

**NUMBER NINE WIND FARM
MDEP NRPA/SITE LOCATION OF DEVELOPMENT COMBINED APPLICATION**

Section 14.
Basic Standards

SECTION 14. BASIC STANDARDS

14.1 EROSION AND SEDIMENT CONTROL PLAN

Fisher Associates developed an Erosion and Sediment Control Plan for Number Nine Wind Farm LLC (Applicant) in support of the Number Nine Wind Farm (Project) that describes the construction process, strategies for controlling erosion and sedimentation associated with construction and operation of the Project, as well as an inspection and maintenance plan (Exhibit 14-A). Erosion and sediment control includes temporary measures during construction and permanent measures to stabilize the soil after construction. Temporary measures are in accordance with those described in the "Maine Erosion and Sediment Control Best Management Practices" manual (March 2003) published by the Bureau of Land and Water Quality, Maine Department of Environmental Protection (MDEP). Permanent measures are in accordance with the Maine Stormwater Best Management Practice Manual.

Engineering details of erosion and sedimentation control are included in Exhibit 1-A (Turbine Area), Exhibit 1-B (North Generator Lead Line), and Exhibit 1-C (Bridal Path Generator Lead Line). Additional measures may be required to protect new stormwater conveyance or management systems due to changes in actual site conditions. For more information on stormwater management, see Section 12.

If constructed in conformance with the Project design plans and the basic standards described in Exhibit 14-A, the Project is not expected to result in any significant erosion or sedimentation either on or off the Project site.

14.2 FIELD ADJUSTMENTS

The Applicant expects that minor adjustments will be made during final design work and during construction based on conditions encountered in the field. As described below, the Applicant has identified changes that do not require a permit modification and that may be made (a) without advance notice to MDEP or, (b) that require prior approval by the third-party inspector or MDEP staff.

The following field and/or final design adjustments are authorized under the permit provided they do not result in new impacts to protected natural resources as defined under the Natural Resources Protection Act (38 MRSA Section 480-B(8)); do not increase overall project clearing; do not impact a new landowner without proper title and/or notifications; and meet the requirements of MDEP Chapter 500 Stormwater Management Standards. Any of these adjustments will be reflected in the final as-built drawings.

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Section 14.
Basic Standards

(a) Examples of adjustments that may be made during construction and/or final design without advance notice to MDEP:

- Reduction in clearing, impervious surface, or size of structure; elimination of a structure; or relocation of a structure;
- Location, dimension or addition of drainage culverts, level spreaders, rock sandwiches or other stormwater infrastructure, provided that the culvert does not convey a regulated stream and that the hydraulic capacity of the modified stormwater infrastructure meets design standards;
- Changes to pole or anchor locations for the electrical collector, provided that any adjustment meets the buffer requirements as defined in Section 10;
- Maintenance within the footprint of existing roads with exception of any in-stream work or wetland impacts to be used for temporary construction access;
- Changes of up to 10 feet in vertical roadway alignment and turbine pad elevation; and
- Changes of up to 300 feet in either direction in horizontal roadway alignment and associated clearing, and in turbine or met tower clearing area, and in electrical collector alignment laydown/staging areas.

(b) May be made upon prior approval by the third-party inspector or MDEP staff:

- Changes other than those identified in (a) and that do not otherwise require a permit amendment as determined by MDEP.

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Section 14.
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EXHIBIT 14-A EROSION AND SEDIMENT CONTROL PLAN

SECTION 14
BASIC STANDARDS
FOR
NUMBER NINE WIND FARM
Turbine Area, North Generator Lead and Bridal Path Generator Lead

Owner/Operator:
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14.1 Project Description

