

**STORMWATER POLLUTION PREVENTION AND SPILL  
PREVENTION PLAN REQUIREMENTS FOR THE SPRING VALLEY  
WIND ENERGY FACILITY**

Prepared for

**U.S. Bureau of Land Management**

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## 1.0 STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS

### 1.1 Introduction

The Nevada Division of Environmental Protection (NDEP) Bureau of Water Pollution Control<sup>1</sup> has been delegated the authority to administer the federal regulations and has adopted state regulations to administer the National Pollutant Discharge Elimination System stormwater program. The Nevada General Permit includes provisions for development, implementation, and maintenance of the Stormwater Pollution Prevention Plan (SWPPP) to provide Spring Valley Wind, LLC (SVW), with the framework for reducing soil erosion and minimizing pollutants in stormwater during construction of the Spring Valley Wind Energy Facility (SVWEF), as well as stormwater protection and erosion control during the continued operation of the facility. Construction sites that result in soil disturbance of 1 acre or greater require the preparation and implementation of a SWPPP meeting the requirements of the General Permit for the State of Nevada (Permit No. NVR100000). For general inclusion within the Nevada stormwater General Permit a Notice of Intent must be filed with the State of Nevada at least two days prior to the start of construction. Upon completion of the construction phase of the project (inclusive of final stabilization of the construction site), a Notice of Termination must be submitted to the State of Nevada. Information, forms, and manuals are available from the NDEP website.

The SWPPP will also provide the tools required to reduce pollutants contained in stormwater discharges and comply with the requirements of the General Stormwater Permit (State of Nevada 2007). Specifically, the SWPPP will:

- Define the characteristics of the site and the type of construction that will be occurring;
- Describe the site plan for the facility to be constructed;
- 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 implemented in conjunction with the planned construction sequencing;
- Evaluate the plan's effectiveness in reducing erosion, sediment, and pollutant levels in stormwater discharged from the site; and
- Describe the final stabilization/termination design to minimize erosion and prevent stormwater impacts after construction is complete.

Runoff and erosion can be minimized at the project site by implementing best management practices (BMPs) that will:

- Divert upslope runoff away from disturbed surfaces until they are stabilized;
- Collect, retain, and/or treat any water that contacts disturbed surfaces before leaving the right-of-way;
- Permanently stabilize exposed surfaces once construction is complete;
- Locate roads and access where impacts to water quality will be minimized; and
- Implement good housekeeping practices to prevent runoff of chemicals and fuels potentially stored on-site.

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<sup>1</sup> [http://ndep.nv.gov/bwpc/storm\\_cont03.htm](http://ndep.nv.gov/bwpc/storm_cont03.htm).

## 1.2 Required Information in the SWPPP

At a minimum, the following specific items of information will be included in the SVWEF SWPPP.

### **Project and Permittee Information:**

- Permittee Name (Proponent or General Contractor, as appropriate)
- Contact Name
- Mailing Address
- City, State Zip
- Phone
- Fax
- Cell
- Email

### **Notice of Intent**

#### **Project Description, including:**

- Description of the proposed construction activity
- Intended sequence of major soil-disturbing activities
- Existing soil and water quality data, as needed
- Runoff coefficients

#### **Site Layout Maps, including:**

- General location map showing roads and highways
- Detailed site map
- Industrial discharges, if applicable

#### **Receiving Waters, including:**

- Receiving water(s) identification
- 303(d) Impaired Water Body Listing, if applicable
- Total maximum daily load

#### **BMP Implementation, including:**

- Stormwater BMPs
- Temporary soil stabilization practices
- Permanent soil stabilization practices
- Structural practices
- Post-construction stormwater management controls
- Non-stormwater discharge management

#### **Other Controls, including:**

- Material storage, spill prevention and response (see Section 2.0)
- Off-site vehicle tracking controls
- Dust control

- Construction waste storage and disposal
- Hazardous and sanitary waste storage and disposal
- Off-site discharges
- Soil stabilization at culverts

