4 shows the planned HDD equipment orientation for this location. The pull string for this location will be welded up and stored on the construction right of way east of the exit location prior to installation.

EQUIPMENT LOGISTICS AND SETUP

Access

A surveyor will stake entry, exit, and access points and construction right-of-way boundaries at each entry, exit and access location for the drill. One-Call notifications will be made prior to mobilization and equipment set up.

Crews, equipment, supplies, materials, drilling water, fuel, bulk drilling mud, spent drilling mud and debris will be hauled to and from the sites (as necessary) from a contractor staging area that will be identified by the contractor selected to perform the work.

Access to the entry location will be by land to a docking point located at an intersection of Indian Lake Road and a north south watercourse that connects to Indian Bayou. From this docking location, crews, equipment, supplies, materials, debris, drilling water, fuel, and spent drilling mud will be hauled (as necessary) by barge or boat up Indian Bayou to an intersection point of Indian Bayou and a foreign pipeline just north of the proposed 36" Golden Pass Pipeline. At this location, barges will be anchored in Indian Bayou for the duration of the drilling activity. The barges will be fitted with a crane to lift necessary crew, equipment, supplies, debris, etc. to and from the 1.47 acre loading and unloading extra work space area which is parallel to the existing foreign pipeline. This extra work space area provides access to the entry location.

The access for the equipment located at the exit sites will be by land along the pipeline right of way not traversed by the HDDs.

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Entry Location

At the entry location, equipment will utilize timber mats for access, placement and work activity as required. A cuttings settlement pit will be dug to collect mud and allow cuttings to settle before the mud is re-circulated. The drill rig will be anchored as required to accommodate the calculated pull force required for the pull string installation. A casing will be installed with the drill rig prior to initiation of the pilot hole drilling to provide an annulus for the return of drilling fluids from the entry approach to the cuttings settlement pit. Prior to digging the cuttings settlement pit or anchoring the drill rig, verification will be conducted to insure there are no subsurface obstructions, pipelines, etc. This verification will be carried out in accordance with a survey procedure established for the project. The entry location planned equipment arrangement for the west drill is shown in Attachment 1.

Once the west drill has been completed certain entry location equipment will be relocated onsite in a reversed drill position to complete the east drill in the same manner as the west drill. Attachment 2 shows the planned equipment location arrangement for this second drill to be conducted from the entry location.

Entry Location Equipment

Horizontal Rig Unit

Control Cab Power Unit

Drill Pipe/Pipe Handler

Water Storage Tank

Slurry Mixing Tank

Cuttings Separation Equipment

Slurry Pump

Power Generators

Spares

Site Office

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Lights

Misc Tools

Misc Containers

Portable Toilets

Communication Equipment

Exit Location

The exit location provides the work area for the exit of the pilot hole drill, the attachment of reamers to the drill string, the attachment of the swabbing devices and the entry location for the pipeline section pull string that will be installed into the bore hole provided by the drilling operation.

The planned exit location equipment arrangement for the west drill is shown in Attachment 3 and in Attachment 4 for the east drill. Prior to digging the exit location cutting settlement pit the same verification per the establish project survey procedure will be conducted to identify subsurface obstructions.

Exit Location Equipment

Pipeline Rollers

Construction/Lifting Equipment

Drill Pipe

Spares

Vacuum Truck

Lights

Misc Tools

Misc Containers

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Portable Toilets

Communication Equipment

DRILLING CONSTRUCTION STAGES

Drills are constructed in the four stages described below:

1. Pilot Hole – rotation cutting and/or jetting with a jetting assembly attached to drill pipe.
2. Reaming – multiple pull backs of a larger diameter rotating cutting tools on the drill pipe assembly, incrementally increasing bore diameter.
3. Swabbing – a cylinder shaped swab pulled through the drill bore to ensure integrity of completed borehole.
4. Pullback – a pre-assembled hydrostatically tested and cleaned section of the pipeline is pulled into the borehole from the drill entry location.

Pilot Hole

The pilot hole bore utilizes control steer drilling using inclination and azimuth information for the initial bore from entry to exit point. A guidance system will be installed from the drill entry to the drill exit site to obtain this control.