Number Nine Wind Farm, LLC is proposing a utility scale wind energy project in the Towns of Bridgewater, T10 R3 Wels, E Township, TD R2 Wels, T9 R3 Wels, TC R2 Wels, T8 R3 Wels, and Saint Croix Township, Aroostook County Maine. 52 miles of two segments of electrical generator lead lie within the Towns of Houlton, Hodgdon, Linneus, Littleton, Hammond, Haynesville, Forktown, T9 R3 WELS, T8 R3 WELS, TC R2 WELS, and TA R2 WELS. The project will include the construction of 119 wind turbines (WTG). The design depicts 129 turbine locations, however only 119 will be chosen for construction. The WTG's are located within lease areas on multiple privately owned properties that are currently used for commercial timber harvesting. Access to the turbines will be through a series of existing and proposed private, 16 and 34-foot wide gravel access roads. The turbines will also be connected by a combination of underground and overhead electric cable to a substation in the center of the project area. In addition, there will be up to 8 (temporary or permanent) meteorological towers, an Operations and Maintenance (O&M) building, up to 4 laydown yards, 3 batch plants/equipment storage areas, and 52 miles of two segments of electrical generator lead that will connect to a switchyard as proposed by others (see plans and reports by others). The access roads will experience minimal traffic from the occasional maintenance vehicle once the wind farm is operational. The improvements proposed for the project will not significantly change the existing drainage patterns or conditions in the area.

Erosion and sediment (E&S) control includes temporary measures during construction and then permanent measures to stabilize the soils after construction. Temporary measures are in accordance with the Maine Erosion and Sediment Control BMPs manual, March 2003. Permanent measures are in accordance with the Maine Stormwater Best Management Practice Manual.

14.2 Project Schedule

Construction of the project is scheduled to take place during 2015-2016. In general, the proposed construction sequence shall consist of installation of all perimeter E&S Control and Green Practices prior to starting the tasks listed below, unless indicated otherwise on the construction documents. Special attention will be needed for work during the Winter Season. In addition, all disturbed areas are to be vegetated prior to commencement of subsequent tasks.

1. Prepare Temporary Staging Areas;
2. Box out, Compact Subgrade, and Install Access Roads;
3. Set up Concrete Batch Plant, if required;
4. Excavate for WTG Foundations;
5. Pour WTG Foundations
6. Construct Crane Pads;
7. Erect WTGs;
8. Install Substations;
9. Clear and construct the generator lead
10. Install Underground Electrical Collection System;
11. Construct O&M Building, Driveway, and Parking Lot;
12. Dismantle Temporary Structures;
13. Remove Temporary E&S devices after final stabilization of each area is declared;
14. Restore any disturbed area due to removal of temporary measures.

After construction is completed, the construction access roads within the phosphorus watersheds are to be reduced from 34 ft to 16 ft wide by reclamation of the compacted earth or gravel shoulders. Furthermore, all cleared areas not remaining as gravel within the phosphorus watersheds are to be reclaimed and allowed to re-vegetate to meadow. The crane pads near the turbines are to remain in place, while all other areas not used for maintenance equipment are to be reclaimed with stockpiled topsoil and re-vegetated.

At locations where crane walk roads cross delineated streams the roads will be reduced from 34 ft to 16 ft and the area within 25 ft of the stream banks will be restored to pre-construction conditions.

Refer to the information listed below for a detailed description of the proposed construction sequencing for each of the various project components.

1. Temporary Laydown Yards/Staging Areas and Batch Plants/Permanent Equipment Storage Areas - The items below provide a generalized construction sequence for the control of erosion and sedimentation during construction of the staging area.
 - Install erosion and sediment controls along perimeter of proposed disturbance.
 - Rough grade site and stockpile topsoil. Install perimeter erosion and sediment controls around soil stockpiles. Topsoil and other excavated materials may be utilized at other project areas as needed.
 - Place gravel and geotextile (as determined by design) over the area.
 - Restore and re-vegetate all disturbed areas as indicated on the plans.
 - After site has been stabilized, remove erosion and sediment controls. Erosion control berms may remain in place.
2. Access Roads (Not Crossing Wetlands or Streams) - The items below provide a generalized construction sequence for the control of erosion and sedimentation during the construction of the access roadways.
 - Install erosion and sediment controls at the locations shown on the construction drawings.
 - Complete clearing and grubbing.
 - Place geotextile (as determined by design) and place gravel or compacted earth (in accordance with the Geotechnical Report) over the geotextile.
 - Use the roadways to deliver equipment and materials to the WTG sites.
 - Stabilize according to temporary/permanent stabilization methods.
 - After the access roadways have been stabilized, remove all erosion and sediment control structures. Erosion control berms may remain in place.
3. Access Roads (Crossing Delineated Streams and Wetlands) - The items below provide a generalized construction sequence for the control of erosion and sedimentation during the construction of the access roadways crossing wetlands or streams.
 - Install erosion and sediment controls at the locations identified on the construction drawings.
 - Limit clearing to minimum width necessary and as indicated on the plans.
 - Install permanent culverts at new access roads and temporary culvert extensions or timber mat bridges at existing crossings or as identified on the plans to maintain wetland/stream hydrology.
 - Place geotextile (as determined by design) and place gravel or compacted earth (in accordance with the Geotechnical Report) over the geotextile.
 - After delivery and assembly of turbine components serviced by the access road, remove temporary culverts or timber mat bridges.
 - Stabilize and restore areas within 25 ft of a delineated stream crossing to preconstruction conditions.
 - After the site has been stabilized, remove all erosion and sediment control structures. Erosion control berms may remain in place.

