STORMWATER MANAGEMENT PLAN

NOVEL ENERGY SOLUTIONS LLC

FOR

ME GORHAM DAIGLE CSG

JUNE 14, 2023

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ME Gorham Daigle CSG
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Gorham, Cumberland County, Maine, 04038

Operator(s):

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SWMP Preparation Date:
6/14/2023

Estimated Project Start Date: 7/31/2023
Estimated Project Completion Date: 10/31/2024

Table of Contents

1. Site Evaluation, Assessment, and Planning

1.1 Project Narrative

This Stormwater Management Plan (SWMP) has been prepared to demonstrate that construction activities will comply with the applicable Maine Department of Environmental Protection (MDEP) stormwater management requirements in Chapter 500. The report is prepared in accordance with the basic stormwater standards to show that drainageways will not be altered to have unreasonable adverse impact on wetlands, waterbodies, or adjacent downgradient properties.

1.2 Contact Information and Responsible Parties

Operator: Novel Energy Solutions LLC	Site Supervisor(s):
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1.3 Construction Site Estimates

The following are estimates of the construction site:

Project Area Summary	
Developed Area	~0.23 acres
Impervious Area	~0.23 acres
Occupied Area	~4.78 acres

**Elevated solar panel installations are considered "disconnected impervious" surfaces, and credit is given for the pervious vegetated surfaces left in place under the panels.*

1.4 Soils, Slopes, Vegetation, and Drainage Patterns

A. Soil Type(s): USDA web Soil Survey data was obtained for the Project location. The custom soil resources report for the Project is included in Appendix C – Soil Report.
B. Description of Slopes: Slopes in the Project area range from 0-10 percent.
C. Drainage patterns: In general, stormwater will drain from areas of higher elevation in the SE to areas of lower elevation in the NW
D. Vegetation: Permanent stabilization will consist of natural grasses and a pollinator mix perimeter.

1.5 Surface Water On or Abutting the Site

Protected Natural Resources (PNR) on and abutting the site were delineated by qualified wetland professionals. 2 wetlands and 1 stream were identified within the Project lease area. See attached PNR Analysis and report in Appendix H.

1.6 Downstream Waterbodies

A. The Project area is located within the Dundee Pond-Upper Presumpscot River watershed (010600010304). Runoff from the Project drains to unidentified water, which discharges to the Kennebec River. No portion of the Project is located within the watershed of a lake or pond or "Urban Impaired Stream" or "Lake Most as Risk from New Development" as defined in Chapter 502.
B. The EPA's Stormwater Discharge Mapping Tool was used to determine the receiving waters to which the Project discharges to and whether they are considered "impaired" under section 303(d) of the Clean Water Act. See table below and follow link to mapper report. EPA Stormwater Discharge Mapping Tool – ME Gorham Daigle CSG

Discharge Mapping Tool Report x

Number of Catchments Found: 2 Number of Assessments Found: 1

Catchment ID / Related Waters	Causes of Impairment / Assessments (Assessment Unit ID)	TMDL (TMDL ID)	TMDL Pollutant
3322260 / Kennebec River	DIOXIN (INCLUDING 2,3,7,8-TCDD) POLYCHLORINATED BIPHENYLS (PCBS) / Kennebec R, (ME0103000306_339R_01)		
6721317 / Unidentified Water			

Links (🔗) above open in a new browser tab. OK

1.7 Floodplain

The Federal Emergency Management Authority (FEMA) maintains materials developed to support flood hazard mapping for the National Flood Insurance Program (NFIP). According to Flood Insurance Rate Map (FIRM) for Cumberland County, panel number 2300470020B, with effective date 10/15/1981, the Project area is located in zone X, area of minimal flood hazard. See Appendix A – Site Maps.

1.8 Alterations to Existing Drainage Ways

Construction of the Project will not significantly alter natural drainage ways.

1.9 Alterations to Land Cover within Watershed

Under proposed development conditions, alterations to land cover generally consist of an increase in gravel area for the access road, placement of impervious concrete pads for electrical equipment, installation of the solar array over land that will be maintained as a meadowed field, and installation of perimeter fencing. Ground disturbance will be minimized as much as possible and will only occur in areas necessary for installation of the proposed access road, electrical conduit runs, proposed grading, equipment pads, array racking posts, fencing, and installation of the new culvert (if applicable). Proposed earthwork is best described as localized grading at shallow depths and will not result in significant alterations of the existing terrain. The disturbed areas will be revegetated to further improve post-construction ground cover.

New impervious surfaces associated with the proposed development consist of the gravel access road, post-supposed racking system, and equipment pads. The solar panels are not considered an impervious surface with respect to stormwater runoff as they are elevated above grade. Separation between rows of panels will allow the passage of precipitation to the ground surface. The array racking system is anticipated to be supported by driven piles; however, the final design will depend on the structural design provided by the racking manufacturer. Common racking supports consist of wither steel beams (W6x8.5) with an area of approximately 2.52 square inches each or approximately 3-inch diameter ground screw foundations. Impervious surfaces associated with the array posts are considered de minimis and negligible in terms of providing stormwater quality treatment.

1.10 Site Features and Sensitive Areas to be Protected

Description of unique features

Two wetlands and one stream were delineated in or near the project area
Describe measures to protect these features, if applicable
The Project has been designed to minimize and avoid protected natural resources to the greatest extent possible. Stormwater BMPs will be installed and maintained around identified features to minimize any construction related impacts. Please see Erosion Control Plan Included in Appendix B for further details.

1.11 Potential Sources of Pollution

Potential Sources of Sediment and Other Pollutants to Stormwater Runoff
Anticipated sources of construction phase pollutants at the site are disturbed (bare) soil, vehicle fuels and lubricants, chemicals associated with construction activities, and construction materials. Without adequate control there is the potential for each type of pollutant to be transported by stormwater.

1.12 Endangered and Threatened Species

The U.S Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool was consulted for Federally Listed Endangered and Threatened Species. Please see table below.

Species	Federal Status	Critical Habitat	ESA Determination
Northern Long-eared Bat	Threatened	No	No Effect
Monarch Butterfly	Candidate	No	May Occur

Maine Department of Inland Fisheries and Wildlife

Endangered and threatened inland fish and wildlife species in Maine are also protected under the Maine Endangered Species Act (MESA). There are currently twenty-six inland fish and wildlife species listed as endangered and twenty-five listed as threatened, some of which are also listed under the ESA. On March 7, 2023, NES requested information on the known or suspected locations of any rare, threatened, or endangered plants or wildlife, Significant Wildlife Habitat, or other significant natural resources within the vicinity of the Proposed Project from Maine's Department of Inland Fisheries and Wildlife (MDIFW). In a response dated March 23, 2023, the MDIFW has not mapped any Essential Habitats that would be directly affected by the Proposed Project. Agency correspondence included in Appendix I.

Maine Natural Areas Program

The MESA only applies to animals – plants are not included in the legislation; however, the Maine Natural Areas Program (MNAP) maintains an "official" list of rare and endangered plants in the state. On March 7, 2023, NES requested information on the presence of any known or suspected locations of rare, threatened, or endangered plants, exemplary natural communities,

or other significant natural resources documented within the vicinity of the Proposed Project Area from the MNAP. In a response dated March 8, 2023, MNAP concluded that there would be no known adverse impacts to rare, threatened, or endangered plants or rare or exemplary natural communities on the Proposed Project Area or within the vicinity. Agency correspondence included in Appendix I.

1.13 Maine Historic Preservation Commission (MHPC)

NES submitted a request for the Maine Historic Preservation Commission (MHPC) to review and comment on the Proposed Project's effect on historic resources. A copy of this project request is included in Appendix I.

1.14 Maps

A. Topographic Site Map - A map of the Project boundaries overlaid on a USGS 7.5-minute quadrangle map is included in Appendix A.
B. Civil Design Drawings - A civil design drawing set has been prepared for the proposed development. Erosion and sediment control details and notes are included in the drawing set in Appendix B.

2. Erosion and Sediment Control Plan

This plan has been developed based on good engineering practices, generally accepted industry standards, and in accordance with the guidance provided in the "Maine Erosion and Sediment Control Best Management Practices Manual for Designers and Engineers" (MDEP, Rev. October 2016).

2.1 Project Schedule

Construction of the Project is tentatively scheduled to commence in the summer/fall of 2023 with the intent of being fully operational in the 2024 calendar year. Additionally, specifics of how work is completed will be based on environmental conditions associated with seasonal changes. The following date are provided to establish a guideline for these seasons:

- Winter: November 1 to March 19
- Mud Season: March 20 to April 30
- Spring: May 1 to June 21
- Summer: June 22 to September 21
- Fall: September 22 to October 31

2.2 Minimize Disturbed Area and Protect Natural Features and Soil

The contractor shall utilize the following general measures and practices throughout construction and development of the Project:

A. Erosion and sedimentation control BMPs shall be implemented prior to commencing earth disturbing activities.
B. Phase construction activities as practicable to minimize the area and duration of bare soil are exposed.
C. Route all construction traffic through approved points of access and egress and over stabilized construction entrances.
D. Only areas of active construction shall remain un-stabilized or unvegetated.
E. Protect and maintain identified buffer area throughout construction.
F. Continuously maintain and inspect installed BMPs.
G. Double rows or paired BMP systems shall be implemented to protect critical areas.
H. Stabilize disturbed areas within 30-feet of a protected natural resources within 7 days.

2.3 Control Stormwater Flowing onto and through the Project

Measures should be taken to ensure that "clean" runoff from off site is diverted around disturbed areas on site. Care should be taken that re-routing off site runoff does not result in flooding or other issues on adjacent properties.

BMP Description	Temporary/Permanent Diversion Ditches and Swales
Installation Schedule	Install temporary diversion ditches as shown on the Erosion Control plan sheets, if applicable and as needed throughout construction, prior to up gradient ground disturbing activities.
Maintenance and Inspection	The wetted perimeter of any temporary or permanent drainage ditch must be stabilized within 200 lineal feet from property edge or from the point of discharge into any surface water. This stabilization must be completed within 24 hours of connecting to a surface water. The remainder of the ditch must be stabilized within 14 days of connecting to a surface water and after construction has ceased. Temporary or permanent ditches that are being used as a sediment containment system do not need to be stabilized but must be stabilized within 24 hours after no longer being used as a sediment containment system. Ditches must be inspected every 7 days, and within 24 hours after 0.5" 24-hour rain event. Any sediment deposited in diversion ditches must be removed and any exposed soils stabilized within 7 days of discovery unless precluded by legal, regulatory, or physical access constraints. If precluded, note reason for delay on maintenance log.
Responsible Staff	Novel Energy Solutions LLC or assigned Subcontractor

2.4 Natural Buffer of Equivalent Sediment Controls

A. For grading and earth disturbances that occur within 50-feet of any wetlands located in the Project area, two (2) rows of silt fence will be used to provide redundant protection of the feature.

B. For any stormwater discharges from construction activities within 50-feet of a Waters of the United States, the Permittee shall:

- Provide a 50-foot buffer undisturbed natural buffer between the construction activities and the Waters of the United States; or
- Provide additional erosion and sediment controls within that area.

2.5 Stabilize Soils

BMP: Seeding	
☐ Permanent	☒ Temporary
Description	Disturbed areas that are not yet at final grade but will not be actively worked for 14 days or more must be temporarily stabilized. Temporary stabilization but be initiated immediately where work has temporarily ceased and must be completed no later than 14 calendar days after work in that portion of the site has temporarily ceased. Temporary seeding shall be dependent on the season of planting but shall consist at a minimum, of 4 lb./acre of Annual Ryegrass.

BMP: Seeding	
	Seeding method and application rate shall be approved by the Engineer prior to the start of construction. Temporary mulch shall be applied when necessary. Alternatively, hydraulic soil stabilizer may be used in place of temporary mulch.

BMP: Seeding	
☒ Permanent	☐ Temporary
Description	All areas at final grade must be stabilized within 14 days after completion of the major construction activity. Permanent stabilization must be initiated immediately where work has permanently ceased and must be completed no later 14 calendar days after construction activity in that portion of the site has permanently ceased. Seeded areas shall be protected with mulch. Permanent mulch shall be Crimped Straw Mulch at 2 tons/acre and shall be disk anchored. Other methods may be approved by the Engineer prior to construction. Hydraulic Soil Stabilizer may be used in place of mulch if approved by Civil Engineer. Permanent stabilization will consist of natural grasses and a pollinator mix perimeter, as outlined in the landscaping plans to be provided with the final construction SWMP.