Prior to the commencement of the drill, the entry hole site will be assessed to determine if it is practical to extend the guidance (wire tracking) system across Indian Bayou for the west drill and Old River for the east drill. A manual angle indicator, in accordance with the project specifications, will verify the required entry angle for the drill. The pump rate of drilling mud during the pilot hole installation will be monitored and maintained at an acceptable level and the viscosity of the drilling fluids shall be maintained within a range established for each drill site. The drill rate will vary depending on cutting returns and actual soil conditions.

The pilot hole shall exit in the bottom of the pre-excavated trench at the exit location. The exit angle shall be consistent with project specifications and installed as provided for in the design of the drill.

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Reaming

Upon completion of the pilot hole, the pilot assembly will be removed at the exit location. The exit location will be stocked with drill pipe, reamers, swabs, swivels and other equipment and tools as deemed necessary for support during the drilling operations. The reaming operations will be monitored so that the hole reaming is achieved within acceptable tolerances. Actual sub-surface conditions encountered will determine the incremental increase in the diameter and number of reamer passes required to obtain the specified bore size.

When reaming, the rig will be rotating and pulling drill pipe from the entry side of the drill while joints of drill pipe are added at the exit side. The return fluids will be removed, transferred to the cuttings settlement pit, recycled as necessary, and pumped through the drill string to the reamer. The viscosity of the drilling fluids shall be maintained within a specified range that will determine mud usage and ability to successfully clean exiting fluids. Solids removed from the drilling mud will be contained in cuttings settlement pit for transportation and appropriate disposal when the installation is complete. The reamers will be rotated and pulled through to the rig on entry side where they will be removed.

Swabbing

Upon successful completion of the reaming operation, a swab shall be utilized to ensure integrity of completed hole. The pumping rate and viscosity of the drilling fluids shall be maintained to project specifications during the swabbing pass. The swab will be pulled at an appropriate rate if obstructions are not encountered. If obstructions are encountered the pull rate will be reduced to eliminate any over-torque. When the obstruction has been cleared pulling should resume at previous rate. Swabbing or reaming the hole will continue until the hole has been properly prepared and conditioned for pipeline pullback operations. When the swab has been successfully removed from the hole, it will be removed at the entry side. The string of drill pipe will remain in the hole and be used to conduct the pipe pullback operation of the pipeline stored at the exit side location.

Pullback

In preparation for pullback, a pre-tested pipeline section shall be dewatered and cleaned. A pullhead assembly will be welded on the leading end of the pipeline section. A pull head assemble and a swab with a trailing swivel will be attached

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to the end of the drill pipe. The drill pipe string will then pull the pipeline pull section from the exit side location to the entry side location with pulling force generated by the drill rig.

The pull back process rate and the drilling mud pumping rate will be monitored for compliance to specification. Excess drilling fluids on the exit side of drill, from the displacement of the bore with the pipe, will be left in the cutting settlement pit. Excess drilling fluids on the entry side of drill, from the displacement of the bore with the pipe, will be collected in the entry side cutting settlement pit, stored as necessary, and hauled for disposal.

CLEANUP

After the pipe string has been successfully pulled into place, the drill equipment at the exit location will be removed from the site. The equipment at the entry hole location will be transported from the site by barge and/or boat back to the dock at Indian Lake Road.

Cuttings and solids from each of the three sites will be disposed of by land farming on pre-approved private property located in the vicinity. If laws or regulations do not allow such disposal, cuttings and solids will be collected and hauled to an approved disposal facility.

Following the installation of the proposed HDDs, the areas disturbed by construction would, to the greatest extent practicable, be restored to their original condition and use. Once cuttings and solids have been removed, the cuttings settlement pits would be backfilled with native soil material that has been removed and stored onsite for reuse for backfilling.

ENTRY/EXIT DRILL SITE RESTORATION

Upon completion of the installation of the HDDs and backfilling of cutting settlement pits, the surface of the right of way disturbed by construction activities would be graded to match the original contours and to be compatible with the surrounding drainage patterns, except in those locations where permanent changes in drainage would be required to prevent erosion or scour. Segregated topsoil would be replaced and soils that have been compacted by construction equipment would be disked. Permanent erosion control measures, if required, would be installed at this time. Temporary construction erosion control measures may be left in place, or replaced with interim erosion control measures, where

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appropriate, until sufficient vegetative cover is re-established to prevent significant erosion and sedimentation.

