

15.0 GROUNDWATER

15.1 LOCATIONS AND MAPS

The Project is located within the Burnham, Albion, and Fairfield United States Geological Survey 7.5-minute series quadrangle. Maine Geological Survey Significant Sand and Gravel Aquifer Maps¹ (Figure 15-1) show the nearest mapped significant sand and gravel aquifer complex is approximately 0.25 miles from the Project Genlead. This mapped aquifer is located west of the existing Albion Road substation in the Town of Benton. Mapped aquifers do not intersect any of the Project site.

There are no known public or private drinking water supply wells within the Project area.² There are no U.S. Environmental Protection Agency (USEPA)-designated sole source aquifers located in the Project area.³

15.2 QUANTITY

No new groundwater extraction is anticipated as part of the Project.

15.3 SOURCES OF CONTAMINATION

The potential sources of groundwater contamination during construction will be fuel and hydraulic and lubricating oils used in the operation of vehicles and construction equipment. Potential spills of these materials from vehicles or equipment are typically small and of very short duration. Potential sources of groundwater contamination during operations will include oils and lubricants contained within the Project electrical equipment. Spills that are properly cleaned up would not pose a risk to groundwater quality. Procedures for handling these materials and preventing spills will be in accordance with all applicable state and federal regulations. A Groundwater Protection Plan has been developed for the Project and is provided as Exhibit 15-1.

15.4 VEGETATION MAINTENANCE

The solar array area, vegetation management areas, and access roads will be maintained as necessary for Project operations. The ground cover surrounding the solar panels will be mowed no more than twice per year. Vegetation management and maintenance will be conducted in accordance with the VMP provided in Section 10.0, Exhibit 10-1 of this application. Herbicide use is not anticipated; however, if herbicide use is needed, herbicides will be of low toxicity with low soil mobility that are registered with the USEPA and approved by the Maine Board of Pesticide Control. If herbicide use is required, herbicide application will be implemented in accordance with the product label and approved guidelines and will, therefore, prevent adverse impacts on groundwater quality. Additionally, herbicides will not be mixed, transferred, or stored on the Project site to further prevent potential impacts on groundwater quality.

¹ Maine Geological Survey, Online Significant Sand and Gravel Aquifers Maps. [Online] URL: <https://www.maine.gov/dacf/mgs/pubs/digital/aquifers.htm> (Accessed December 1, 2021).

² Maine Geological Survey, Water Well Database. [Online] URL: <https://www.maine.gov/dacf/mgs/pubs/digital/well.htm> (Accessed December 1, 2021).

³ USEPA, Designated Sole Source Aquifers in EPA Region 1. [Online] URL: https://www3.epa.gov/region1/eeco/drinkwater/pc_solesource_aquifer.html (Accessed December 1, 2021).

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SECTION 15: GROUNDWATER**15.5 MEASURES TO PREVENT DEGRADATION**

The multiple methods, plans, and procedures to prevent groundwater degradation during construction of the proposed Project are incorporated in the Project erosion and sediment control requirements (Section 14.0) and the civil design plans (Section 1.0, Exhibit 1-1). These procedures establish a set of minimum requirements for spill prevention and response during construction and have proven successful for preventing spills and addressing spills if they occur. The procedures incorporate measures developed and fine-tuned from experience during other solar power construction projects, including input from other review agencies. All personnel working on the Project will be required to follow these procedures.

15.6 GROUNDWATER PROTECTION PLAN

The Project will not significantly alter existing surface water drainage characteristics, as described in Section 12.0 (Stormwater). Measures to prevent and address potential impacts to both surface water and groundwater are included in the procedures and implementation measures indicated in this section, as well as the long-term operational maintenance plans in Section 10.0 (OMP in Exhibit 10-1), Section 12.0 (Inspection and Maintenance Plan in Exhibit 12-2), and Exhibit 15-1 (Spill Prevention and Response Plan) of this application. These documents and adherence to the design and procedural requirements they contain represent the groundwater protection and monitoring plans for the Project. Accordingly, the construction or operation of the Project is not expected to adversely affect groundwater resources, based on implementation of the erosion and sediment control measures identified in Section 14.0.