2.6 Protect Slopes

Steep slope areas: The Contractor must minimize the need for disturbance of portions of the project that have steep slopes (3:1 or steeper). For those sloped areas which must be disturbed, the Contactor must use techniques such as phasing and stabilization practices designed for steep slopes, such as draining and terracing. Slopes steeper than 3:1 must be protected by erosion control blankets.

BMP Description: Erosion Control Blanket	
Installation Schedule	If applicable, install erosion control blankets as detailed in finalized SWMP and as needed throughout construction, within the timeframe allowable for stabilization after work has ceased in an area, depending on the location (i.e., 24 hours, 7 days, 14 days).
Maintenance and Inspection	To function properly, erosion control blankets must be in contact with the soil beneath the blanket. Blankets must be secured per the construction details provided in the finalized SWMP. Inspect blankets every 7 days or within 24 hours after a 0.5" 24-hour rain event. Repair or replace non-functional blankets within 24 hours after discovery.
Responsible Staff	Novel Energy Solutions LLC or assigned Subcontractor

2.7 Protect Storm Drain Inlets

All storm drain inlets must be protected by appropriate means during construction, until all sources with potential for discharging to the inlet have been stabilized. Inlet protection may

be removed for an inlet if a specific safety concern (street flooding/freezing) has been identified and permittee(s) have received written correspondence from the jurisdictional authority (e.g., city/county/township etc.) verifying the need for removal. The written correspondence must be documented in this SWMP.

BMP Description: Silt Fence Inlet Protection	
Installation Schedule	Install inlet protection in existing structures as needed throughout construction, prior to beginning ground disturbing activities up gradient of the inlet. Install inlet protection on new structures as soon as the structures are put to use.
Maintenance and Inspection	Inspect silt fence every 7 days or within 24 hours after a 0.5" 24-hour rain event. Sediment accumulations should be removed when sediment build-up reaches 1/2 the height of the silt fence. This maintenance must be completed within 24 hours of discovery.
Responsible Staff	Novel Energy Solutions LLC or assigned Subcontractor

BMP Description: Wimco (or Approved Equal) Inlet Protection	
Installation Schedule	Install inlet protection in existing structures as needed throughout construction, prior to beginning ground disturbing activities up gradient of the inlet. Install inlet protection on new structures as soon as the structures are put into use.
Maintenance and Inspection	Inspect silt fence every 7 days or within 24 hours after a 0.5" 24-hour rain event. Sediment accumulations should be removed when sediment build-up reaches 1/2 the height of the silt fence. This maintenance must be completed within 24 hours of discovery.
Responsible Staff	Novel Energy Solutions LLC or assigned Subcontractor

2.8 Control Stormwater Discharge Points

Pipe or other temporary permanent outlets must be stabilized with temporary or permanent energy dissipation within 24 hours after connection to a surface water. Stabilize the normal wetted perimeter of a drainage ditch or swale within 200 feet of the property edge within 24 hours of connection to a surface water. The remainder of the ditch or swale must be stabilized within 14 days of connection.

BMP Description: Riprap	
Installation Schedule	Installation must be completed within 24 hours of connecting to a surface water.
Maintenance and Inspection	Inspect outlets every 7 days or within 24 hours after a 0.5" 24 hour rain event. Repair, replace or supplement non-functioning riprap energy dissipation within 24 hours of discovery. Any off site accumulation of sediment must be removed in manner and

BMP Description: Riprap	
	at a frequency to minimize off-site impacts.
Responsible Staff	Novel Energy Solutions LLC or assigned Subcontractor

2.9 Chemical Erosion and Sediment Control BMP's

Polymers, flocculants, or other sedimentation treatment chemicals must be applied after conventional erosion and sediment control devices are utilized. Chemicals may only be applied where treated stormwater is directed to a sediment control system which allows for filtration or settlement of the floc prior to discharge. Consideration must be given when selecting chemicals to the expected soil types to be exposed during construction, and to the expected turbidity, pH and flow rate of stormwater flowing into the chemical treatment system or area. If chemicals are part of the erosion control plan, they must be used in accordance with accepted engineering practices, and with dosing specification and sediment removal design specifications provided by the manufacturer or provider/supplier of the applicable chemicals.

2.10 Establish Perimeter Controls and Sediment Barriers

All structural sediment controls intended to receive and treat construction runoff must be in place before any up-gradient land alteration can begin and must stay in operation until final stabilization of the site has been achieved. Temporary soil stockpiles must have silt fence or other effective sediment controls and cannot be placed in any natural buffers or surface waters, including stormwater conveyances such as curb and gutter systems, or conduits and ditches unless there is a bypass in place for the stormwater.

BMP Description: Silt Fence	
Installation Schedule	Install silt fence as needed throughout construction and prior to commencing up gradient land disturbing activities.
Maintenance and Inspection	Inspect silt fence every 7 days or within 24 hours after a 0.5" 24-hour rain event. Sediment accumulations should be removed when sediment build-up reaches ½ the height of the silt fence. This maintenance must be completed within 24 hours of discovery.
Responsible Staff	Novel Energy Solutions LLC or assigned Subcontractor

BMP Description: Biologs	
Installation Schedule	Install bio-logs as needed throughout construction and prior to commencing up gradient land disturbing activities.
Maintenance and Inspection	Inspect silt fence every 7 days or within 24 hours after a 0.5" 24-hour rain event. Sediment accumulations should be removed when sediment build-up reaches ½ the height of the

BMP Description: Biologs	
	biolog. This maintenance must be completed within 24 hours of discovery.
Responsible Staff	Novel Energy Solutions LLC or assigned Subcontractor

2.11 Retain Sediment On-Site

Any off-site accumulations of sediment must be removed in a manner and at a frequency sufficient to minimize off-site impact (e.g., fugitive sediment in streets could be washed into storm sewers by the next rain and or pose a safety hazard to users of public streets.

BMP Description: Temporary Sedimentation Basin (if applicable)	
Installation Schedule	Install temporary sedimentation basin (if applicable) prior to beginning upslope land disturbing activities. If this is not possible due to existing topography, limit disturbance to only those areas necessary to install temporary sedimentation basin.
Maintenance and Inspection	Inspect temporary sedimentation basins every 7 days or within 24 hours after a 0.5" 24-hour rain event. Temporary and permanent sedimentation basins must be drained and the sediment removed when the volume of sediment collected in the basin reaches ½ the storage volume. This maintenance must be completed within 72 hours of discovery, or as soon as field conditions allow access. If conditions do not allow maintenance to be performed within 72 hours, document the cause of delay on the maintenance form. Refer to section 3.7 of this SWMP for basin draining guidelines.
Responsible Staff	Novel Energy Solutions LLC or assigned Subcontractor

2.12 Establish Stabilized Construction Exits

Rock construction exits have been designed to prevent sediment track off. If there is evidence of sediment tracking from vehicles in paved areas, the sediment must be removed by street sweeping or other method as soon as feasibly possible, but no longer than 24 hours after discovery.

BMP Description: Rock Exit Drive	
Installation Schedule	Install rock exits as soon as possible at the beginning of construction activities. Install additional rock exit drives as needed throughout construction.
Maintenance and Inspection	Inspect rock exit drives every 7 days or within 24 hours after a 0.5" 24-hour rain event. Rock exit drives must be periodically 'refreshed' to ensure proper functionality. Maintenance should be performed when the exit appears smooth and compacted or

BMP Description: Rock Exit Drive	
	when the rock exit drive ceases to function properly. Exit locations should be inspected for signs of off-site sediment tracking. Tracked sediment must be removed from all paved surfaces within 24 hours of discovery. Street sweeping must be used if rock exit drives are not adequate to prevent sediment from being tracked onto the street.
Responsible Staff	Novel Energy Solutions LLC or assigned Subcontractor

2.13 Allowable Non-Stormwater Discharge Management

Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified, and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:

A. Discharges from firefighting activity.
B. Fire hydrant flushing.
C. Vehicle wash water if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarriage and transmission washing is prohibited).
D. Dust control runoff in accordance with permit conditions and Appendix (C)(3).
E. Routine external building washdown, not including surface paint removal, that does not involve detergents.
F. Pavement wash water (where spills/leaks of toxic or hazardous materials have not occurred unless all spilled material had been removed) if detergents are not used.
G. Uncontaminated air conditioning or compressor condensate.
H. Uncontaminated groundwater or spring water.
I. Foundation or footer drain-water where flows are not contaminated; and
J. Uncontaminated excavation dewatering (see requirements in Appendix C(5)).
K. (vi) Potable water sources including waterline flushings.2

Allowable non-stormwater discharges cannot be authorized under this permit unless they are directly related to and originate from a construction site or dedicated support activity (e.g., a pressure washing company cannot broadly use this general permit for their business operations, because general vehicle washing is not associated with a construction site). It is not necessary to list these sources of non-stormwater in the NOI.

3. Good Housekeeping BMP's

3.1 Material Handling and Waste Management

Type	Details
Solid Waste Disposal	No solid materials, including construction and demolition materials, collected sediment, asphalt and concrete millings, shall be allowed to be carried from the site with storm water. All solid waste, including disposable materials incidental to the major construction activities, must be collected, and placed in containers. The containers will be emptied periodically by a contract trash disposal service and hauled away from the site. Disposal of solid wastes must comply with MEDEP requirements.
Groundwater Protection	Substances that have the potential for polluting surface and/or groundwater must be controlled by whatever means necessary to ensure that they do not discharge from the site. As an example, special care must be exercised during equipment fueling and servicing operations. If a spill occurs, it must be contained and disposed of so that it will not flow from the site or enter groundwater, even if this requires removal, treatment, and disposal of soil. In this regard, potentially polluting substances should be handled in a manner consistent with the impact they represent.
Sanitary Facilities	All personnel involved with construction activities must comply with state and local sanitary septic system regulations. Portable toilets must be positioned so that they are secure and will not be tipped or knocked over. Temporary sanitary facilities will be provided at the site throughout the construction phase where required by state or local regulations. They must be utilized by all construction personnel and be serviced by a commercial operator.
Spill Prevention	Discharge of oil or other hazardous substances is subject to reporting and clean up requirements.

3.2 Establish Proper Storage, Handling, and Disposal Practices

Hazardous materials & toxic waste (including oil, diesel fuel, gasoline, hydraulic fluids, paint solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids) must be stored in waterproof containers with secondary containment, and the location(s) must be noted on the SWMP map. Except during application, the contents must be kept in trucks or within storage facilities. Storage and disposal of hazardous waste must follow local or State regulations. Runoff containing such material must be collected, removed from the site, treated, and disposed at an approved solid waste or chemical disposal facility. Building products that have the potential to leach pollutants and pesticides, herbicides, insecticides, fertilizers, treatment chemicals and landscape materials must be under cover by plastic sheeting or protected by similar effective means to prevent contact with stormwater.

3.3 Designated Washout Areas

The contractor shall designate areas for concrete and other (stucco, paint, for release oils, curing compounds and other construction materials related to the construction activity) washouts, and note the locations on the site map. All liquid and solid wastes generated by washout operations must be contained in a leak proof containment facility or impermeable layer. The liquid and solid wastes must not contact the ground, and there must not be runoff from the washout operations or areas. Liquid and solid waste must be disposed of. A sign must be installed adjacent to each washout facility to inform site workers to utilize proper facilities for disposal of concrete and other wastes.

BMP Description: Concrete Washout	
Installation Schedule	Prior to concrete work
Maintenance and Inspection	Inspect concrete washouts for evidence of discharge every 7 days or within 24 hours after a 0.5” 24-hour rain event. Repair, replace or supplement non-functioning concrete washouts within in 24 hours of discovery or prior to next use.
Responsible Staff	TBD

3.4 Establish Proper Equipment and Vehicle Fueling and Maintenance Practices

The contractor shall designate areas for equipment fueling, cleaning, maintenance, and repair, and note the location(s) on the SWMP site maps. Runoff must be contained within the designated areas (i.e., through use of a temporary berm). The areas must not be located in any surface water. Special care must be exercised during equipment fueling and servicing operations. If a spill occurs, it must be contained and disposed of so that it will not flow from the site or enter groundwater, even if this requires removal, treatment, and disposal of soil. It is the contractor’s responsibility to ensure that adequate supplies are always available to clean up discharged materials and that an appropriate disposal method is available for recovered spilled materials. No engine degreasing is allowed on site.