CONTINGENCY IN EVENT OF HDD FAILURE

A feasibility study has been conducted that concludes up to 36" pipeline drills should be successful. The lengths of the drills proposed by Golden Pass Pipeline for these two HDDs for crossing the Sabine River are within the capacity of available drilling equipment and have been used for 36" pipelines in similar situations. Based on recent experience in this geographical region, it is known that the soils in the area are relatively uniform, and subsurface fractures or bedrock is not anticipated.

To further improve the chance of success, prior to the proposed HDDs for crossing the Sabine River, a geotechnical investigation will be conducted to determine the exact characteristics of the soils through which the pipeline will be installed. The geotechnical investigation will identify the preferred strata in which to locate the drill to ensure the integrity of the borehole and successful completion of the installation of the proposed pipeline. This information, planned detailed engineering of the construction of the installation, and the planned engineering and management practices outlined in the attached Appendix I will greatly reduce the risk of failure of the HDD.

Even after completing a full and detailed design a failure due to and an operational error can occur. For most operational or execution failures that occur, there is a high probability that the cause for the failure can be determined and remedial action can be employed to successfully continue drilling operations that result in a successful completion of the HDD. Once the cause of the failure is determined, a number of identified remedial actions can be employed to continue drilling or redrill at the original location.

If in the event all identified remedial measures and planned actions have proven unsuccessful to complete a successful installation of the pipeline in the proposed location, consideration, with appropriate agency consultation, will be given to the relocation of the pipeline to an alternative location to accomplish the crossing. To protect against this unlikely event and allow maximum time for a reroute, the SIWMA HDD will be performed early in the GPPL construction schedule.

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Attachments:

Attachment 1 – A4080-00-051307-9085 West Drill Entry Side Workspace

Attachment 2 – A4080-00-051307-9086 East Drill Entry Side Workspace

Attachment 3 – A4080-00-051307-9087 West Drill Exit Side Workspace

Attachment 4 – A4080-00-051307-9088 East Drill Exit Side Workspace

References:

Reference 1 – Golden Pass Pipeline LP, RR1 – Appendix A, Preliminary Alignment Sheets, Drawing No. A4080-00-051307-0400, sheets 50, 51, 52 of 60, RevA, August 13, 2004

Reference 2 – Golden Pass Pipeline LP, Resource Report 1, Project Description, August 2004

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APPENDIX 1 – Frac-Out Prevention, Monitoring, And Response
Procedure For Horizontal Directional Drilling

1. Introduction

This document establishes preliminary procedures for preventing, monitoring, and responding to frac-outs of drilling fluids that may occur during the two horizontal directional drills (HDDs) planned for crossing the Sabine River and the Sabine Island Wildlife Management Area. The intent of this document is to set forth a preliminary plan to illustrate actions to be taken, under various conditions and for various sizes of frac-outs, should frac-outs occur. Pre-construction approval of mitigation and remedial actions should occur to expedite the response time, ensure that appropriate actions are taken, and minimize negative environmental impacts that may arise as a result of frac-outs. HDD installations are generally a 24-hour per day, 7 day per week operation, and the objective will be to complete each drill in a timely manner with the least negative impacts to the environment.

2. Frac-out Definition

For the purposes of this document, a “frac-out” shall be defined as the unintentional or inadvertent loss of drilling fluids from the HDD borehole to the ground surface, other than at the borehole entry or exit points. Loss of drilling fluids to the subsurface geological formation may result in an apparent reduction in the return of fluids and cuttings, but will not be considered a frac-out unless drilling fluids are observed in surface waters or at the ground surface.

3. Drilling Fluid Characteristics

“Drilling fluids” (often referred to as “drilling mud”) to be used on this project will be a mixture of liquids (mostly fresh water) and solids used in a circulating system in the drilling process for the removal of soil cuttings from the borehole, while filling the void left by the cuttings, lubricating and cooling the drill string, and sealing the borehole wall to eliminate fluid loss and maintain borehole stability.