Three Corners Solar Project

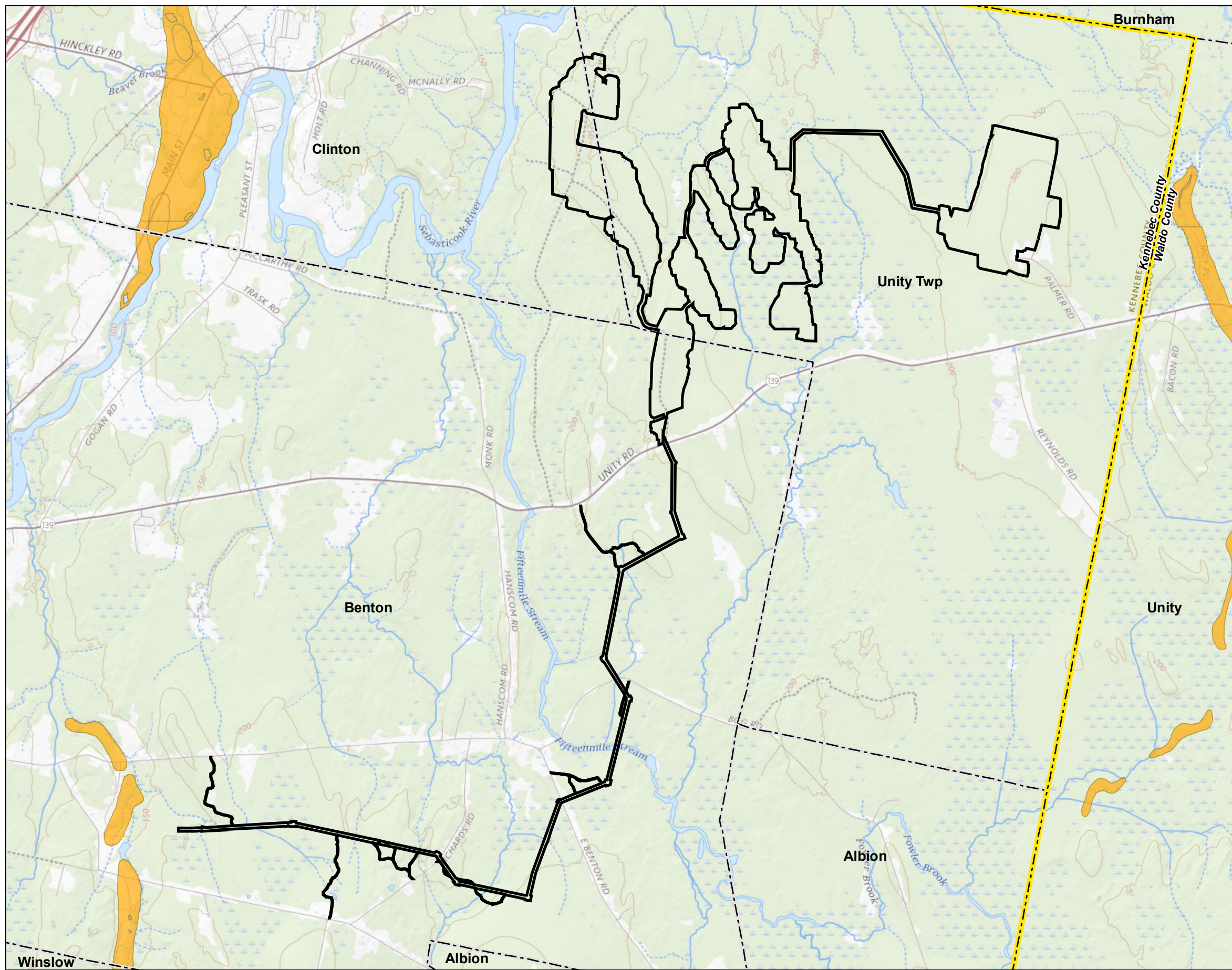
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SECTION 15: GROUNDWATER

Figure 15-1

Significant Sand & Gravel Aquifers

V:\195601453\active\195601453_03_data\gis_cad\gis\mxd\15-1_Aquifer.mxd Revised: 2022-01-27 By: gcarpenter

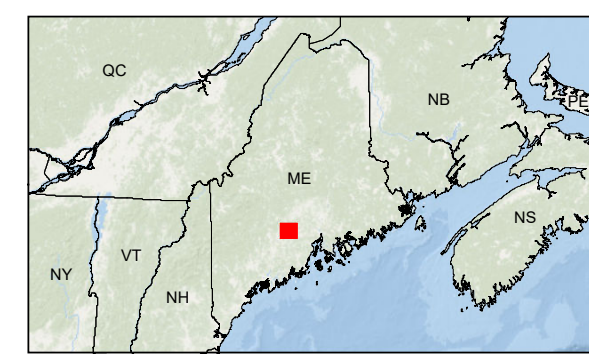


- Legend**
- Project Area
 - Significant Sand and Gravel Aquifer
 - Municipal Boundary
 - County Boundary