3.5 Control Equipment and Vehicle Washing

The contractor shall designate location(s) for vehicle washing and note the location(s) on the SWMP site map. Runoff from the washing area must be contained in a sediment basin or other similarly effective controls and waste from the washing activity must be properly disposed of. The contractor must properly use and store soaps, detergents, and solvents. Engine degreasing of trucks and other construction vehicles is also prohibited.

4. Post-Construction Stormwater Maintenance Plan

Once permanent stabilization is achieved, the Project will be operated by a qualified maintenance representative who will be responsible for maintenance of the entire grounds and stormwater management features.

4.1 General Inspection and Maintenance Requirements

Generally, the proposed facility will be operated and maintained in a manner consistent with good utility practices, including a minimum of biannual (spring and fall) onsite inspections and maintenance of stormwater management system components, as needed. A post-construction maintenance and inspection log will be completed as part of the quarterly onsite inspections, refer to Attachment E for a template of this inspection log. A copy of the log shall be retained for a period of at least five years from the completion of permanent stabilization.

The Owner shall be responsible for maintaining vegetation within the limits of the fenced-in solar array. It is anticipated that mowing will be performed twice annually, with schedule adjusted as needed, to maintain vegetation to 20 inches in height or less between each cutting.

Potential maintenance concerns associated with specific areas and facilities at the facility are discussed in the following paragraphs.

4.2 Facilities to be Maintained

The stormwater management features to be maintained at the Project include (if applicable):

4.2.1 Access roadway

The access roadway will typically require little on-going maintenance, owing to their primary and limited use by light-duty vehicles. These areas will be inspected quarterly, and signs of existing or developing erosion, rutting, trash, or unwanted vegetation will be removed or repaired as needed. Additionally, shoulders shall be inspected for low spots or evidence of channelized flow and false ditching. Repair and maintenance shall be completed as necessary to ensure runoff from the roadways is conveyed as sheet flow to the downgradient stabilized areas.

4.2.2 Vegetated swales

Vegetated swales shall be inspected in the Spring and Fall of each year and following significant rain events. Ditches shall be inspected for signs of failure including, but not limited to, evidence

of erosion, newly formed channels or gullies, bare spots, and sediment accumulation. Bare spots should be re-stabilized as soon as practicable. Woody vegetation within the banks or flow path of the ditch shall be controlled. Sediment, leaf litter, sand from Winter operations, etc. shall be removed from ditches when it reduces the capacity of the channel. Addition of stone check dams to reduce velocity may be necessary following maintenance or repair activities.

4.2.3 Culvert

Culvert and associated inlet/outlet protection will be inspected bi-annually. Sediment, debris, or other obstructions accumulating within or at the inlet and/or outlet of the culvert shall be removed. Any evidence of scour or erosion at the inlet and outlet of the culvert shall be repaired and additional stabilization measures added as applicable. Overall condition of the culvert barrel section shall be assessed for signs of damage, heaving, settlement, deflection, or other structural damage; as well as evidence of flow piping around the culvert, undermining the inlet, or evidence of high water above the culvert crown. Repair/maintenance shall be completed as necessary to ensure proper drainage is maintained through culvert.

4.2.4 Vegetated areas beneath array drip edges

Vegetated areas beneath the solar array drip edges will be inspected quarterly for signs of erosion and for the condition of erosion control blankets (where they exist). Any signs of erosion or inadequate vegetation of these areas will be corrected as needed. Any deficiencies in the erosion control blankets will be repaired as needed.

4.2.5 Revegetated areas and embankments

Revegetated areas and embankments will be inspected bi-annually. Any signs of erosion or inadequate revegetation of these areas will be corrected as needed.

4.3 Winter Conditions

"Winter construction" is construction activity performed during the period from November 1 through April 15. If areas within the construction activity are not stabilized with temporary or permanent measures outlined above by November 15, then the site must be protected with additional stabilization measures that are specific to winter conditions. No more than one acre of the site may be without stabilization at one time.

A. Site Stabilization: For winter stabilization, hay mulch is applied twice the standard temporary stabilization rate. At the end of each construction day, areas that have been brought to final grade must be stabilized. Mulch may not be spread on top of snow.
B. Sediment Barriers: All areas within 75 feet of a protected natural resource (PNR) must be protected with a double row of sediment barriers.
C. Ditch: All vegetated ditch lines that have not been stabilized by November 1, or will be worked during the winter construction period, must be stabilized with an appropriate stone lining backed by an appropriate gravel bed or geotextile, unless specifically released from this standard by the regulating agency department.
D. Slopes: Mulch netting must be used to anchor mulch on all slopes greater than 8% unless erosion control blankets or erosion control mix is being used on these slopes.
   NOTE: For guidance on additional winter construction standards, see the "Maine Erosion and Sediment Control BMPs", Maine Department of Environmental Protection.

4.4 Re-certification

As required in Chapter 500, re-certification will be required for each five-year interval from the date of issuance of the permit. The Owner shall submit certification of the following items within 3-months of the expiration of each permit interval.

A. All areas of the Project site have been inspected for evidence of erosion, and all areas of identified erosion have been permanently stabilized.
B. All aspects of the permanent stormwater management system have been inspected for evidence of damage, wear, and malfunction, and that all necessary steps have been taken to repair or replace the system, or portions of the system.
C. The Erosion and Stormwater Management Plan for the Project is being implements as written, or modifications to the plan have been submitted to and approved by the Department, and the maintenance log is being maintained.

5. Inspections

5.1 Inspection and Maintenance

The following standards must be met during construction.

5.1.1 Inspections and Corrective Action

Inspect disturbed and impervious areas, erosion control measures, material storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. Inspect these areas at least once a week as well as before and within 24 hours after a storm event (rainfall), and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct the inspections.

5.1.2 Maintenance

If BMPs need to be repaired, the repair work should be initiated upon discovery of the problem but no later than the end of the next workday. If additional BMPs or significant repair of BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event (rainfall). All measures must be maintained in effective operating condition until areas are permanently stabilized.

5.1.3 Documentation

Keep a log summarizing the inspections and any corrective action taken. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicles access points to the parcel. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.

The log must be made accessible to Department staff and a copy must be provided upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization. The inspection/maintenance form attached as Appendix G incorporates both inspection and maintenance reporting into a single form.

5.2 Delegation of Authority

Duly Authorized Representative(s) or Position(s)
Company: Novel Energy Solutions LLC
Name: Jeff Burkett
Position: Director of Construction
Address: 2303 Wycliff Street, Suite 300
City, State, Zip Code: St. Paul, MN 55114
Telephone Number: 651.392.0046
Email: Jeff.burkett@novelenergy.biz

A copy of the Delegation of Authority form is attached in Appendix F.

6. Recordkeeping and Training

6.1 Recordkeeping

Record Retention – The Owner must keep the SWMP including all changes made to it during construction (see section 7.2), along with the following additional records on file for three years after completion of the construction project:

A. Any other stormwater related permits required for the project.
B. Records of all inspections and maintenance conducted during construction.
C. All permanent operation and maintenance agreements that have been implemented, including all right of way, contracts, covenants, and other binding requirements regarding perpetual maintenance.
D. All required calculations for design of the temporary and permanent stormwater management systems.

6.1.1 Modifications to the SWMP

This SWMP intends to control water-borne and liquid pollutant discharges by some combination of interception, filtration, and containment. The general contractor and subcontractors implementing this SWMP must remain alert to the need to periodically refine and update the SWMP in order to accomplish the intended goals. This SWMP must be amended as necessary during construction in order to keep it current with the pollutant control measures utilized at the site. Amending the SWMP does not mean that it must be reprinted. It is acceptable to add addenda, sketches, new sections, and/or revised drawings. This SWMP must be updated as necessary to include additional requirements, such as additional or modified BMP's, designed to correct problems identified or address situations whenever:

A. There is a change in design, construction, operation, maintenance, weather, or seasonal conditions that has a significant effect on the discharge of pollutants to surface waters or underground waters.
B. Inspections or investigations by site operators, local, state, or federal officials indicate the SWMP is not effective in eliminating or significantly minimizing the discharge of pollutants to surface waters or underground waters or that the discharges are causing water quality standard exceedances.
C. The SWMP is not achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity, or the SWMP is not consistent with the terms and conditions of the General Permit.

D. The MDEP has determined that the project's storm water discharges may cause or contribute to non-attainment of any applicable water standard, or that the SWMP does not incorporate requirements related to an approved Total Maximum Daily Load (TMDL) implementation plan. In this case, the SWMP must be updated, or a supplemental BMP action plan developed to address the identified concerns.

6.2 Training Log

The permittee(s) must fulfill training requirements and include records of training in the SWMP. Refresher training must be attended every three years. Individuals required to be trained include:

A. Individuals preparing the SWMP
B. Individuals overseeing implementation of, revising, and amending the SWMP and individuals performing inspections.
C. Individuals performing or supervising the installation, maintenance, and repair of BMP's. At least one individual on a project must be trained in these job duties.

The content and extent of training must be commensurate with the individual's job duties and responsibilities regarding activities covered under the General Permit. At least one individual trained in the job duties listed above must be present on the site or available on site in 72 hours upon request by the MEDEPs.

The Training documentation must include:

A. Names of personnel associated with the project that are required to be trained.
B. Dates of training and names of instructor and entity providing training.
C. Content of training course, including number of hours of training.

Individuals must be trained by local, state, federal agencies, professional organizations, or other entities with expertise in erosion prevention, sediment control, or permanent stormwater management.

7. Permanent Stabilization

7.1 Permanent Stabilization

If the area will not be worked for more than one year or has been brought to final grade, then permanently stabilize the area within 7 days by planting vegetation, seeding, sod, or through the use of permanent mulch, riprap, or road, subbase. If using vegetation for stabilization, select the proper vegetation for the light, moisture, and soil conditions; amend areas of disturbed subsoils with topsoil, compost, or fertilizers; protect seeded areas with mulch or, if necessary, erosion control blankets; and schedule sodding, planting, and seeding so to avoid die-off from summer drought and fall frosts. Newly seeded or sodded areas must be protected from vehicle traffic, excessive pedestrian traffic, and concentrated runoff until the vegetation is well-established. If necessary, areas must be reworked and restabilized if germination is sparse, plant coverage is spotty, or topsoil erosion is evident. One or more of the following may apply to a particular site.

A. **Seeded areas** - For seeded areas, permanent stabilization means a 90% cover of the disturbed area with mature, healthy plants with no evidence of washing or rilling of the topsoil.
B. **Sodded areas** - For sodded areas, permanent stabilization means the complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.
C. **Permanent Mulch** - For mulched areas, permanent mulching means total coverage of the exposed area with an approved mulch material. Erosion Control Mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.
D. **Riprap** - For areas stabilized with riprap, permanent stabilization means that slopes stabilized with riprap have an appropriate backing of a well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Stone must be sized appropriately. It is recommended that angular stone be used.
E. **Agricultural use** - For construction projects on land used for agricultural purposes (e.g., pipelines across crop land), permanent stabilization may be accomplished by returning the disturbed land to agricultural use.
F. **Paved areas** - For paved areas, permanent stabilization means the placement of the compacted gravel subbase is completed.
G. **Ditches, channels, and swales** - For open channels, permanent stabilization means the channel is stabilized with mature vegetation at least three inches in height, with well graded riprap lining, or with another non-erosive lining capable of withstanding the anticipated flow velocities and flow depths without reliance on check dams to slow flow.

There must be no evidence of slumping of the lining, undercutting of the banks, or downcutting of the channel.

7.2 Notice of Termination

The permittee shall submit Notice of Termination (NOT) on a form provided by the Department within 20 days of completion of permanent stabilization of within 20 days of obtaining coverage under an alternative MEPDES permit. If the property is transferred and construction activity is ongoing, the permittee is not required to file an NOT if the new owner or lessee files an NOI to continue authorization under this general permit for continuing discharge. NOT form is included in Appendix E.