4. Culverts- The items below provide a generalized construction sequence for the control of erosion and sedimentation during culvert installation.
 - Install the erosion and sediment controls as identified on the construction drawings.
 - Divert water as necessary prior to excavation.
 - Complete the excavation required for the culvert installation.
 - Install the culvert and complete the backfill and compaction operations.
 - Finish slopes around the culvert and stabilize according to plans.
 - After the site has been stabilized, remove all erosion and sediment control structures. Erosion control berms may remain in place.

5. WTG Facilities- The items below provide a generalized construction sequence for the control of erosion and sediment during WTG construction:
 - Install erosion and sediment controls along perimeter of the proposed disturbances from the WTG site area.
 - Complete site clearing and grubbing; stockpile topsoil where required.
 - Rough grade site, excavate foundation, and stockpile soil. Install perimeter erosion and sediment controls around soil stockpiles. Topsoil and other excavated materials may be utilized at other project areas as needed.
 - Finish-grade the slopes around the WTG site. Install erosion control blankets, where applicable, and apply mulch and seeding. All seeding and erosion matting (if required) shall be performed upon completion of the foundations and erection, while construction is still in progress.
 - Construct the WTG foundations, Crane Pads, and assemble the WTG components.
 - Complete the final grading of the site, replace topsoil, and stabilize according to specifications.
 - After site has been stabilized, remove erosion and sediment controls. Erosion control berms may remain in place.

6. Underground Electric Collection System and Overhead Collection Line- The following provides a generalized construction sequence of the construction and implementation of the erosion and sediment controls during construction of the collection system:
 - Install the erosion and sediment controls around perimeter of areas to be disturbed.
 - Complete clearing and grubbing along the cable route.
 - Install and backfill trench in one operation.
 - Replace topsoil and place seed and mulch.
 - After the site is stabilized remove erosion and sediment controls. Erosion control berms may remain in place.

7. Overhead Electric Generator Lead Line- The following provides a generalized construction sequence of the construction and implementation of the erosion and sediment controls during construction of the generator lead line:
 - Survey the clearing limits and access roads
 - Install the erosion and sediment controls around perimeter of areas to be disturbed.
 - Complete clearing along the generator lead route.
 - Install structures and conductors.

- Place seed and mulch along the route.
 - After the site is stabilized remove erosion and sediment controls. Erosion control berms may remain in place.
8. O&M Facility- The items below provide a generalized construction sequence for the control of erosion and sedimentation during construction of the O&M building and site improvements:
- Install the erosion and sediment controls around proposed perimeter of disturbance.
 - Complete site clearing and grubbing.
 - Rough grade the site and stockpile soil for reuse. Rough grade the proposed stormwater management basin. The basin shall be utilized and maintained during construction to collect sediment from the O&M site.
 - Install gravel parking areas and gravel for outdoor storage yard.
 - Install the building foundations, septic system, water well, and assemble the pre-fabricated building.
 - Complete the final grading of the site, topsoil, and stabilize according to specifications.
 - After the site is stabilized remove erosion and sediment controls. Erosion control berms may remain in place.
9. Substation- The items below provide a generalized construction sequence for the control of erosion and sedimentation during construction of the substation.
- Install the erosion and sediment controls around proposed perimeter of disturbance.
 - Complete site clearing and grubbing.
 - Rough grade site and stockpile soil for reuse. Install perimeter erosion and sediment controls around soil stockpiles. Topsoil and other excavated materials may be utilized at other project areas as needed.
 - Finish the slopes around the substation. Install erosion control blankets, where applicable, and apply mulching and seeding.
 - Install all the substation components.
 - Complete the final grading of the site and install gravel within the substation area. Stabilize the outside areas.
 - After the site has been stabilized, remove erosion and sediment controls. Erosion control berms may remain in place.