**Inspection/Maintenance Procedures:**

- Inspection and maintenance of BMPs
- Inspection and maintenance of other controls
- Inspector qualifications

**Certifications of Compliance**

- Owner/operator certification statement
- Contractor's certification statement

**Records of Inspection and Construction Activities**

- Record of major construction activities and BMP implementation
- Record of construction site inspections
- Record of follow-up actions

### 1.3 Other SWPPP Information: Mitigation and Prevention Measures

The following mitigation measures are outlined in the *Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States* (Bureau of Land Management [BLM] 2005) and will be incorporated into the SWPPP that is prepared for the SVWEF:

- Erosion controls that comply with county, state, and federal standards should be applied. Practices such as jute netting, silt fences, and check dams should be applied near disturbed areas.
- On-site surface runoff control features should be designed to minimize the potential for increased localized soil erosion. Drainage ditches should be constructed where necessary but held to a minimum.
- Operators should identify unstable slopes and local factors that can induce slope instability (such as groundwater conditions, precipitation, earthquake activities, slope angles, and dip angles of geologic strata). Operators also should avoid creating excessive slopes during excavation and blasting operations. Special construction techniques should be used where applicable in areas of steep slopes, erodible soil, and stream channel/wash crossings.
- Existing drainage systems should not be altered, especially in sensitive areas such as erodible soils or steep slopes. When constructing stream or wash crossings, culverts or water conveyances for temporary and permanent roads should be designed to comply with county standards, or if there are no county standards, to accommodate the runoff of a 10-year storm. Potential soil erosion should be controlled at culvert outlets with appropriate structures. Catch basins, roadway ditches, and culverts should be cleaned and maintained regularly.

## 2.0 SPILL PROTECTION

There is potential for on-site spills or leaks and therefore a Spill Protection Plan (SPP) will be prepared as a safety precaution. If at any time the project area has fuels and hazardous fluids in quantities greater than

those stated in 40 Code of Federal Regulations (CFR), SVW or its contractor will submit a Spill Prevention Control and Countermeasure Plan to meet federal and state requirements.

Potential hazards include fuel and oil spills or leakage from equipment at the project site. Hazardous materials and fluids that may be kept at the site include:

- Fuel (diesel and unleaded) for construction equipment and vehicles
- Lubricants and mineral oils
- Cleaners
- Industrial material

## 2.1 Spill Protection Guidelines

The guidelines and procedures discussed in this document will cover the construction period as well as operations and maintenance (O&M) activities once construction is complete. The SPP will be adapted to the activities occurring within the project area and will be modified to new or changing activities. Spill prevention for the project will include but not be limited to the following guidelines as a means to minimize the risks of spills during construction and operation:

- Personnel should follow manufacturer's instructions for setup, operation, and maintenance procedures on all equipment to eliminate possible spills. Maintenance schedules will include leak checks; any leaks detected will be noted and fixed, and any release of hazardous waste should be cleaned up and mitigated immediately upon discovery in accordance with the plan.
- The construction and operational activities will include fuel staging areas with containment structures that will not be located in an area that may be subject to periodic flooding.
- All tanks, valves, fittings, equipment, and vehicles will be inspected regularly by company inspectors to determine present condition and perform required maintenance. SVW, or its contractor, will implement oil spill provisions accordance with 40 CFR 112 and the regulations of the State of Nevada.
- Site personnel who are involved in fuel-powered vehicles, use of fuel or oil, maintenance of the facility, stormwater drainage, and spill cleanup will be made familiar with the plan. A copy of the plan will be posted and readily available to all personnel at the facility. Site personnel whose job duties require them to unload, transfer, disperse, or handle hazardous chemicals must be trained in the proper handling, safety, hazards, and cleanup of such materials. Site personnel will be trained in the proper use of personal protective gear and in reporting and recordkeeping procedures.
- Fuel and oil transfers performed on-site will meet minimum requirements and regulations established by the U.S. Department of Transportation. The tanks will be attended while filling to prevent overflow and to note visible leaks. Site equipment may be refueled by a mobile fuel service.
- Truck drivers should follow correct operating procedures when unloading diesel fuel and stay with the equipment at all times during unloading operations. Key personnel will be present when fuel and/or other chemicals are delivered to ensure that the delivery personnel follow proper procedures. Any spillage will be immediately cleaned up in accordance with the SPP.
- Any fuel storage facility or equipment will be kept gated and locked to prevent vandalism or theft whenever facility personnel are not present. Any other storage facilities that have hazardous chemicals present must be locked and checked on a regular basis for possible accidental releases.