0 3,000 Feet
 (At original document size of 11x17)
 1:36,000

- Notes**
1. Coordinate System: NAD 1983 UTM Zone 19N
 2. Sources: Sand and Gravel Aquifer provided by USGS
 3. Background: The USGS National Map



Project Location
 Benton, Clinton, Unity Twp, Maine

Prepared by HT on 2022-01-06
 TR Review by GC on 2022-01-07
 IR Review by EB on 2022-01-10

Client/Project
 Three Corners Solar Project

195601453

Figure No.
15-1
Title
Significant Sand and Gravel Aquifers

Three Corners Solar Project

MDEP Site Location of Development Act Permit Application

SECTION 15: GROUNDWATER

Exhibit 15-1

Groundwater Protection Plan

Groundwater Protection Plan

Three Corners Solar Project
Unity Township, Benton, and Clinton, Maine

Prepared for:

Three Corners Solar, LLC

Prepared by:

Stantec Consulting Services Inc.

December 2021

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Plan prepared by Tom Tetreau, CPESC



1.0 INTRODUCTION

On behalf of Three Corners Solar, LLC, Stantec Consulting Services Inc. (Stantec) has prepared Groundwater Protection Plan as a stand-alone document to identify the general requirements for spill prevention, containment, and control to be implemented during construction and operations.

During construction, the potential sources of groundwater contamination will be fuel and hydraulic, lubricating, and insulating oils used in the operation of vehicles and construction and electrical equipment. Any spills of these materials from the vehicles or equipment are typically small and of very short duration. Spills that are properly cleaned up would not pose any risk to groundwater quality. During project operations, potential contaminants that may be present include oils and lubricants located within the main project transformer (transformers associated with each inverter will utilize mineral oil or be of a dry-type). Any fuel or lubricant stored on site will be in accordance with all applicable local, state, and federal regulations.

Procedures for preventing spills and handling potential spills during construction and operations are detailed below. The basic elements of this plan provide descriptive procedures for safe storage and handling of materials to prevent spills, as well as spill reporting procedures, emergency contact telephone numbers (including state and federal environmental agencies), and oil spill cleanup guidelines. In the event of an oil or hazardous material spill, employees are trained to promptly contain, report, and clean up the spill in accordance with these procedures. In addition, as a standard operating procedure, operational vehicles carry an oil spill kit that contains material for conducting initial containment and clean-up of spills.

2.0 GENERAL REQUIREMENTS

- Contractors/subcontractors will store, transport, and use oil, hazardous materials, and wastes in accordance with all applicable local, state, and federal regulations and these requirements.
- At a minimum, contractors/subcontractors will follow Best Management Practices when storing, transporting, or using oil, hazardous materials, and wastes.
- Contractors/subcontractors will take care not to cause an uncontrolled spill or release of oil or hazardous materials to the environment.
- Contractors/subcontractors will provide and maintain sufficient on-site spill cleanup and containment supplies (e.g., absorbent pads, containment booms, protective clothing, debris containers) to control releases of oil, hazardous materials, or wastes. In addition, operational vehicles will carry an oil spill kit that contains material for conducting initial containment and clean-up of spills.
- Contractors/subcontractors will remove oils, hazardous materials, wastes, and unused materials from the work site at the completion of the job. This includes full and partially full containers of waste material such as, but not limited to, rags, gloves, trash, scrap material, and empty containers.

3.0 STORAGE AND HANDLING REQUIREMENTS

- Petroleum products, toxic or hazardous chemicals, or liquid waste or byproducts will not be used or stored on site other than as fuel in equipment.
- Herbicides will not be mixed, transferred, or stored on site.
- Petroleum products and other hazardous materials will not be stored or transferred, including fueling of vehicles and equipment, within 100 feet of waterbodies or wetlands or within 200 feet of water supply wells.
- Overnight parking of equipment will not occur within 100 feet of waterbodies or wetlands and not within 200 feet of water supply wells. An overnight parking area for construction equipment will be designated prior to construction. The parking area will be inspected in the morning prior to initiating daily construction activities so that potential slow drip spills or leaks can be found and cleaned up.
- Maintenance of construction equipment will not occur within 100 feet of waterbodies or wetlands and not within 200 feet of water supply wells.
- Containers will be kept closed unless material is being transferred.