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“Additives” can be mixed with the drilling fluids, in relatively small proportions, as necessary to modify the physical and chemical properties of the drilling fluids in order to improve the drilling performance, or to respond to a frac-out.

4. Potential Environmental Impacts from Frac-outs

4.1 Frac-outs to Water

Drilling fluids released from an HDD that frac-out directly into a surface water body at the mud line will be dissipated by the natural currents or blended with the existing solids suspended in the water column, which are primarily clay. The solids in the drilling fluids are also primarily clay, but at low concentrations (no more than 5 percent by volume). Inadvertent discharges of the nontoxic drilling fluids may result in a very localized and transient increase in suspended solids concentrations, but these increases pose no significant threat to public health and safety or to aquatic resources. If an underwater frac-out could be located in existing turbid conditions, containment and recovery of the drilling fluids would be impractical due to mixing with the surface water. In the event of a frac-out, measures described in Section 7 will be employed to regain proper circulation in order to complete the borehole, which in turn should reduce or eliminate the frac-out to surface water.

4.2 Frac-outs to Wetlands

The two (2) HDDs proposed for the SIWMA the HDDs are being performed in order to eliminate direct impacts to wetlands from conventional pipe installation by trenching. Because of the low concentration (less than 5 percent) of solids in the drilling fluids, and the natural tendency of the fluid to seek a uniform elevation equal to the natural water level, a measurable or permanent increase in any ground surface elevation is not likely. Efforts to contain and recover frac-out fluids in wetlands will cause disturbance of the wetland surface and vegetation by equipment and personnel. Depending on the location, such disturbance could offset the benefit gained in removing released fluids. Because it is difficult to predict the net effect of a frac-out and attempts to recover the fluids, any frac-outs in the wetland must be evaluated on a case-by-case basis including consultation with regulatory resource agencies.

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5. Frac-out Prevention

The first and most effective step in limiting the potential environmental impacts of HDD frac-outs is to prevent frac-outs from occurring in the first place. This can be accomplished in the conservative design of the drill profile by examination of industry experience history, geotechnical studies prior to final design, and performance during pilot hole drilling operation.

5.1 Design

Golden Pass Pipeline intends to incorporate conservative design and precautionary measures into the final design of the proposed HDDs to minimize the possibility of frac-outs, including:

5.1.1 Geotechnical Investigations

The soils strata targeted for the majority of the length of each bore will be selected based on physical properties most conducive to producing a successful boring. These strata and their properties will be identified in pre-construction geotechnical investigations conducted along the length of each proposed HDD installation.

5.1.2 Depth of Cover

The proposed depth of cover is planned to be maintained at a depth between 20 feet and 75 feet below water bodies and wetlands, except in the initial and final 100 feet where the borings enter and exit the ground.

5.2 Construction

Reasonable engineering measures and management practices during drilling activities to prevent or minimize the occurrence of frac-outs, included as a minimum:

5.2.1 On-site Mud Engineer (Management Practices)

A full-time, qualified, mud engineer will be stationed on site. The On-site Mud Engineer will continuously monitor the drilling fluid circulation and returns, and ensure that the fluids handling equipment is operating within expected and optimum parameters (i.e. pressures, flow rates, etc.) for the soils conditions observed.

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The On-site Mud Engineer will continuously monitor returned cuttings for soils type, and will modify the drilling fluid properties (i.e. viscosity, density, etc.) with the appropriate approved additives, as he deems necessary to account for changes in soil conditions.

5.2.2 Controlled Drill Head Advance (Engineering Measures)

Where possible at the beginning of a drill, the drill head will be initially advanced with minimum drilling fluid pressure to minimize frac-outs in the relatively shallow depths.

The drill head will be advanced at conservative rate, to ensure that soils cuttings have sufficient time to be flushed from the borehole by the drilling fluids, preventing plugging and thereby keeping down-hole pressures to a minimum. The maximum rate of advance will be set, and periodically adjusted as subsurface conditions change. If plugging occurs (i.e. return flow is diminished relative to fluid pumping rate), the rate of advance will be reduced, stopped, or reversed, as appropriate, until the plug has been cleared.

