

## **APPENDIX E**

### **STORMWATER POLLUTION AND PREVENTION PLAN METHODOLOGY**

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## 1.0 INTRODUCTION

The Environmental Protection Agency (EPA) currently allows discharges of stormwater associated with construction activities for projects such as the SWIP – Southern Portion and SWIP – Central Portion if the activity is compliant with the National Pollutant Discharge Elimination System (NPDES) General Permit. In accordance with this regulation, the Nevada Division of Environmental Protection (NDEP) has issued a Stormwater Construction General Permit for the State of Nevada (NVR 100000). Operator(s) of construction sites that involve one or more acres of disturbance must submit a Notice of Intent (NOI) to obtain coverage under the General Permit, which requires that a Stormwater Pollution Prevention Plan (SWPPP) be prepared for the projects in accordance with the NPDES. The construction contractor will be responsible for submitting an NOI, preparing a SWPPP and implementing the SWPPP throughout the duration of construction.

### 1.1 Purpose

The purpose of a SWPPP for the projects is to identify, and implement storm water pollution prevention measures to reduce the quantity of impacted runoff and to deal with runoff in a manner that minimizes environmental impacts during construction, operation and maintenance of the projects.

A SWPPP is needed to minimize the volume of contaminated runoff, including sediment runoff, and to implement mitigation measures in a manner that minimizes environmental impacts. Temporary stabilization methods (silt-fences, straw bales, etc.) are not guaranteed or fail-safe measures without regular maintenance and field inspection throughout construction activities. In addition to conventional methods of erosion control there are numerous new and improved products and the Construction Contractor is encouraged to review these progressive or improved materials in the development and implementation of a SWPPP.

The proper implementation of mitigation measures associated with a SWPPP is imperative during all construction activities and these activities will be conducted in an environmentally sensitive and responsible manner in order that no discharge of sediment or contaminants may be conveyed as either direct or indirect discharge to wetlands, Waters of the United States (WOUS), or Waters of the State of Nevada (WOSN).

Development, implementation, and maintenance of the SWPPP will provide the contractor with the framework for reducing soil erosion and minimizing pollutants in stormwater during construction. The SWPPP will:

- Define the characteristics of the site and the type of construction that will be occurring
- Describe the practices that will be implemented to control erosion and the release of pollutants in stormwater
- Create an implementation schedule to ensure that the practices described in the SWPPP are in fact implemented and to evaluate the plan's effectiveness in reducing erosion, sediment, and pollutant levels in stormwater discharge from the site

- Describe the final stabilization/termination design to minimize erosion and prevent stormwater impacts after construction is complete

## **2.0 NOTIFICATION REQUIREMENTS AND IMPLEMENTATION**

Before construction begins, the Construction Contractor will be responsible for developing a SWPPP, and obtaining coverage under the NPDES General Permit by filing a NOI and appropriate fee with the NDEP in accordance with NOI instructions. The Construction Contractor will be responsible for implementing a site-specific SWPPP and is required to perform routine inspections throughout the duration of construction activities.

The primary intent of the erosion and sediment control measures (often referred to as Best Management Practices [BMPs]), is to control and minimize erosion at the source. For the projects, the main source of potential stormwater contamination will be erosion of soils from construction activities. It will be the responsibility of the Construction Contractor to implement erosion control measures where necessary, in order to minimize pollutants in stormwater, and to keep the projects in compliance with NDEP regulations.

A copy of the SWPPP shall remain with the Construction Manager on the construction site or at a staging area(s), and be readily available while the transmission line and substations are under construction, from the start of construction activities until completion of restoration for the projects.

The Construction Contractor must retain a set of construction site maps (see Volume II of the COM Plan) for the duration of the projects, and for three years after the Notice of Termination, that delineate the following items:

- Areas of soil disturbance that have been stabilized
- Areas to be graded along with a time schedule
- Areas of potential soil erosion where control practices will be implemented
- The type of control practices and time schedule for implementation
- Locations of any post-construction projects
- Copies of all inspections performed over the duration of the projects

## **3.0 PROJECT MODIFICATIONS**

The Construction Contractor is responsible for maintaining an up-to-date SWPPP and shall amend the SWPPP whenever there is a change in construction or operations that may affect the discharge of pollutants to surface waters or groundwater. The SWPPP shall also be amended if it is in violation of the General Permit or has not achieved the general objective of eliminating pollutants in stormwater discharges. The SWPPP shall be amended and implemented in a timely manner, but in no case more than 14 days after it has been determined that the SWPPP is inadequate. All amendments should be dated and directly attached to the SWPPP. The NDEP may require the discharger to amend the SWPPP.

#### **4.0 MITIGATION MAINTENANCE, INSPECTION, REPAIR AND MONITORING**

The Construction Contractor shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances). Proper operation and maintenance also include appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems if construction takes place in an above average precipitation year.

The Construction Contractor will be required to conduct routine maintenance and emergency repair on any structural controls, including the maintenance of erosion and sediment control measures and any required subsequent reporting. As part of the SWPPP, the Construction Contractor will be required to develop an inspection schedule and conduct routine inspections to identify conditions that could lead to discharges of chemicals or contact of stormwater with storm drainages or surface waters. Schedules will be established for regular inspections of equipment and areas. Inspections of the construction site shall occur within 24 hours following any rainfall event of 0.5 inches or greater to identify areas contributing to a stormwater discharge and to evaluate whether BMPs are in place and functioning properly. For storm events with extended durations, observations shall be performed every 24 hours. During inspections, the Construction Contractor will also determine if the BMPs identified in the SWPPP are adequate and whether additional control practices are needed. All monitoring and inspection records which have been produced in association with this SWPPP will be retained for a period of at least three years.

To monitor the mitigation's effectiveness and to evaluate whether additional mitigation measures are required, a monitoring program and reporting system will be followed. As part of this program, weather conditions should be monitored in order to prepare for precipitation events. It is recommended that weather forecasts be checked at least every week.

#### **5.0 TRAINING**

The Construction Contractor will be responsible for the SWPPP implementation, amendments, and revisions. On-site construction personnel will be responsible for installation and maintenance of on-site mitigation measures.

Properly trained personnel are more capable of preventing spills, responding safely and effectively to accidents, and recognizing situations that could lead to stormwater contamination. The Construction Contractor will be responsible for familiarizing their personnel with the information contained within the SWPPP. Training meetings will need to be held for new personnel who join the projects after the initial training has been provided. The purpose of these meetings will be to review the proper installation methods and maintenance of all erosion control measures to be used for the projects. The monitoring/inspection program and all required maintenance and repair will be conducted by trained personnel.

#### **6.0 POST-CONSTRUCTION STORM WATER MANAGEMENT**

Mitigation measures used to reduce pollutants in storm water discharges after all construction phases have been completed at the sites should take into account local post-construction storm water management requirements, policies, and guidelines, as well as site-specific and seasonal

conditions. Post-construction mitigation measures will be assessed during future line maintenance. During line maintenance, any areas disturbed by the line installation that are observed to be eroding sediment into drainages will be assessed for the appropriate permanent mitigation measure to control sediment movement off the disturbed area. Disturbed areas will also be restored per Appendix F – Right-of-Way Preparation, Rehabilitation, and Restoration Plan.