- Contractors/subcontractors will ensure that all transferring operations are monitored and not left unattended.
- Handling of flammable and combustible liquids, including gasoline and diesel fuel, will be in accordance with rules developed under Title 25 M.R.S.A., Section 2441 (Fire Prevention and Fire Protection), as amended (See also Code of Maine Rules 16-219 Chapter 317). These regulations include, but are not limited to, bonding and grounding during transfer operations, fire protection requirements, storage quantity limitations, and spacing and location requirements.
- Handling and disposal of hazardous wastes will be in accordance with Maine Department of Environmental Protection (MDEP) Hazardous Waste Management rules (06-096 Chapters 850 through 857) developed pursuant to Title 38 M.R.S.A., Section 1301 et. seq., and U.S. Environmental Protection Agency regulations (40 CFR 260 through 272). Handling and disposal of waste oil will be in accordance with MDEP Waste Oil Management Rules (06-096 Chapter 860) and U.S. Environmental Protection Agency regulations (40 CFR 279).

4.0 SPILL REPORTING REQUIREMENTS

- Spill reporting requirements are the responsibility of the contractor/subcontractor during construction and the responsibility of Three Corners Solar, LLC, during operations. As required by Title 38 M.R.S.A., Section 543 and MDEP regulations (06-096 Chapters 600 4.B and 800 4.1), spills of oil or hazardous materials in any amount and under any circumstances must be reported to the MDEP within two hours from the time the spill was discovered at **1-800-482-0777**. A description of available spill control equipment must also be provided as part of this reporting requirement.
- As required by the federal Clean Water Act (40 CFR Part 110.4), a discharge of oil "which causes a sheen upon the surface of the water or adjoining shoreline or oily sludge deposits beneath the surface of the water" must be reported within 24 hours to the National Response Center at **1-800-424-8802**.
- The need to report spills to the National Response Center of hazardous materials other than oil will be determined by the contractor/subcontractor by consulting the Comprehensive Environmental Response, Compensation, and Liability Act list of hazardous substances and reportable quantities (40 CFR Table 302.4). Any spills that involve a reportable quantity of any hazardous substance must be reported to the National Response Center by the contractor/subcontractor during construction and Three Corners Solar, LLC, during operations.
- During construction, the contractor/subcontractor must also report all spills immediately to the Three Corners Solar, LLC, the Project and/or Construction Manager, and local emergency response officials.
- During operations, Three Corners Solar, LLC, will immediately report all spills to the MDEP and local emergency response officials.

5.0 SPILL CLEAN-UP REQUIREMENTS

- During construction, it is the responsibility of the contractor/subcontractor to ensure and oversee immediate and complete cleanup of all spills involving oil or hazardous materials in accordance with state and federal requirements. The contractor/subcontractor is also responsible for all health and safety issues related to the cleanup of oil or hazardous materials. The contractor/subcontractor is also responsible for expediting the appropriate disposal of spill debris waste and restoring the site to its original condition. During operations, Three Corners Solar, LLC, will be responsible for these tasks.
- If the spill cannot be safely or adequately handled by personnel on site, the contractor/subcontractor (during construction) or Three Corners Solar, LLC (during operations), will, in consultation with MDEP, immediately arrange for a licensed spill response contractor to contain, clean up, and perform required sampling and disposal of spilled materials and debris and comply with applicable reporting requirements.

6.0 PERSONNEL TRAINING REQUIREMENTS

6.1 Construction

Prior to construction, the contractor will instruct construction personnel on the operation and maintenance of construction equipment to prevent the accidental discharge or spill of fuel, oil, and lubricants. Personnel will also be made aware of the pollution control laws, rules, and regulations applicable to their work. During construction, spill prevention refresher briefings with the construction crew will be conducted monthly. These briefings will highlight:

- Precautionary measures to prevent spills;
- Potential sources of spills, such as equipment failure or malfunction;
- Review of standard operating procedures in case of a spill, including applicable notification requirements;
- Equipment, materials, and supplies available for clean-up of a spill; and
- A list of known spill events.

6.2 Operations

During operations, Three Corners Solar, LLC, will provide periodic training to operations and maintenance personnel to prevent the accidental discharge or spill of fuel, oil, and lubricants. Such training will include:

- Precautionary measures to prevent spills;
- Potential sources of spills, such as equipment failure or malfunction;
- Review of standard operating procedures in case of a spill, including applicable notification requirements;
- Equipment, materials, and supplies available for clean-up of a spill; and
- A list of known spill events.

Operations and maintenance personnel will also be made aware of the applicable pollution control laws, rules, and regulations.