5.2.3 Incremental Reaming (Engineering Measures)

The borehole diameter will be increased (reamed) in the smallest reasonable increments that will allow good production while maintaining a low volume of cuttings generated relative to the fluids circulation rate. This will ensure good circulation and prevent excessive accumulation of soil cuttings that may result in down-hole plugging and increased borehole pressures.

5.2.4 Minimum Pump Pressure (Engineering Measures)

Drilling fluid pump pressure will be maintained at no more than the minimum necessary to maintain good circulation and to keep the borehole clear of cuttings. In the event a reduction in circulation is observed, adjustments to drilling fluid properties (density, viscosity, etc.), rate of drill head advance, and reaming diameter shall be considered before pump pressure is increased.

6. Monitoring for Frac-outs

HDD operations are monitored for the occurrence of frac-outs using each of the following methods, where appropriate:

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6.1 Pump Pressure

The drilling fluid pump discharge pressure shall be continuously monitored and recorded on a field data log prior to each drill pipe joint connection. Significant changes or fluctuations in pressure may indicate the possibility of a frac-out, requiring immediate response.

6.2 Circulation Rate

The flow rate of drilling fluid circulation and the volume of returns will be continuously monitored and recorded prior to each drill pipe joint connection or change in return rate. Differences between the pumping rate and the rate of returns may indicate a frac-out.

6.3 Ground Surface Inspection

The ground surface will be visually inspected along the progress of the HDD for indications of escaping drilling fluids. Where possible, without trespassing outside the approved workspace or entering wetland areas the inspection should cover a corridor of approved width, centered on the drill. Inspections shall be made relative to the rate of advance of the drill head, but an inspection pass should be made at least once every hour while pumping drilling fluids. Any indications of a frac-out shall be reported immediately. If operating parameters (i.e. fluctuations in fluid pressure or returns) indicate the possibility of a frac-out, the surface inspection shall become continuous (daylight only) until the location of the suspected frac-out is found, the drill is completed, or measures to remedy the frac-out using additives or other operational adjustments have been successful. Daylight continuous monitoring will supplement the monitoring of operating parameters. Reasonable efforts will be made to locate the point of frac-out, if possible, in order to assess environmental damage, if any.

6.4 Surface Water Inspection

Surface water will be visually inspected in the water bodies under which the HDD is crossing, along the progress of the HDD, for turbidity plumes that might indicate a frac-out is occurring. Inspection passes should be made at least once every hour while pumping. Any indications of a frac-out shall be reported immediately. If operating parameters indicate the possibility of a frac-out under water, the water inspection shall become continuous (daylight only) until the location of the suspected frac-out is found, the drill is completed, or measures to

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remedy the frac-out using additives or other operations adjustments have been successful. Inspections shall be made by boat, or from an elevated position on land with an unobstructed line-of-sight to the water body. Inspection boats shall be positioned and operated so as not to interfere with the ability to observe a plume or create a prop-induced plume (i.e. down-current from the drill centerline). Daylight continuous monitoring will supplement the monitoring of operating parameters.

6.5 Special Safety Considerations

Monitoring in water or wetlands at night or in fog will require special safety precautions and equipment considerations, including approved navigation lights on all vessels, two men in each boat, continuous communication with the onshore crew or the drill barge, and portable lights of sufficient power to effectively monitor the area. No continuous nighttime monitoring is planned. Monitoring in water or wetlands will be discontinued whenever conditions render the activity unsafe.

6.6 Notifications

Upon conformation of a frac-out, appropriate site personnel, agencies and landowners shall be notified.

7. Initial Response to a Frac-out

The initial response to a potential frac-out is described below.

- 7.1** Upon first indication of a potential frac-out, the drilling fluid circulating pressure will be reduced, the rotation of the drill string will continue, and the drill head will continue to advance in an attempt to stop or substantially reduce the frac-out rate.
- 7.2** If the frac-out is initially or subsequently confirmed by an observed release of fluids to the surface or an observed turbidity plume in water, an attempt to advance the drill head past the known point of the frac-out will be made and regulatory agencies administering the land and drilling operation notified.
- 7.3** Concurrently, pre-approved additives may be injected in concentrations recommended by the manufacturer and as

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calculated onsite, into the drilling fluid mixture as an additional attempt to control the release.