- Used engine oil or fluids will be stored in suitable containers or sheds. Construction contractors are responsible for disposal of the used fluid at an approved disposal site. All used oil or other petroleum products will be hauled away and disposed of an approved waste oil facility. There will be no release of crank-case oil into washes or on the soil. No vehicular maintenance operations, i.e., oil changes, will be released on the site. All oil substances will be drained into containers and disposed of in an approved landfill site. SVW operations personnel will be responsible for used fluid disposal once construction is complete.
- **IF AT ALL POSSIBLE, STOP THE SOURCE OF THE SPILL IMMEDIATELY.** If it is safe to do so, close the valve(s), shut down pumps, or take whatever actions are possible to stop any release. If conditions are hazardous (for example, fire or potential explosion), do not approach. If the determination is made that the release can be stopped safely, call other nearby employees for assistance in stopping the release.
- The release should be confined to the smallest area possible. Use booms or sandbags, dig small trenches, or place absorbent pads to stop the spread of spilled liquid. Take immediate action to prevent the spill from reaching off-site or surface waters.
  - Place booms or pads, dig a diversion ditch, or use soil to form a berm.
  - If the release reaches water, attempt to place booms to contain the release, or, if necessary, block drainage downstream of spill to prevent further discharge.

## 2.2 Spill Response Equipment

Table 1 identifies the recommended spill response equipment to be maintained on-site. Spill response will likely include digging up dirt and placing it in berms around the spill and/or digging diversion trenches as well as placing absorbent mats into the spilled oil. Manufacturer information indicates that the oil holding capacity of the listed spill response absorbents is approximately 300 gallons, which should be adequate for initial response to spill incidents.

**Table 1.** Recommended Spill Response Equipment

<b>Equipment</b>	<b>Quantity</b>	<b>Location</b>
<b><i>Communications</i></b>		
Telephone-Cellular	8	Site Vehicle
Two-way Radio	8	Site Vehicle
<b><i>Personal Protective Equipment</i></b>		
Protective Coveralls	6	O&M Facility
Impervious Boots and Gloves	6 pair	O&M Facility
Hard Hats	10	O&M Facility
Safety Glasses	10	O&M Facility
<b><i>Spill Response Equipment</i></b>		
95-Gallon Oil-Only Overpak Spill Kit	1	O&M Facility
Oil Only Pig Mats	6	O&M Facility
Pig Universal Mat	3	O&M Facility
Shovels	12	Site Vehicle (8); O&M Facility (4)
Empty Drums	5	O&M Facility

**Table 1.** Recommended Spill Response Equipment (Continued)

<b>Equipment</b>	<b>Quantity</b>	<b>Location</b>
<b><i>First Aid / Emergency Response</i></b>		
Fire Extinguisher	10	Site Vehicle (8); O&M Facility (2)
First Aid Kits	9	Site Vehicle (8); O&M Facility (1)
Automatic External Defibrillator	9	Site Vehicle (8); O&M Facility (1)
Eyewash Bottles	10	Site Vehicle (8); O&M Facility (2)
<b><i>Miscellaneous Spill Response Equipment</i></b>		
Extended Reach Forklift with Bucket Attachment (for excavating diversion trenches, removal of impacted soil, and construction of spill berms)	1	On-Site during Oil Change-Out Activities

### 3.0 LITERATURE CITED

Bureau of Land Management (BLM). 2005. Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States. U.S. Department of the Interior, Bureau of Land Management. June 2005.

State of Nevada. 2007. Stormwater General Permit NVR100000, State Division of Environmental Protection, Carson City, Nevada.