14.3 Project Components

The project will include the construction of 119 wind turbines. The design depicts 129 turbine locations, however only 119 will be chosen for construction. In addition to the WTGs, laydown yards; batch plants/permanent equipment storage areas; access roads and culverts; WTG facilities, such as foundations and temporary turnarounds; crane pads; underground electrical collection system; overhead electrical collection line; overhead electric generator lead, Operation and Maintenance (O&M) facility; substations; and meteorological towers will be required for completion of the project as defined below.

1. Laydown Yards - During the construction phase of the project, laydown yards will be required. These areas are to be used for storing and moving necessary project components upon arrival to the project site and as emergency safety areas. Temporary construction offices will be located within laydown yard areas. The laydown yards are to be located on the existing ground surface as much as practicable.

2. Batch Plants/Permanent Equipment Storage Areas - Batch plants will be required to furnish concrete for the construction of the foundations. The aggregates, cement, and water required for the operation of the batch plant will be obtained from offsite sources. Each batch plant area will be up to 7 acres and will contain wash-out pit(s) as necessary which shall be maintained throughout construction. There shall be no discharges from the Batch Plants. The final location of the Batch Plants will be determined during final design in order to facilitate delivery of concrete to the turbine sites. After construction of the project is complete, the Batch Plant locations will be converted to Permanent Equipment Storage areas that will house off-road vehicles necessary for operations and maintenance of the project.
3. Access Roads and Culverts - The access roads are to consist of a minimum permanent 16ft wide gravel lane. In areas where assembly cranes are expected to walk, the road will be 34ft wide. These roads will consist of a permanent 16ft wide gravel lane with the remaining 18ft as either gravel or compacted earth material as approved by the Geotechnical Engineer. In phosphorus watersheds, 34ft wide roads will be reduced to 16ft with the remaining 18ft to be restored and revegetated to a meadow condition. The use of geotextile under the gravel is to be evaluated during the design based on the soil properties. Existing logging roads will be used and maintained in their current alignment to the greatest extent practicable. Minor alignment changes and/or grading may occur on existing roads to facilitate delivery and construction vehicles in accordance with Section 14.4-Field Adjustments of this report. Gravel topping of existing roads may be necessary in areas where excessive rutting or potholes have occurred. In no case shall an existing road be expanded to more than 16ft wide unless otherwise indicated on the plans. In areas where the existing roads are to be expanded to 34ft wide, existing culverts will be extended to accommodate the additional width. Where access roads cross delineated streams and wetlands within 25ft of the stream, the access roads will be reduced to 16ft wide and temporary culverts or temporary timber mat bridges will be removed and the disturbed area (not remaining as road) within 25ft of the stream will be restored to preconstruction grades and allowed to naturally revegetate.
4. Wind Turbine Generator (WTG) Facilities - The project will include the construction of 119 wind turbines (WTG). The design depicts 129 turbine locations, however only 119 will be chosen for construction. The proposed WTGs consist of a multi-coated, conical tubular steel tower, up to 374 feet tall with three rotor blades extending to a height of up to 492 feet. The top of the tower foundation has an approximate 18-foot diameter exposed concrete pedestal that extends approximately 6 inches above grade. The tower foundation is anticipated to be a spread footing approximately 11.5 to 13 feet deep by approximately 60 to 65 feet in diameter. Other foundation sizes and/or types may be utilized in accordance with the Geotechnical report. The steel tower is to be installed over the pedestal and bolted down. Each foundation and pedestal will require placement of approximately 550 to 600 cubic yards of concrete. The turbine components, including tower sections, nacelle and blades, are to be delivered by truck along the existing logging roads and access roads constructed as a part of this project. Cranes will be used to assemble these components on-site.
5. Crane Pads (Turbine Erection and Assembly Area) - A crane pad designed with a maximum slope of 1 percent in all directions is to be constructed at each WTG location to provide an area for the crane during erection of the WTGs. The crane pad areas are thick compacted gravel areas measuring approximately 100 feet by 65 feet in size. The turbine components are to be delivered in trucks to each of the turbine sites. The cranes located at the WTG site will offload the components and stage at each WTG site. Upon completion of the foundation and backfilling the area, the heavy cranes will pick up the components and install them over the foundation. These pads are to remain on-site for future operation and maintenance of the WTGs.