8. Preparation and Certification – Professional Engineer

This SWMP was developed under the supervision of Robin Brigham and reviewed and certified by Scott Geddes. This ECP was developed and certified by Scott Geddes.	
Contact: Robin Brigham *Manager of Environmental Compliance* Address: 2303 Wycliff Street, Suite 300 City, State, Zip: St. Paul, MN 55114 Phone: 612.418.9536 Email: Robin.Brigham@novelenergy.biz	Contact: Scott Geddes *Director of Civil Engineering and Maine Certified Professional Engineer* Address: 2303 Wycliff Street, Suite 300 City, State, Zip: St. Paul, MN 55114 Phone: 612.322.3756 Email: Scott.Geddes@novelenergy.biz

9. SWMP Appendices

Appendix A – Site Maps

Appendix B – Civil Design Package including Erosion Control Plan

Appendix C – Soil Report

Appendix D – Construction General Permit

Appendix E – Permit Application and NOT Forms - Pending

Appendix F – Delegation of Authority

Appendix G – Inspection Template and Maintenance Records

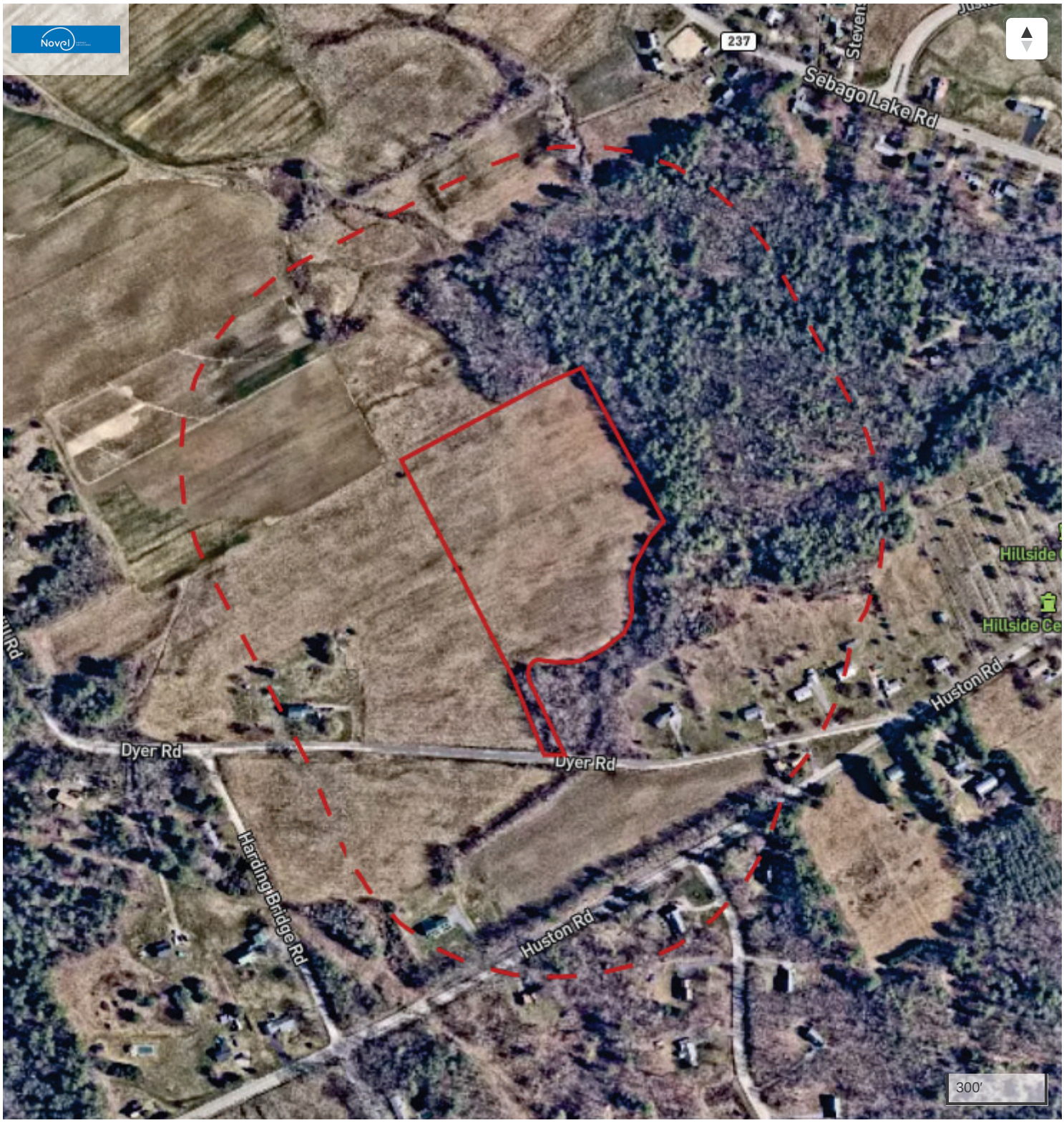
Appendix H – Protected Natural Resource Analysis Desktop Review

Appendix I – Agency Correspondence

- MDIFW, MNAP, and MHPC

APPENDIX A – Site Maps

- Location Map
- Topo Map
- Floodplain Map



Site Location Map

Novel Energy Solutions

ME Gorham Daigle CSG LLC

9.9 acres

Maine

Cumberland County

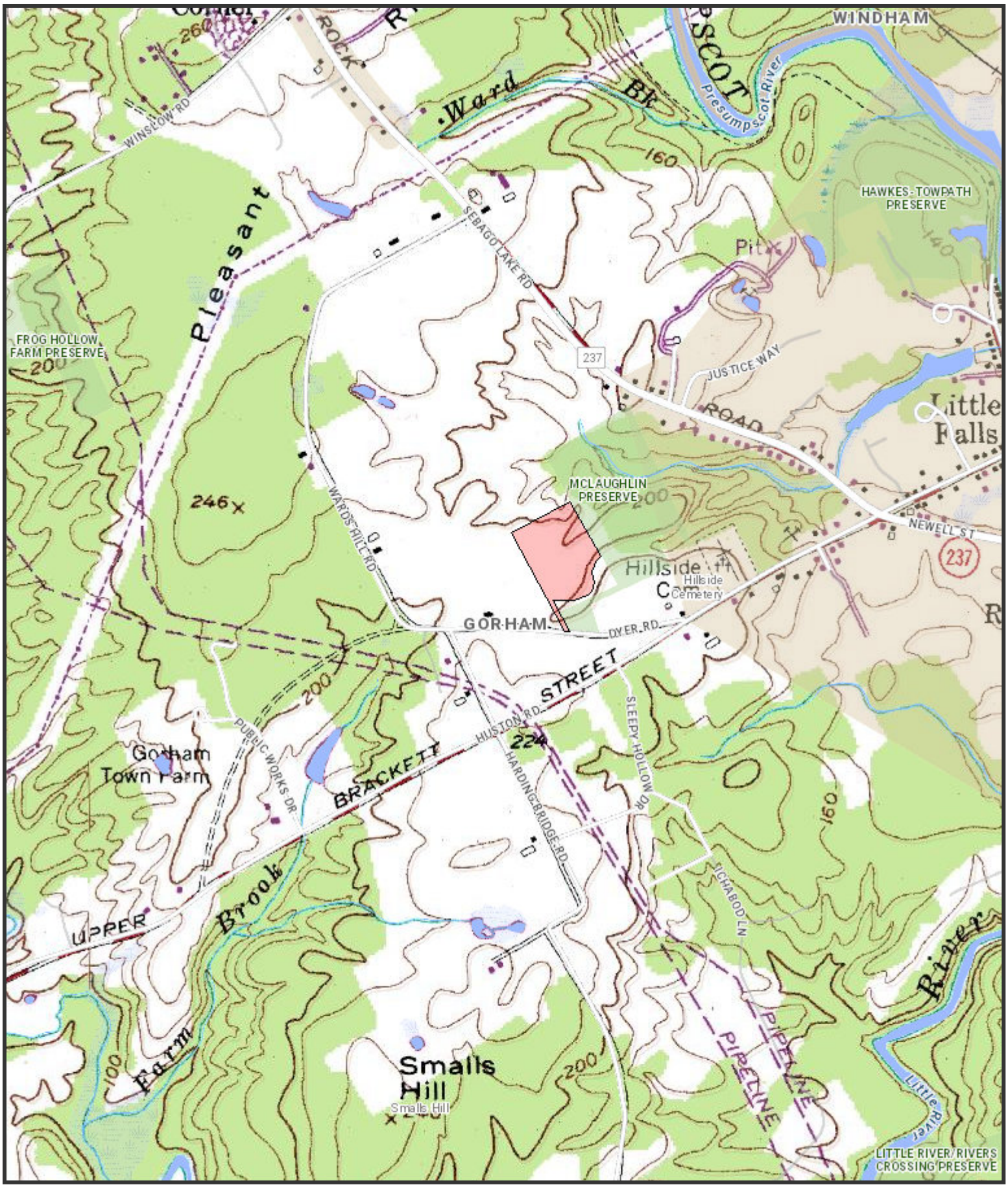
43.728320, -70.442250

transect

Legend

Buffer AOI

ME GORHAM DAIGLE CSG



0.25 Miles

1 inch = 0.28 miles

Date: 3/6/2023
Time: 4:26:30 PM

REFERENCE MARK	ELEVATION IN FT. (NGVD)[1]	DESCRIPTION OF LOCATION
*RM 5	99.85	U.S. Geological Survey disk about 1.45 miles southeast along the Maine Central Railroad from the station at South Windham, about 0.35 mile northwest of mile post P9, in the top of northwest end of northeast stone head wall of a 3 foot stone culvert, 15.5 feet northeast of northeast rail, 0.7 foot southeast of northwest end of headwall and about 6 feet below level of track.
RM 6	105.72	Chiseled X on northeast abutment of Mallison Street bridge over Presumpscot River.
*RM 7	122.04	Chiseled X on northwest abutment of U.S. Route 202 (State Route 4) bridge over Presumpscot River.
*RM 8	141.10	Top of railroad spike in southwest side of 36 inch pine tree, 40 feet northeast of Maine Central Railroad, 100 feet southeast of stone culvert, approximately 0.3 mile northwest along railroad from U.S. Route 202 (State Route 4).
RM 9	139.41	Top of railroad spike set in east side of 23 inch pine tree located 65 feet southwest of CMP Co. Pole 29, which is 35 feet west of the west end of the Newhall Dam.
RM 10	159.00	Chiseled circle in left end of right downstream abutment of Maine Central Railroad bridge over the Presumpscot River, upstream of Newhall Bridge.

[1] National Geodetic Vertical Datum of 1929
* Located Outside Corporate Limits

KEY TO MAP

500-Year Flood Boundary
100-Year Flood Boundary
Zone Designations*
100-Year Flood Boundary
500-Year Flood Boundary

ZONE B
ZONE A1 / ZONE A5
ZONE B

Base Flood Elevation Line With Elevation In Feet** — 513
Base Flood Elevation in Feet Where Uniform Within Zone** — (EL 987)
Elevation Reference Mark — RM7 ×
River Mile — • M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
NOVEMBER 15, 1974
FLOOD HAZARD BOUNDARY MAP REVISIONS:
MARCH 26, 1976

FLOOD INSURANCE RATE MAP EFFECTIVE:
OCTOBER 15, 1981
FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE
800 0 800 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
GORHAM, MAINE
CUMBERLAND COUNTY

PANEL 20 OF 30
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
230047 0020 B
EFFECTIVE DATE:
OCTOBER 15, 1981

federal emergency management agency
federal insurance administration

APPENDIX B - Civil Design Package Including Erosion Control Plan

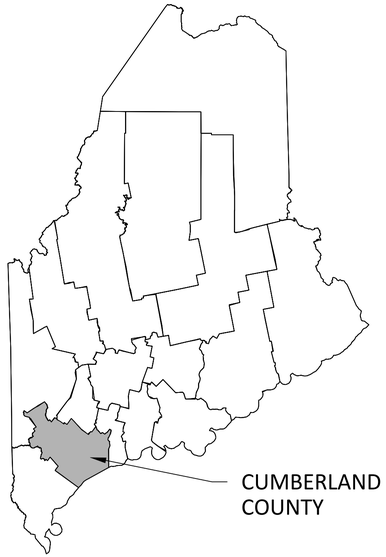
Prepared By:
Novel Energy Solutions LLC
2303 Wycliff Street | Suite 300 | St. Paul, MN 55114 | Phone 612.345.7188 | https://www.novelenergysolutions.com

ME GORHAM DAIGLE CSG LLC

CUMBERLAND COUNTY, ME

SOLAR PV PROJECT - 700 KW AC

CIVIL SUBMITTAL - ISSUED FOR PERMITTING (IFP)



COUNTY MAP

LOCATION MAP

SHEET INDEX

QUANTITIES

CIVIL SITE ITEMS		
GRADING AREA	0	ACRE
EARTHWORK CUT	0	CU YD
EARTHWORK FILL	0	CU YD
2-3" GRAVEL	30	TONS
AGGREGATE DRIVE 8" (CL V)	560	TONS
AGGREGATE (LAYDOWN YARD)	280	TONS
(OPTIONAL) POROUS GRANULAR BASE 12"	830	TONS
EROSION CONTROL ITEMS		
SILT FENCE	2,000	LF
ROCK CONSTRUCTION ENTRANCE	1	EACH
XX" CULVERT	0	LF
FLARED END SECTIONS	0	EACH
FENCING ITEMS		
20' GATE	1	EACH
FENCE	1,960	LF
LANDSCAPING		
TREE - WHITE SPRUCE	20	EACH
TREE - EASTERN WHITE PINE	20	EACH
ARRAY MIX - NATIVE GRASSES	35	POUNDS
POLLINATOR MIX - GRASSES	14	POUNDS

PROJECT CONTACT LIST

DEVELOPER
NOVEL ENERGY SOLUTIONS
2303 WYCLIFF ST, SUITE 300
SAINT PAUL, MN 55114
TEL (209) 918-4222
CONTACT: PAULA FITZGERALD

CIVIL ENGINEER
NOVEL ENERGY SOLUTIONS
2303 WYCLIFF ST, SUITE 300
SAINT PAUL, MN 55114
TEL (612) 322-3756
CONTACT: SCOTT GEDDES, P.E.