- 7.4** If the release of drilling fluids continues unabated at a rate that threatens to expand at a rate deemed excessive by on-site personnel and appropriate agencies, or completion of the drill is in jeopardy due to failure to remove cuttings from the borehole, advancement of the drill will be temporarily suspended.
- 7.5** The drill string may continue rotation in the borehole and continued circulation of fluids may occur at a pressure that does not result in continued fluid release at the frac-out point, in order to keep the borehole open.
- 7.6** If the frac-out is to wetlands, the analysis for containment and recovery described in Section 8.2 below will be conducted, before continuing to advance the drill.
- 7.7** If the frac-out is to uplands, the drill may continue to advance, provided the released fluids are contained and removed (as described in Section 8.3 below), and after confirmation that cuttings are being returned at a sufficient rate to ensure successful completion of the borehole. Adjustments shall be made to the drilling fluid properties to plug the frac-out or reduce the volume of fluids being released.
- 7.8** The drill may also continue advancement if the release is to open water, the release does not obstruct a navigation channel, directly impact sensitive resources, or accumulate in wetlands, and after confirmation that cuttings are being returned at a sufficient rate to ensure successful completion of the borehole. Adjustments shall be made to the drilling fluid properties to plug the frac-out or reduce the volume of fluids being released. If, however, the resulting turbidity plume is deemed to be excessive, drilling may be temporarily suspended until necessary corrective measures are successfully implemented.
- 7.9** All parameters being tracked at the time of frac-out shall be recorded, including fluid circulating pressure, fluid mixture composition, fluid viscosity, location and depth of the drill head,

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location of the frac-out, rate of drill advance, and time of day. The HDD Driller shall keep a running log of all activities associated with the attempts to control the frac-out.

8. Containment and Removal

Containment and removal of drilling mud releases to the surface from a frac-out shall be performed where practical and where there will be a net benefit in the reduction of total environmental impacts.

8.1 To Surface Waters

Containment and removal of drilling fluids released to surface waters as a result of a frac-out is generally impractical and ineffective because of dilution in the water column, and dispersion due to currents.

8.2 In Wetlands

Containment and removal of released drilling fluids from a frac-out to wetlands shall be performed when there is a net benefit in the reduction of impacts, as determined by the following actions.

- 8.2.1** Upon confirmation of a frac-out in a wetland, the area directly affected by the released drilling fluids will be measured. The area affected may be estimated from a distance, if access to the affected area for measurement would result in additional unacceptable negative impacts.
- 8.2.2** The type of impact as a result of released fluids will be characterized by a qualified individual, (i.e. temporary, permanent, vegetation only, change in surface hydrology, etc.) Concurrence from the regulatory agency representative will be obtained.
- 8.2.3** The additional area, if any, likely to be affected if the drilling was to proceed will be estimated if the drilling fluids were not contained and removed.
- 8.2.4** An estimate and characterization of the additional impacts to wetlands likely to occur as a result of accessing the affected

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area for containment and removal of the drilling fluids will be conducted.

- 8.2.5** The reduction in impacts that might be achieved if the released fluids were removed will be estimated.
- 8.2.6** The total actual impacts, plus the estimated impacts from continuation of an uncontained release, shall be compared to the total actual impacts, plus the estimated impacts from accessing the area for containment and removal, less the estimated reduction in impacts as a result of recovery of the fluids. When making this comparison, some consideration and judgment should be given to the types of impacts, and value of the resources affected, if dissimilar. The action resulting in the least total impacts will generally be selected, unless there are mitigating circumstances, or as otherwise instructed by the regulatory agency representative, if present.
- 8.2.7** If the decision is to forgo containment and proceed with the drill, continued observation of the location of the frac-out will occur. If the impacts continue to increase, the comparison described in 8.2.6 above will be periodically repeated, until such time as containment and removal are justified, or the drill is complete.