6. Electrical Collection System - The location of the underground collection system for electric power is grubbed prior to trenching, resulting in a 2 foot wide strip per cable. Depending on the electrical design there may be more than 1 cable trench per strip with a 10-foot separation between them. A 34.5 kV overhead and underground collector system is to be installed to collect the electric power generated by the WTGs and bring it to the substation. Power generated within the nacelle is transmitted through drop cables which travel down the tower to the underground system. The collection cables are to be placed in trenches that are approximately 4 feet below the ground surface. The 2-foot wide trench is to be immediately backfilled and compacted. The disturbed areas are to be promptly stabilized upon completion of cable installation.
7. Operation and Maintenance (O&M) Facility- An operation and maintenance building, outdoor storage yard, parking lot, and drive is to be constructed to house the Supervisory Control and Data Acquisition (SCADA) System, as well as to store other O&M equipment and materials.
8. Substation- A substation is to be constructed to collect the power generated from the turbines and then transmit to the grid for distribution.
9. Electric Generator Lead – Approximately 52 miles of electric generator lead will be installed from the onsite substation and will head in a southerly direction until it reaches a proposed switchyard by others (refer to plans and reports by others).
10. Meteorological Towers- Up to 8 (temporary or permanent) meteorological towers are to be installed within the project boundary during the construction and operation phases to monitor wind resources.

14.4 Erosion Control Measures

All erosion and sediment control measures are to be selected, installed, and maintained in accordance with the Maine Department of Environmental Protection manual “Maine Erosion and Sediment Control BMP’s”, latest edition.

Overview of Construction Erosion and Sediment Control Measures

Soil erosion and sediment controls are to be used at all locations where construction disturbances will take place. Locations are included in the construction drawings. The following management practices are to be performed by the contractor in conjunction with the erosion and sediment controls specified in this section:

- Minimize exposure time of bare or disturbed areas by properly sequencing construction activities
- Verify that all needed materials are available to complete a specific task without delays
- Apply temporary stabilization immediately after grading
- Stabilize areas prior to disturbing new areas
- Install erosion and sediment controls immediately
- Inspect and maintain all erosion and sediment controls on a regular basis

Temporary Measures

The temporary erosion and sediment control measures listed below are to be used during construction of the project and removed after final stabilization of the site.

1. Erosion Control Berms - Erosion Control Berms are proposed at the down gradient side of access drives and WTG sites to prevent sediment from disturbing areas outside the construction limits.
2. Straw Bale Dikes- Straw bales are to be used where no other practice is feasible, such as at the base of a steep slope.

3. Temporary Swales- Temporary swales are to be used at all WTG pad locations to prevent sediment from disturbing areas outside of the construction limits and to redirect stormwater around the construction and assembly areas. Vegetative and/or reinforced outlets shall be used at all outlets of the temporary swales to prevent erosive velocities of the storm water to occur.
4. Check Dams- Temporary check dams are to be installed as shown in the construction details and as required to slow the velocity of runoff, reduce erosion and scour, and trap debris. The check dams are to be constructed of gravel and rock or straw bales, where deemed appropriate.
5. Stabilized Construction Entrance- A stabilized construction entrance shall be constructed at each new and/or highly utilized access road connection to a public roadway (Town, County, State).
6. Sediment Traps- Small impoundments installed in drainage ways downstream of disturbed areas may be used to settle out sediment from runoff water. If deemed necessary for this project, the location of proposed sediment traps are to be identified on the construction drawings.
7. Vegetative Stabilization- Seeding and mulching for temporary stabilization shall be performed, as in accordance with the Maine Erosion and Sediment Control BMPs manual as shown in Table 14-1 below:

Table 14-1 - TEMPORARY SEEDING SCHEDULE				
Seed	Seeding Rate (lbs/acre.)	Seeding Depth (Inches)	Recommended Seeding Dates	Remarks
Winter Rye	112 (2.0 bu)	1-1.5	8/15 – 10/1	Good for fall seeding. Select a hardy species, such as Aroostook Rye.
Oats	80 (2.5 bu)	1-1.5	4/1 – 7/1 8/15 – 9/15	Best for spring seeding. Early fall seeding will die when winter weather moves in, but mulch will provide protection.
Annual Ryegrass	40	0.25	4/1 – 7/1	Grows quickly but is of short duration. Use where appearance is important. With mulch, seeding may be done throughout growing season.
Sudangrass	40 (1.0 bu)	0.5-1	5/15 – 8/15	Good growth during hot summer periods.
Perennial	40 (2.0 bu)	0.25	8/15 – 9/15	Good cover, longer lasting than Annual Ryegrass. Mulching will allow seeding throughout growing season.
Temporary Mulch with or without dormant seeding			10/1 – 4/1	Refer to Temporary Mulching BMP and/or Permanent Vegetation BMP within Maine Erosion and Sediment Control BMP Manual

Permanent Measures

The erosion and sediment control measures listed below are to be used during construction of the project and remain in place after project closeout.

1. Diversion Berms & Channels- These devices are to be used to intercept and divert runoff water away from proposed disturbed and impervious areas, where possible. These devices will allow for better treatment of stormwater runoff from the proposed impervious areas by reducing the overall flow to the proposed practices, thus, allowing the use of smaller practices which in turn

will reduce overall project disturbance.

2. Erosion Control Blankets- This practice consists of installation of items such as jute mat or engineered erosion control products that will remain in place after completion of the project. Such measures are to be installed where slopes exceed 3H:1V and at locations where immediate stabilization is to be achieved.
3. Vegetative Stabilization- Seeding and mulching for permanent stabilization shall be performed as specified on the final construction documents.
 - Topsoil will be spread over disturbed areas that are not remaining as gravel, and then graded to a uniform depth and a natural appearance. Topsoil shall be as specified or approved by the Engineer.
 - Final seeding shall be completed immediately (within 7 days) following final topsoil grading. All final fertilizing and seeding shall adhere to these specifications unless otherwise approved by the Engineer.
 - Areas shall be mulched immediately after seeding. Immediately upon first signs of any evidence of significant erosion occurring, the Contractor shall repair and mulch all such areas until the area is stabilized. Mulching shall consist of hay mulch, hydro-mulch, or any suitable substitute deemed acceptable by the Engineer. Should mulching prove to be ineffective, netting or matting shall be used in its place.
 - Straw mulch shall be applied at the rate of 2 tons per acre (2 bales/1,000 square feet) unless otherwise specified.
 - Hydro-mulch shall consist of a mixture of tackifier, wood fiber or paper fiber and water sprayed over a seeded area. Hydro-mulch shall not be used during the fall, winter, or mud season unless approved by the Engineer.
 - Dormant seeding shall not occur unless approved by the Engineer. Should seeding be necessary between November 1 and April 15, the following procedure shall be followed.
 - Only unfrozen topsoil shall be used.
 - Topsoil, seeding, and mulching will not be done over snow cover. If snow exists, it must be removed prior to placement of seed.
 - No permanent seeding will be done during fall, winter, or mud season unless specifically approved by the Engineer. If attempted, the normal seed application rate shall be doubled. Reseeding in spring by Contractor will be required in all areas with insufficient growth.
 - Where temporary seeding is required, the rates specified in the *Temporary Seeding and Mulching Schedule* below shall be adhered to.
 - On slopes greater than 3H: 1V, straw matting or excelsior matting may be substituted for mulch. Biodegradable netting over mulch may be applied where required by the Engineer.
 - Following final seeding, the site will be inspected every 30 days until 80 percent cover has been established. Reseeding and mulching shall be carried out in areas where inadequate growth is observed until adequate growth is established in seeded areas, as agreed upon by the Engineer. The Contractor may be required to reseed during the following spring subsequent to winter or fall construction and seeding in order to provide 90 percent vegetative cover as required for Acceptance by the Owner.
4. Ditch Turnouts - used at the outlet of culverts and ditches to convert concentrated flow into sheet flow. Sheet flow is more natural and reduces erosion and the movement of sediment. Ditch turnouts are detailed on the plans. Ditch turnouts will be inspected at least once a year for signs of channelization or sedimentation. Damage to associated ditches will be repaired immediately.