ELECTRICAL ENGINEER
NOVEL ENERGY SOLUTIONS
2303 WYCLIFF ST, SUITE 300
SAINT PAUL, MN 55114
TEL (612) 345-7188
CONTACT: JONATHON CALVA, P.E.

SURVEYOR
NOVEL ENERGY SOLUTIONS
2303 WYCLIFF ST, SUITE 300
SAINT PAUL, MN 55114
TEL (612) 499-6202
CONTACT: TOM HEALEY, L.S.

GEOTECHNICAL
SUMMIT GEOENGINEERING SERVICES
173 PLEASANT ST
ROCKLAND, ME 04841
TEL (207) 318-7761
CONTACT:

Approved: Town of Gorham Site Plan Review Committee

SIGNATURE: _____ DATE: _____

SIGNATURE: _____ DATE: _____

SIGNATURE: _____ DATE: _____

ELECTRICAL REFERENCE

THIS CIVIL PLAN SET IS TO BE USED IN COORDINATION WITH THE ELECTRICAL PLAN SETS PREPARED FOR THIS PROJECT.
ELECTRICAL "IC / IFP / IFC" PLAN SET DATED ####
MODULE TYPE: WAAREE BI-31-445
MODULE QUANTITY: 2184

811 DigSafe MA·ME·NH·RI·VT

Novel ENERGY SOLUTIONS
2303 Wycliff St, Suite 300
St Paul, MN 55114

info@novelenergy.biz
612-345-7188 telephone

Landowner
CLAUDE F DAIGLE JR.

GORHAM, ME

Project
ME GORHAM DAIGLE CSG LLC

Location
N43.7267°, W70.4428°

Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Maine

PRELIMINARY
NOT FOR CONSTRUCTION

SCOTT GEDDES, P.E.
Registration No. 16864 Date: MONTH/DAY/YEAR

If applicable, contact us for a wet signed copy of this plan which is available upon request at Novel Energy Solutions - St. Paul, MN office.

Summary

Designed: DAP Drawn: DAP
Approved: SEG Project: 22 458. 08
Phase: PERMITTING Initial Issue: 2/16/23

Revisions

No.	Date	By	Chk	Description
1	XX/XX	AAA	AAA	DESCRIPTION
-	--	--	--	--
-	--	--	--	--
-	--	--	--	--
-	--	--	--	--
-	--	--	--	--
-	--	--	--	--

Sheet Title
COVERSHEET

MAP 69
LOT 1-1

Sheet No. Revision
C1.01 IFP

Project No. GRHM

GENERAL NOTES

1. THE DESIGN SHOWN IS BASED ON ENGINEER'S UNDERSTANDING OF EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED UPON ALTA AND TOPOGRAPHIC MAPPING PREPARED BY OTHERS PRIOR TO DESIGN. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS WITHOUT EXCEPTION, CONTRACTOR SHALL HAVE MADE, AT OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.

2. CONTRACTOR IS SPECIFICALLY CAUTIONED THAT LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM INFORMATION AVAILABLE. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE UTILITY MAPPING ACCURACY. PRIOR TO START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES 48 HOURS PRIOR TO ANY EXCAVATION FOR ON-SITE LOCATIONS OF EXISTING UTILITIES. DIGSAFE SHALL BE NOTIFIED A MINIMUM 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION. FULL UTILITY COORDINATION WITH NON-MEMBER UTILITIES AND USE OF GROUND PENETRATING RADAR TO LOCATE UTILITIES SHOULD BE PERFORMES AS NECCESSARY.

3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING VEHICULAR AND PEDESTRIAN TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARDS.

5. IF REQUIRED, CONTRACTOR SHALL PREPARE AND SUBMIT TO THE GOVERNING AUTHORITY A TRAFFIC AND/OR PEDESTRIAN TRAFFIC PLAN PER STATE STANDARDS TO BE APPROVED BY THE LOCAL GOVERNING AUTHORITY.

6. EXISTING TREES AND OTHER NATURAL VEGETATION WITHIN THE PROJECT AND/OR ADJACENT TO THE PROJECT ARE OF PRIME CONCERN TO THE CONTRACTOR'S OPERATIONS AND SHALL BE A RESTRICTED AREA. CONTRACTOR SHALL PROTECT TREES TO REMAIN AT ALL TIMES. EQUIPMENT SHALL NOT NEEDLESSLY BE OPERATED UNDER NEARBY TREES AND EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING ADJACENT TO TREES. SHOULD ANY PORTION OF THE TREE BRANCHES REQUIRE REMOVAL TO PERMIT OPERATION OF THE CONTRACTOR'S EQUIPMENT, CONTRACTOR SHALL OBTAIN THE SERVICES OF A PROFESSIONAL TREE TRIMMING SERVICE TO TRIM THE TREES PRIOR TO THE BEGINNING OF OPERATION. SHOULD CONTRACTOR'S OPERATIONS RESULT IN THE BREAKING OF ANY LIMBS, THE BROKEN LIMBS SHOULD BE REMOVED IMMEDIATELY AND CUTS SHALL BE PROPERLY PROTECTED TO MINIMIZE ANY LASTING DAMAGE TO THE TREE. NO TREES SHALL BE REMOVED WITHOUT AUTHORIZATION BY THE ENGINEER. COSTS FOR TRIMMING SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE GRADING CONSTRUCTION AND NO SPECIAL PAYMENT WILL BE MADE.

   6.a. RESTRICTED AREAS SHALL INCLUDE ALL DESIGNATED TREED AREAS OUTSIDE OF THE DESIGNATED CONSTRUCTION ZONE. ALL VEGETATION WITHIN THE RESTRICTED AREAS SHALL REMAIN.

   6.b. CONTRACTOR SHALL RESTRICT ALL GRADING AND CONSTRUCTION ACTIVITIES TO AREAS DESIGNATED ON THE PLANS. ACTIVITIES WITHIN THE CONSTRUCTION MAY BE RESTRICTED TO A NARROWER WIDTH IN THE FIELD TO SAVE ADDITIONAL TREES AS DIRECTED BY THE OWNER.

   6.c. ACTIVITIES PROHIBITED OUTSIDE OF THE CONSTRUCTION BOUNDARIES WOULD INCLUDE, BUT NOT BE LIMITED TO: SOIL AND OTHER MATERIAL STOCKPILING, EQUIPMENT OR MACHINERY STORAGE, DRIVING OF ANY VEHICLE, LEAKAGE OR SPILLAGE OF ANY "WASHOUT" OR OTHER TOXIC MATERIAL. THE COLLECTION OF OTHER DEBRIS AND SOIL STOCKPILING WILL BE IN AN AREA DETERMINED ON-SITE BY THE ENGINEER.

   6.d. ALL RESTRICTED AREAS SHALL BE FENCED OFF WITH SILT FENCE AS NOTED ON THE PLANS.

   6.e. BEFORE COMMENCING WITH ANY EXCAVATION CONTRACTOR SHALL COMPLETE ALL PREPARATORY WORK REGARDING TREE REMOVAL, ROOT PRUNING, TREE PRUNING AND STUMP REMOVAL TO THE SATISFACTION OF THE OWNER.

   6.f. PREPARATORY WORK SHALL INCLUDE THE FOLLOWING AND SHALL BE COMPLETED UNDER THE DIRECT SUPERVISION OF THE OWNER'S REPRESENTATIVE:

   6.f.a. TREE REMOVAL: CONTRACTOR SHALL FELL THE TREES. AT NO TIME SHALL TREES BE BULLDOZED OUT, BUT SHALL BE CUT DOWN AND STUMPS REMOVED SEPARATELY. PRIOR TO THE FELLING OF ALL TREES, PROPER REMOVAL OF A PORTION OR ALL OF THE CANOPY SHALL BE COMPLETED SO THAT TREES IN THE RESTRICTED AREAS SHALL NOT BE INJURED IN THE PROCESS.

   6.f.b. ROOT PRUNING: BEFORE ANY STUMPS ARE TO BE REMOVED, ALL ROOTS SHALL BE SEVERED FROM ROOTS IN THE RESTRICTED AREAS BY SAW CUTTING WITH A VERMEER DESIGNED FOR ROOT PRUNING, BY HAND, OR WITH A CHAINSAW. TREE ROOTS PROJECTING INTO THE CONSTRUCTION ZONE SHALL BE EXPOSED PRIOR TO ROOT PRUNING WITH SMALL MACHINERY, I.E..., BOBCAT.

   6.f.c. STUMP REMOVAL: AT SUCH TIME THAT ROOTS HAVE BEEN PROPERLY SEVERED, STUMPS MAY BE REMOVED. WHERE REMOVAL OF CERTAIN STUMPS COULD CAUSE DAMAGE TO EXISTING PROTECTED TREES, TREE STUMPS SHALL BE GROUND OUT. ALL STUMP REMOVAL SHALL BE UNDER THE DIRECT SUPERVISION OF THE OWNER'S REPRESENTATIVE.

   6.f.d. TREE PRUNING: PROPER PRUNING OF TREES IN THE RESTRICTED ZONE SHALL BE DIRECTED BY AND SUPERVISION AT ALL TIMES BY THE OWNER'S REPRESENTATIVE.

   6.g. AN OWNER'S REPRESENTATIVE WILL BE AVAILABLE AT ALL TIMES DURING THE PREPARATORY AND CONSTRUCTION PERIOD.

   6.h. MULCH RATHER THAN SEED OR SOD WILL BE USED AT THE BASE OF QUALITY TREES TO A PERIMETER DETERMINED BY THE OWNER'S REPRESENTATIVE. AREAS TO BE SEEDED FOR EROSION CONTROL PURPOSES WITHIN THE CONSTRUCTION ZONE ARE TO BE DETERMINED BY THE OWNER'S REPRESENTATIVE. NATURAL GROUND COVER WILL BE MAINTAINED WHEREVER POSSIBLE.

SUBSURFACE UTILITY NOTES

THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE/CI 38-02, TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, BY CONTACTING THE UTILITY NOTIFICATION CENTER. THE CONTRACTOR AND/OR SUBCONTRACTOR AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).

DEMOLITION NOTES

1. DEMOLITION NOTES ARE NOT COMPREHENSIVE. CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION TO OBTAIN A CLEAR UNDERSTANDING OF THE INTENDED SCOPE OF WORK.

2. THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION, REMOVAL, AND DISPOSING IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES AND IN ACCORDANCE WITH APPLICABLE CODES, OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE GEOTECHNICAL REPORT AND/OR GEOTECHNICAL ENGINEER.

3. CLEARING AND GRUBBING: CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.

4. CONTRACTOR IS RESPONSIBLE FOR THE DISCONNECTION OF UTILITY SERVICES TO EXISTING BUILDINGS PRIOR TO DEMOLITION OF THE BUILDINGS.

5. CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO REMOVAL AND/OR RELOCATION OF UTILITIES. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANIES' FORCES AND ANY FEES WHICH ARE TO BE PAID TO UTILITY COMPANIES FOR SERVICES. CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.

6. THE MAPPING LOCATION OF ALL EXISTING SEWERS, PIPING, AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH WORK. UTILITIES DETERMINED TO BE ABANDONED SHALL BE REMOVED IF UNDER THE BUILDING INCLUDING 10' BEYOND FOUNDATIONS.

7. ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY DURING CONSTRUCTION.

8. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC., TO THE BEST PRACTICES.

9. CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE SURROUNDING PROPERTIES AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES.

10. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED AND APPROVED BY THE LOCAL AUTHORITY.

11. CONTRACTOR SHALL LIMIT SAW-CUT & PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.

12. CONTRACTOR TO PROTECT EXISTING FEATURES WHICH ARE TO REMAIN. DAMAGE TO ANY EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.

LEGEND

EXISTING FEATURES

- PROPERTY LINE
- ROAD RIGHT OF WAY
- EDGE OF EXISTING ROAD
- STORM CULVERT
- DRAIN TILE
- UNDERGROUND ELECTRIC
- OVERHEAD ELECTRICAL
- POWER POLE
- 200 MAJOR CONTOUR
- 196 MINOR CONTOUR
- TREE LINE
- WL WETLAND
- SB SOIL BORING

PROPOSED FEATURES

- TEMPORARY AGGREGATE ROAD
- AGGREGATE ROAD BASE, PER DETAIL 1/C9.01
- AGGREGATE BASE - LAYDOWN YARD
- PERIMETER SECURITY FENCE
- TEMPORARY FENCE
- SETBACK LINE
- LEASE BOUNDARY
- CMP CULVERT
- MAJOR CONTOUR
- MINOR CONTOUR
- PROPOSED POWER POLE & LINE

EROSION CONTROL FEATURES

- SF SILT FENCE
- BIO BIO LOG
- ROCK CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET

REMOVALS

- TREE REMOVAL
- TREE REMOVAL
- FENCE POST REMOVAL
- FENCE REMOVAL
- LoD PROP GRAD LIMITS

GRADING NOTES

1. PROPOSED CONTOURS ARE TO FINISHED SURFACE ELEVATION.

2. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

3. SAFETY NOTICE TO CONTRACTORS: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER OR THE DEVELOPER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.

4. CONTRACTOR SHALL COMPLETE DEWATERING AS REQUIRED TO COMPLETE THE SITE GRADING CONSTRUCTION.

5. PRIOR TO PLACEMENT OF THE AGGREGATE BASE, A TEST ROLL SHALL BE PERFORMED ON THE STREET AND PARKING AREA SUBGRADE. CONTRACTOR SHALL PROVIDE A LOADED TANDEM AXLE TRUCK WITH A GROSS WEIGHT OF 25 TONS. THE TEST ROLLING SHALL BE AT THE DIRECTION OF THE SOILS ENGINEER AND SHALL BE COMPLETED IN AREAS AS DIRECTED BY THE SOILS ENGINEER. CORRECTION OF THE SUBGRADE SOILS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS ENGINEER.

6. REPLACE ALL SUBGRADE SOIL DISTURBED DURING THE CONSTRUCTION THAT HAVE BECOME UNSUITABLE AND WILL NOT PASS A TEST ROLL. REMOVE UNSUITABLE SOIL FROM THE SITE AND IMPORT SUITABLE SOIL AT NO ADDITIONAL COST TO THE OWNER.

7. EXCAVATE TOPSOIL FROM AREAS TO BE FURTHER EXCAVATED OR REGRADED AND STOCKPILE IN AREAS DESIGNATED ON THE SITE. CONTRACTOR SHALL SALVAGE ENOUGH TOPSOIL FOR RESPREADING ON THE SITE AS SPECIFIED. EXCESS TOPSOIL SHALL BE PLACED IN EMBANKMENT AREAS, OUTSIDE OF EQUIPMENT PADS, ROADWAYS AND THE ARRAY LAYOUTS.

8. TRENCH BORROW CONSTRUCTION: IF ALLOWED BY THE OWNER, CONTRACTOR SHALL COMPLETE "TRENCH BORROW" EXCAVATION IN AREAS DIRECTED BY THE ENGINEER IN ORDER TO OBTAIN STRUCTURAL MATERIAL. TREES SHALL NOT BE REMOVED OR DAMAGED AS A RESULT OF THE EXCAVATION, UNLESS APPROVED BY THE ENGINEER. THE EXCAVATION SHALL COMMENCE A MINIMUM OF 10 FEET FROM THE LIMIT OF THE BUILDING PAD. THE EXCAVATION FROM THIS LIMIT SHALL EXTEND AT A MINIMUM SLOPE OF 1 FOOT HORIZONTAL TO 1 FOOT VERTICAL (1:1) DOWNWARD AND OUTWARD FROM THE FINISHED SURFACE GRADE ELEVATION. THE TRENCH BORROW EXCAVATION SHALL BE BACKFILLED TO THE PROPOSED FINISHED GRADE ELEVATION, AND SHALL BE COMPACTED IN ACCORDANCE WITH REQUIREMENTS OF THE QUALITY COMPACTION METHOD AS OUTLINED IN MN/DOT SPECIFICATION 2105.3F2. SNOW FENCE SHALL BE FURNISHED AND PLACED ALONG THE PERIMETER OF THE TRENCH BORROW AREA WHERE THE SLOPES EXCEED 2 FOOT HORIZONTAL TO 1 FOOT VERTICAL (2:1).

9. FINISHED GRADING SHALL BE COMPLETED, CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING, INCLUDING ADJACENT TRANSITION AREAS. PROVIDE A SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCES, WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS AND EXISTING GRADES. AREAS THAT HAVE BEEN FINISHED GRADED SHALL BE PROTECTED FROM SUBSEQUENT CONSTRUCTION OPERATIONS, TRAFFIC AND EROSION. REPAIR ALL AREAS THAT HAVE BECOME RUTTED, ERODED OR HAS SETTLED BELOW THE CORRECT GRADE. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION OR TO THE REQUIREMENTS OF THE NEW WORK. CONTRACTOR MUST REGRADE/RECOMPACT ACCESS ROAD AS FINAL RESTORATION.

10. TOLERANCES
    10.a. THE EQUIPMENT PAD SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.10 FOOT ABOVE, OR 0.10 FOOT BELOW, THE PRESCRIBED ELEVATION AT ANY POINT WHERE MEASUREMENT IS MADE.

11. CONTRACTOR SHALL USE THE PROPOSED ACCESS ROADS FOR HAULING OF MATERIALS REQUIRED TO COMPLETE THE SOLAR INSTALLATION. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE GOVERNING AUTHORITY OF EACH PUBLIC ROADWAY. FOR OFFSITE MATERIAL TRANSPORT CONTRACTOR SHALL POST WHATEVER SECURITY, AND COMPLY WITH ALL CONDITIONS WHICH ARE REQUIRED BY EACH GOVERNING AUTHORITY OF EACH ROADWAY.

12. WETLAND AREAS DESIGNATED TO BE PROTECTED SHALL BE AVOIDED. ANY WETLAND AREAS DAMAGED BY SITE OPERATIONS SHALL BE RESTORED AS REQUIRED BY THE JURISDICTIONAL AGENCY.

ZONING REQUIREMENTS

1. APPROVALS

   A. MEDEP STORMWATER PERMIT BY RULE DATED XXXXXXX XX, 2021 (#XXXXX).
   B. MEDEP NOTICE OF INTENT APPROVAL DATED XXXXXXX XX, 2021 (#XXXXX).
   C. RANDOLPH SITE PLAN APPROVAL DATED XXXXXXXXXXXX.
   D. MAINE DOT ACCESS PERMIT#XXXXXXXX DATED XXXXX XX, 2021.
   E. MEDEP SECTION 401 PERMIT FOR XXX SF OF WETLAND IMPACT. PERMIT #_____ DATED _____.
   F. ARMY CORPS OF ENGINEERS (ACOE) MAINE GENERAL PERMIT #XXXXXXXXXXX DATED XXXXXXX XX, 2021. THE ACOE ISSUED A CLARIFICATION LETTER DATED XXXX XX, 2021.

2. ZONING DISTRICTS SUMMARY

   GENERAL ZONING DISTRICT: RURAL FARM RESIDENTIAL DISTRICT (RF)
   OVERLAY ZONING DISTRICT: NONE

3. DIMENSIONAL STANDARDS

   RURAL FARM RESIDENTIAL DISTRICT

	REQUIRED	PROVIDED
FRONT YARD SETBACK	50	>50
SIDE YARD SETBACK	50	>50
REAR YARD SETBACK	50	>50
STRUCTURE HEIGHT, MAX	N/A	12

4. PROJECT SCHEDULE

   SPECIFICS OF HOW WORK IS TO BE COMPLETED SHALL ALSO BE BASED ON ENVIRONMENTAL CONSIDERATIONS ASSOCIATED WITH SEASONAL CHANGES. THE FOLLOWING DATES ARE PROVIDED TO ESTABLISH A GENERAL GUIDELINE FOR THESE SEASONS:

WINTER	NOVEMBER 1 TO MARCH 15
MUD SEASON	MARCH 20 TO APRIL 30
SPRING	MAY 1 TO JUNE 21
SUMMER	JUNE 22 TO SEPTEMBER 21
FALL	SEPTEMBER 22 TO OCTOBER 31

EARTHWORK NOTES

1. SITE CLEARING AND GRUBBING IS AS FOLLOWS:

   1.a. STANDARD CLEARING AND GRUBBING: SUBCONTRACTOR SHALL CLEAR AND GRUB ALL AREAS (EXCEPT IN WETLANDS) OF PROJECT SITE WITHIN PERIMETER FENCING, REMOVING ALL VEGETATION HIGHER THAN 3" AND OTHER DELETERIOUS MATERIALS. SUBCONTRACTOR SHALL GRADE OUT MINOR TOPOGRAPHIC UNDULATIONS, MOUNDS, AND DEPRESSIONS, AS NECESSARY, TO PRODUCE A SMOOTH, SAFE WORKING SURFACE FOR PLANT CONSTRUCTION AND OPERATIONS.

   1.b. TEMPORARY WETLAND DISTURBANCE: SUBCONTRACTOR MAY PERFORM TEMPORARY WETLAND DISTURBANCES WHICH SHALL INCLUDE CLEARING BUT NOT STUMP REMOVAL. THESE INDIRECT WETLAND DISTURBANCES MAY OCCUR WITHIN PERIMETER FENCING OR JUST OUTSIDE OF PERIMETER FENCING FOR SHADE MANAGEMENT PURPOSES.

   1.c. PERMANENT WETLAND DISTURBANCE: WHERE EXPLICITLY APPROVED AND NECESSARY, THE SUBCONTRACTOR MAY PERFORM CLEARING AND GRUBBING WITHIN WETLANDS. THIS MAY ALSO COME IN THE FORM OF GRADING WITHIN WETLANDS. GRADING OR GRUBBING WITHIN WETLANDS SHALL BE CONSIDERED A PERMANENT WETLAND IMPACT AND SHALL COUNT TOWARDS THE TOTAL DIRECT IMPACTS ALLOWED BY THE AUTHORITY HAVING JURISDICTION.

   1.d. SUBCONTRACTOR SHALL CLEAR AND GRUB, STRIP AND REMOVE TOPSOIL, VEGETATION, AND OTHER DELETERIOUS ORGANIC MATERIAL FROM PROPOSED EQUIPMENT PADS, ROADWAYS, AND AREAS TO RECEIVE FILL. STOCKPILE TOPSOIL AND IMMEDIATELY STABILIZE UNTIL RE-SPREAD FOR USE TO RE-VEGETATE DISTURBED AREAS AFTER GRADING OPERATIONS ARE COMPLETE.