Overwinter Construction and Stabilization

If a construction site is not stabilized with a road gravel base, 75 % mature vegetation cover or riprap by November 15 then the site needs to be protected with over-winter stabilization. An area considered open is any area not stabilized with vegetation, mulching, erosion control mix, erosion control mats, riprap or gravel base on a road. The winter construction period is from November 1 through April 15.

Winter excavation and earthwork shall be completed such that no more than 1 acre of the site is without stabilization at any one time. Limit the exposed area to those areas in which work is to occur during the following 15 days and that can be mulched in one day prior to any snow event. All areas shall be considered denuded until the subbase gravel is installed in roadway areas or the areas of future loam and seed have been loamed, seeded and mulched. A cover of erosion control mix performs the best.

Areas within 100 feet of any natural resource that do not have at least 75% mature vegetative cover shall be mulched by December 1 and protected with an erosion control cover. A double row of sediment barriers shall be placed between the disturbed area and any natural resource during winter construction. During frozen conditions, sediment barriers may consist of erosion control berms.

Mulch application shall be applied at a rate of 150 lb/1000 sf or 3 ton/acre and shall be properly anchored. Erosion control mix shall be applied with a minimum 4-inch thickness. Snow shall be removed to a 1-inch depth prior to mulching. At the end of each day of final grading, all areas shall be properly stabilized with anchored hay or straw or erosion control matting.

Site Stabilization Schedule Before Winter:

September 15 All disturbed areas must be seeded and mulched. All slopes will be stabilized, seeded, and mulched. All grass lined ditches must be stabilized with mulch or an erosion control blanket.

October 1 All disturbed areas to be protected with an annual grass must be seeded at a seeding rate of 3 pounds per 1,000 square feet and mulched.

November 15 All stone-lined ditches and channels must be constructed and stabilized. All slopes requiring riprap must be constructed by this date.

December 1 All disturbed areas where the growth of vegetation fails to be at least 3 inches tall or at least 75% of the disturbed soil is covered by vegetation, must be protected for over-winter.

All disturbed areas shall be inspected in the spring and damaged spots shall be repaired. An established vegetative cover means a minimum of 85 to 90% of an area is vegetated with vigorous growth.

Field Adjustments

The Applicant expects that minor adjustments will be made during final design work and during construction based on conditions encountered in the field. As described below, the Applicant has identified changes that do not require a permit modification and that may be made: 1. without advance notice to MDEP or, 2. that require prior approval by the third-party inspector or MDEP staff.

The following field and/or final design adjustments are authorized under the permit provided they do not result in new impacts to protected natural resources as defined under the Natural Resources Protection Act (38 MRSA Section 480-B(8)); do not increase overall project clearing; do not impact a new landowner without proper title and/or notifications; and meet the requirements of MDEP Chapter 500

Stormwater Management Standards. Any of these adjustments will be reflected in the final as-built drawings.