2. SUBGRADE PREPARATION FOR EQUIPMENT PADS, SPREAD FOOTINGS, AND ROADWAYS IS AS FOLLOWS:

   2.a. SCARIFY TO A MINIMUM DEPTH OF 12 INCHES.
   2.b. MOISTURE CONDITION SOILS TO BETWEEN 1% BELOW AND 3% ABOVE OPTIMUM MOISTURE CONTENT.
   2.c. COMPACT TO A MINIMUM OF 95% OF STANDARD PROCTOR MAXIMUM DENSITY. EXCAVATION SHALL EXTEND 5' BEYOND EXTENTS OF IMPROVEMENTS FOR PADS OR FOOTINGS.
   2.d. PROOF ROLL WITH FULLY LOADED DUMP TRUCK OR OTHER SIMILARLY WEIGHTED PNEUMATIC TIRED EQUIPMENT.
   2.e. UNSTABLE AREAS IDENTIFIED DURING PROOF ROLL SHOULD BE EXCAVATED A MINIMUM OF 12 INCHES AND RE-STABILIZED.

3. SUBGRADE PREPARATION FOR NON-STRUCTURAL FILL AREAS SHALL CONSIST OF COMPACTION TO 90% OF STANDARD PROCTOR MAXIMUM DENSITY.

FILL PLACEMENT

1. ENGINEERED FILL - SOILS CLASSIFIED AS GW, GP, GM, GC, SW, SP, SM, SC, ML, AND CL BY THE USCS ARE ACCEPTABLE FOR USE AS STRUCTURAL FILL. MOST ON-SITE SOILS ARE EXPECTED TO BE SUITABLE FOR USE AS ENGINEERED FILL IF THEY ARE FREE OF ORGANIC SOIL AND DEBRIS.
2. SELECT GRANULAR FILL - GRANULAR, WELL GRADED MATERIAL WITH NO ORGANICS, A MAXIMUM PARTICLE SIZE OF 2 INCHES, AND LESS THAN 12 PERCENT PASSING THE U.S. NO. 200 SEIVE.
3. IN THE EVENT CLAY FILL IS ENCOUNTERED, CLAY FILL SHALL BE MOISTENED TO BETWEEN 1 PERCENT BELOW AND 3 PERCENT ABOVE OPTIMUM MOISTURE CONTENT. SAND FILL SHALL BE MOISTENED TO BETWEEN 3 PERCENT BELOW AND 3 PERCENT ABOVE OPTIMUM MOISTURE CONTENT.
4. FILL SHALL BE PLACED IN LIFTS OF LESS THAN 8 INCHES LOOSE DEPTH AND COMPACTED TO AT LEAST 90% OF STANDARD PROCTOR MAXIMUM DENSITY PER ASTM D698.
5. TRENCH BACKFILL FOR PROPOSED CULVERT OR POND OUTLET SHALL BE COMPACTED TO AT LEAST 85 PERCENT OF STANDARD PROCTOR MAXIMUM DENSITY, EXCEPT IN STRUCTURAL AREAS WHICH SHALL BE COMPACTED TO 95 PERCENT.

EARTHWORK BALANCE

THE INTENTION OF THE GRADING DESIGN IS TO BALANCE THE EARTHWORK ON SITE WITHOUT THE NEED FOR IMPORT OR EXPORT. THE CONTRACTOR SHALL FIELD ADJUST CUT AND FILL AS NECESSARY TO CREATE A BALANCED SITE WITHOUT NEGATIVELY IMPACTING DRAINAGE PATTERNS OR INCREASING MAXIMUM SLOPES.

AGGREGATES

1. AGGREGATE BASE AND COARSE AGGREGATE SHALL BE MOISTENED TO WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT AND COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR MAXIMUM DENSITY. PROOF ROLL WITH FULLY LOADED DUMP TRUCK OR OTHER SIMILARLY WEIGHTED PNEUMATIC TIRED EQUIPMENT.

   AGGREGATE GRADATION - SHALL COMPLY WITH THE GRADATION REQUIREMENTS OF TABLE 3138-3, CLASS 5, OF SECTION 3126 "AGGREGATE", OF THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

   RIP RAP GRADATION - SHALL COMPLY WITH THE GRADATION REQUIREMENTS OF CLASS 1 RIP RAP, SECTION 3601 OF THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

GEOTEXTILE FABRIC

IF SITE CONDITIONS WARRANT USE OF A GEOTEXTILE FABRIC, CONTRACTOR SHALL USE TENSAR BX1100 OR EQUAL, PER GEOTECH REPORT.

EROSION CONTROL BLANKET

EROSION CONTROL BLANKET SHALL CONFORM TO MNDOT APPROVED/QUALIFIED PRODUCTS LIST, EROSION CONTROL BLANKETS, CATEGORY 3.

TESTING REQUIREMENT NOTES

DEFINITION

1. CONTRACTOR SHALL COMPLETE THE SITE GRADING CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER'S SOILS ENGINEER. ALL SOIL TESTING SHALL BE COMPLETED BY THE OWNER'S SOILS ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE SOILS ENGINEER.

2. SUBGRAGE PROOFROLLING TEST SHALL BE CONSIDERED ACCEPTABLE IF RUTTING IS NO GREATER THAN 3", AND NO "PUMPING" OF THE SOIL BEHIND THE PROOF ROLL.

3. STANDARD PROCTOR DENSITY TESTS SHALL BE IN CONFORMANCE WITH ASTM D698.

4. SOIL DENSITY IN PLACE TESTING SHALL BE IN CONFORMANCE WITH ASTM D2922.

5. MOISTURE CONTENT TEST OF IN PLACE SOIL SHALL BE IN CONFORMANCE WITH ASTM D3017.

EXECUTION

1. COMPACTED SUBGRADE IN STRUCTURAL AREAS SHALL BE TESTED AS FOLLOWS:

   1.1. ONE TEST PER 200 LF OF ROAD.

   1.2. ONE TEST PER ELECTRICAL EQUIPMENT PAD

2. FILL MATERIAL SHALL BE TESTED AT A MINIMUM ONCE PER SOIL TYPE FOR GRAIN SIZE, SOIL CLASSIFICATION, PROCTOR TESTS, AND MOISTURE CONTENT. FILL PLACEMENT SHALL BE TESTED FOR DENSITY AT A MINIMUM OF ONE TEST PER 2,500 SF PER LIFT.

3. AGGREGATE BASE DENSITY SHALL BE TESTED BY PROOF ROLLING WITH A FULLY LOADED DUMP TRUCK (MINIMUM GROSS WEIGHT OF 25 TONS) OR OTHER SIMILARLY WEIGHTED PNEUMATIC TIRED EQUIPMENT. AGGREGATE PROOFROLLING TEST SHALL BE CONSIDERED ACCEPTABLE IF RUTTING IS NO GREATER THAN 3".

   3.1. AT THE COMPLETION OF CONSTRUCTION, RE-GRADE AGGREGATE ROAD SURFACES TO DESIGNED SURFACE PROFILE, ELIMINATING RUTS CAUSED BY CONSTRUCTION TRAFFIC.

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Landowner
CLAUDE F DAIGLE JR.

GORHAM, ME

Project
ME GORHAM DAIGLE CSG LLC

Location
N43.7267°, W70.4428°

Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Maine

PRELIMINARY NOT FOR CONSTRUCTION

SCOTT GEDDES, P.E.
Registration No. 16864 Date: MONTH/DAY/YEAR

If applicable, contact us for a wet signed copy of this plan which is available upon request at Novel Energy Solutions - St. Paul, MN office.

Summary

Designed: DAP Drawn: DAP
Approved: SEG Project: 22 458. 08
Phase: PERMITTING Initial Issue: 2/16/23

Revisions

No.	Date	By	Chk	Description
1	XX/XX	AAA	AAA	DESCRIPTION
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Sheet Title
NOTES

MAP 69
LOT 1-1

Sheet No. Revision
C1.02 IFP

Project No. GRHM

May 12, 2023 - 2:23pm - GRHM-CIVBASE.dwg

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Sheet Title
EXISTING CONDITIONS

MAP 69
LOT 1-1

Sheet No. Revision
C2.01 IFP

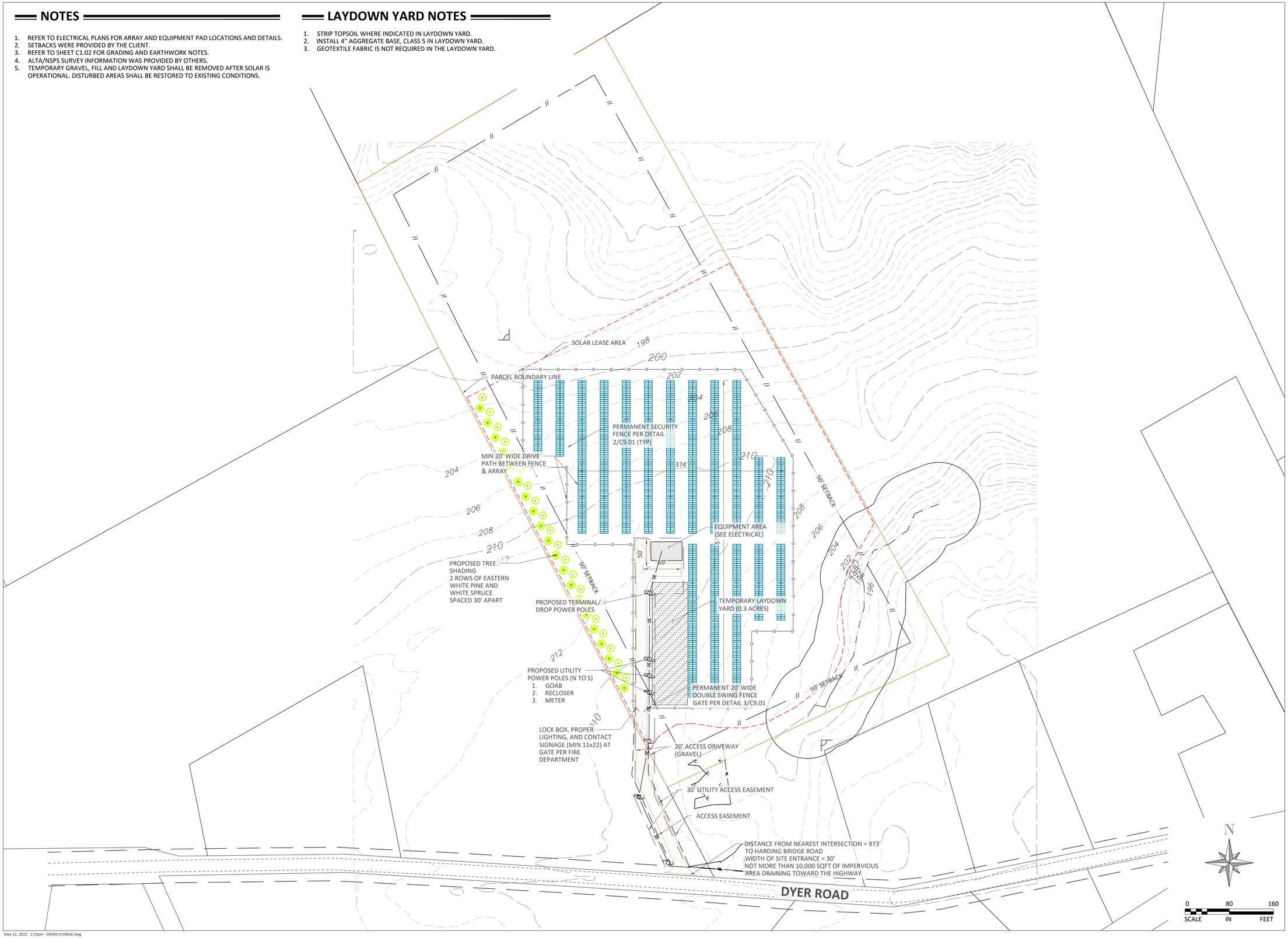
Project No. GRHM

NOTES

1. REFER TO ELECTRICAL PLANS FOR ARRAY AND EQUIPMENT PAD LOCATIONS AND DETAILS.
2. SETBACKS WERE PROVIDED BY THE CLIENT.
3. REFER TO SHEET C1.02 FOR GRADING AND EARTHWORK NOTES.
4. ALTA/NSPS SURVEY INFORMATION WAS PROVIDED BY OTHERS.
5. TEMPORARY GRAVEL, FILL AND LAYDOWN YARD SHALL BE REMOVED AFTER SOLAR IS OPERATIONAL. DISTURBED AREAS SHALL BE RESTORED TO EXISTING CONDITIONS.