1. Examples of adjustments that may be made during construction and/or final design without advance notice to MDEP:
 - Reduction in clearing, impervious surface, or size of structure; elimination of a structure; or relocation of a structure;
 - Location, dimension or addition of drainage culverts or other stormwater infrastructure, provided that the culvert does not convey a regulated stream and that the hydraulic capacity of the modified stormwater infrastructure meets design standards;
 - Changes to pole or anchor locations for the electrical collector, provided that any adjustment meets the buffer requirements as defined in Section 10;
 - Maintenance within the footprint of existing roads with exception of any in-stream work or wetland impacts to be used for temporary construction access;
 - Changes of up to 10 feet in vertical roadway alignment and turbine pad elevation; and
 - Changes of up to 300 feet in either direction in horizontal roadway alignment and associated clearing, and in turbine or met tower clearing area, and in electrical collector alignment laydown/staging areas.
2. May be made upon prior approval by the third-party inspector or MDEP staff:
 - Changes other than those identified in (a) and that do not otherwise require a permit amendment as determined by MDEP.

14.5 Limits of Disturbance

By following the construction staging, sections will be constructed and stabilized such that the entire project area will not be disturbed at one time.

14.6 Design Drawings

Project plans are included in the exhibits.

14.7 Calculations

All erosion and sediment control measures are to be constructed in accordance with the Maine Erosion and Sediment Control BMPs Manual.

14.8 Inspection and Maintenance Plan

The Contractor shall be responsible for installing, monitoring, maintaining, repairing, replacing and removing the temporary erosion and sedimentation controls as specified herein or as directed by the Engineer, or shall appoint a qualified subcontractor to do so, as follows:

- The Contractor or approved designated Inspector shall perform inspections weekly, or immediately following any significant rainfall, of the site until the site is stabilized.
- Maintenance measures will be performed as needed during the entire construction cycle. After each rainfall, and prior to predicted significant rainfall events ($> 1''$), a visual erosion controls inspection will be made by the Contractor or approved designated Inspector to insure their continuing function as designed.
- Stone check dams, bale barriers, drop inlet barriers, erosion control mix berms, and mulch shall be inspected and repaired once a week or immediately following any significant rainfall. Sediment trapped behind these barriers shall be removed when it reaches a depth of 6 inches (or $1/2$ the height of the dam for check dams).
- Near completion of the construction and after the site is reseeded and stabilized, the Contractor

shall inspect, clean, maintain, repair, re-stabilize, or re-vegetate all drainage structures, storm drains, culverts, level spreaders and ditches prior to acceptance by the Owner.

Inspection Schedule

The Contractor shall conduct an assessment of the site prior to the commencement of any non-erosion and sediment control construction work and report that the appropriate erosion and sediment controls described herein have been installed adequately for construction of the project to begin.

Construction observations shall be completed upon commencement of disturbance at least one time every 7 days, or immediately following any significant rainfall, until final stabilization of the site is achieved.

Observation and Maintenance Practices

The following observation and maintenance practices shall be used to maintain the proposed erosion and sediment controls and all post construction stormwater management practices identified herein throughout construction:

1. Construction Entrances are to be inspected for evidence of off-site sediment tracking where vehicles exit the project area to a paved road. Each contractor and subcontractor is responsible for maintaining the construction entrance and other controls as previously described.
2. Material storage areas that are exposed to precipitation are to be inspected. Offsite storage areas for materials used exclusively for the project are to be included in the inspections and inspections reports are to be completed.
3. Swales shall be observed for breaches and they shall be repaired when found.
4. Check Dams shall be inspected for depth of sediment and built-up sediment shall be removed prior to it exceeding a depth of one-third the height of the dam.
5. Sediment Traps, if required, shall be inspected for depth of sediment and built-up sediment shall be removed prior to it exceeding a depth greater than 50-percent of the basin, as measured at the outlet of the structure. Vegetation within the structure shall be limited to a maximum height of 18-inches.
6. All sediment and debris removed from a practice shall be disposed of in accordance with all applicable waste disposal regulations.
7. Temporary and Permanent Seeding, as well as plantings shall be inspected for washouts, bare spots, and healthy growth. Washout areas shall be stabilized by jute-mesh, sod, or other approved energy dissipation means. Bare spots and unhealthy growth areas shall be re-established, as required.
8. All measures shall be maintained in good working order. If a repair is necessary, it shall be initiated within 24 hours of report and completed within 48-hours thereafter.

Inspection Reporting

Inspections shall occur in accordance with the Maine Erosion and Sediment Control BMPs manual and construction observation reports shall be completed after each observation.