LAYDOWN YARD NOTES

1. STRIP TOPSOIL WHERE INDICATED IN LAYDOWN YARD.
2. INSTALL 4" AGGREGATE BASE, CLASS 5 IN LAYDOWN YARD.
3. GEOTEXTILE FABRIC IS NOT REQUIRED IN THE LAYDOWN YARD.



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Sheet Title
SITE PLAN

MAP 69
LOT 1-1

Sheet No. Revision
C3.01 IFP

Project No. GRHM

STORMWATER BASIN NOTES

1. IF CONSTRUCTION REQUIRES A BASIN TO BE CONSTRUCTED TO FINAL GRADE PRIOR TO FINAL STABILIZATION, THE CONTRACTOR SHALL EMPLOY RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS TO KEEP SEDIMENT AND RUNOFF AWAY FROM THE BASIN.
2. IF THE SOLAR ARRAY IS LOCATED WITHIN THE BASIN AND REQUIRES CONSTRUCTION EQUIPMENT TO DRIVE WITHIN THE BASIN, THE CONTRACTOR SHALL BE REQUIRED TO CLEAN OUT ANY SEDIMENT AND RIP THE SOILS TO A MINUIMUM OF 12" DEEP TO LOOSEN THE COMPACTED SOIL AND RE-GRADE WITH EQUIPMENT SIMILAR TO A RUBBER TRACKED SKID LOADER PRIOR TO SEED AND MULCH.
3. MARK EDGE OF BASINS WITH IDENTIFYING FLAGS, STAKES, OR EQUIVALENT.

EROSION CONTROL QUANTITIES

ITEM	QUANTITY	UNIT
SILT FENCE	1980	LF
BIO-ROLL	0	LF
CONSTRUCTION ENTRANCE	1	EA
EROSION CONTROL BLANKET*	0	SY

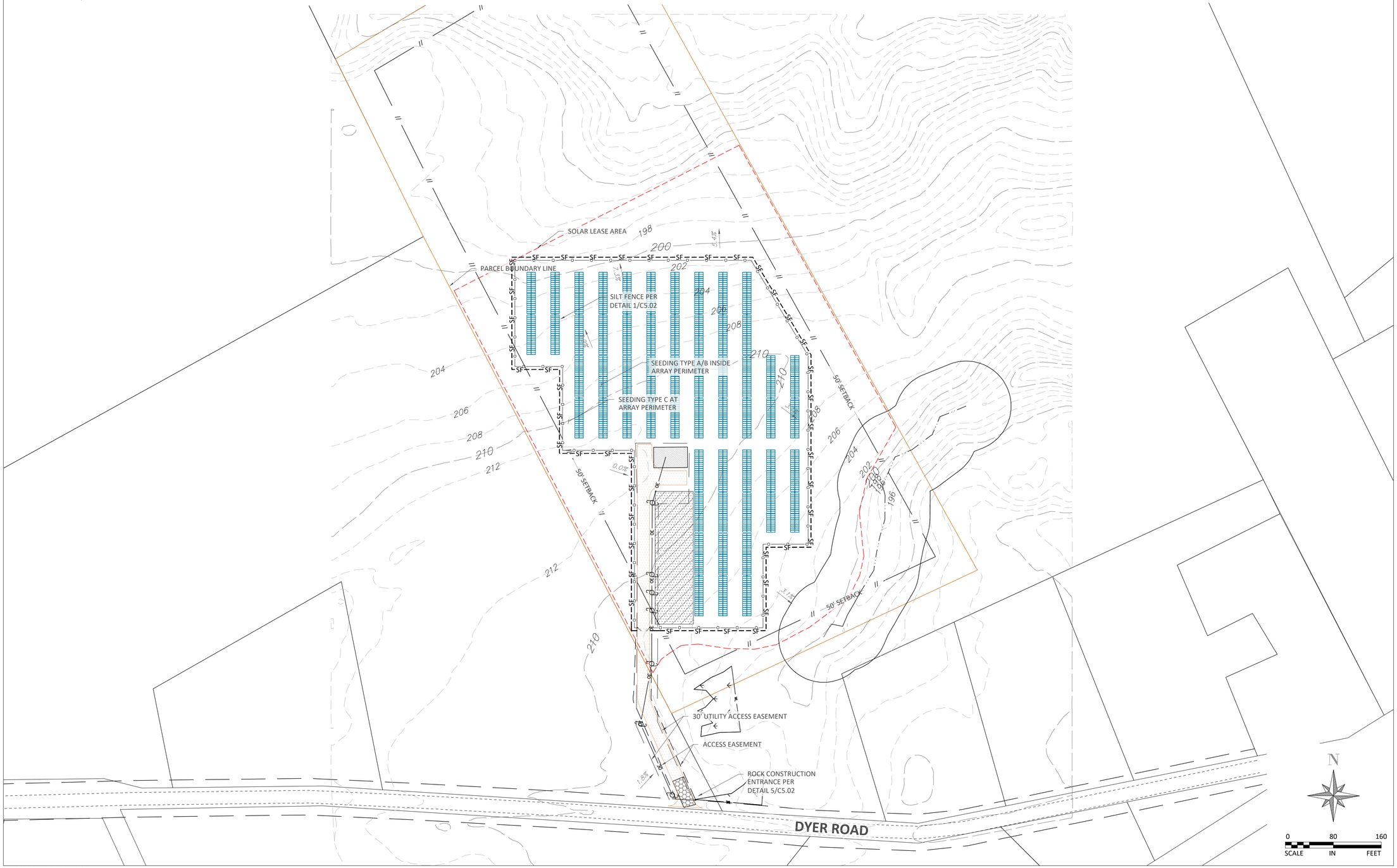
*EROSION CONTROL BLANKET CAN BE ADDED AT THE END OF CONSTRUCTION

CIVIL IMPACT QUANTITIES

ITEM	SQFT	ACRES
IMPERVIOUS AREA	10,170	0.23
DEVELOPED AREA	10,170	0.23
OCCUPIED AREA	208,000	4.78
TREE REMOVAL AREA	0	0.00
TEMP WETLAND IMPACT AREA	0	0.00
PERM WETLAND IMPACT AREA	0	0.00
FENCED AREA	208,000	4.78

NOTES

1. REFER TO SHEET C5.02 FOR EROSION CONTROL NOTES AND DETAILS.
2. DUST CONTROL MUST BE PROVIDED ON GRAVEL ROAD DURING CONSTRUCTION.



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Sheet Title
EROSION CONTROL PLAN

MAP 69
LOT 1-1

Sheet No. Revision
C5.01 IFP

Project No. GRHM

SEQUENCE OF CONSTRUCTION

1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
2. CONSTRUCT THE SILT FENCES ON THE SITE.
3. INSTALL RIPRAP AROUND OUTLET STRUCTURES.
4. PREPARE SITE FOR CONSTRUCTION.
5. PILE DRIVING FOR SOLAR FEATURES, AND TRENCHING FOR UNDERGROUND UTILITIES WILL COMMENCE, AND CONCRETE PADS WILL BE POURED.
6. RACKING AND SOLAR MODULES WILL BE INSTALLED ON PILES.
7. COVER ACCESS ROAD WITH GRAVEL.
8. RESTABILIZE DISTURBED AREAS.
9. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER SITE HAS BEEN STABILIZED, IF REQUIRED BY CONTRACT.

EROSION CONTROL NOTES

1. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME. WHERE A CONFLICT EXISTS BETWEEN LOCAL JURISDICTIONAL STANDARD SPECIFICATIONS AND NES STANDARD SPECIFICATIONS, THE MORE STRINGENT SPECIFICATION SHALL APPLY.

2. THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS COMPRISED OF THIS DRAWING (EROSION & SEDIMENTATION CONTROL PLAN-ESC PLAN), THE STANDARD DETAILS, THE PLAN NARRATIVE, AND ITS APPENDICES, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING & SUBMITTING THE APPLICATION FOR THE GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE SWPPP AND THE STATE OF MAINE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THE CONTENTS. THE SWPPP AND ALL OTHER RELATED DOCUMENTS MUST BE KEPT AT THE SITE DURING CONSTRUCTION.

4. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED BY THE SWPPP & PERMITS. CONTRACTOR SHALL OVERSEE THE INSPECTION & MAINTENANCE OF THE BMP'S AND EROSION PREVENTION FROM BEGINNING OF CONSTRUCTION AND UNTIL CONSTRUCTION IS COMPLETED, IS APPROVED BY ALL AUTHORITIES, AND THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED WITH THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION BY EITHER THE OWNER OR OPERATOR AS APPROVED ON PERMIT. ADDITIONAL BMP'S SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

5. BMP'S AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

6. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THESE PLANS SHALL BE CLEARLY DELINEATED (E.G. WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC.) ON THE DEVELOPMENT SITE BEFORE WORK BEGINS. GROUND DISTURBING ACTIVITIES MUST NOT OCCUR OUTSIDE THE LIMITS OF DISTURBANCE.

7. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.

8. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) MUST BE LIMITED TO A DEFINED AREA OF THE SITE AND SHALL BE CONTAINED AND PROPERLY TREATED OR DISPOSED. NO ENGINE DEGREASING IS ALLOWED ON SITE.

9. ALL LIQUID AND SOLID WASTES GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK-PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER. A COMPACTED CLAY LINER IS NOT ACCEPTABLE. THE LIQUID AND SOLID WASTES MUST NOT CONTACT THE GROUND, AND THERE MUST NOT BE RUNOFF FROM THE CONCRETE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTES MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH STATE REGULATIONS. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES. SELF-CONTAINED CONCRETE WASHOUTS ON CONCRETE DELIVERY TRUCKS ARE ALLOWED.

10. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

11. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

12. SOLID WASTE: COLLECTED SEDIMENT, ASPHALT & CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION & DEMOLITION DEBRIS & OTHER WASTES MUST BE DISPOSED OF PROPERLY & MUST COMPLY WITH STATE DISPOSAL REQUIREMENTS.

13. HAZARDOUS MATERIALS: OIL, GASOLINE, PAINT & ANY HAZARDOUS SUBSTANCES MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT, TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE & DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE WITH STATE REGULATIONS.

14. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE SWPPP, SHALL BE INITIATED AS SOON AS PRACTICABLE AND PRIOR TO SOIL DISTURBING ACTIVITIES UP-SLOPE.

15. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED SHALL BE TEMPORARILY SEEDED, WITHIN 14 DAYS OF INACTIVITY. SEEDING MIXES, METHOD AND APPLICATION RATE SHALL CONFORM TO SPECIFICATION CONTAINED WITHIN THIS PLAN. TEMPORARY MULCH SHALL BE APPLIED. ALTERNATIVELY, HYDRAULIC SOIL STABILIZER MAY BE USED IN PLACE OF TEMPORARY MULCH.

16. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED. THESE AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE TIME TABLE DESCRIBED ABOVE. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN FOR VEGETATIVE COVER.

17. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM CONVEYANCES & FROM TEMPORARY SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASINS. SEDIMENT MUST BE STABILIZED TO PREVENT IT FROM BEING WASHED BACK INTO THE BASIN, CONVEYANCES, OR DRAINAGE-WAYS DISCHARGING OFF-SITE OR TO SURFACE WATERS. THE CLEAN-OUT OF PERMANENT BASINS MUST BE SUFFICIENT TO RETURN THE BASIN TO DESIGN CAPACITY.

18. ON-SITE & OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BMP'S. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

19. TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS & CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB & GUTTER SYSTEMS OR CONDUITS & DITCHES.

20. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

21. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, CHECK DAMS, INLET PROTECTION DEVICES, ETC.) TO PREVENT EROSION.

22. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

MAINTENANCE NOTES

ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. THE DESIGNATED CONTACT PERSON NOTED ON THIS PLAN MUST ROUTINELY INSPECT THE CONSTRUCTION ON SITE ONCE EVERY SEVEN DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. ALL SILT FENCES MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/3 OF THE HEIGHT OF THE FENCE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.

2. TEMPORARY AND PERMANENT SEDIMENTATION BASINS MUST BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS (SEE PART IV.D. OF THE GENERAL PERMIT).

3. SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS, MUST BE INSPECTED FOR EVIDENCE OF SEDIMENT BEING DEPOSITED BY EROSION. CONTRACTOR MUST REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS, AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. THE REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. CONTRACTOR SHALL USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) CALENDAR DAYS OF OBTAINING ACCESS. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK.

4. CONSTRUCTION SITE VEHICLE EXIT LOCATIONS MUST BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING ONTO PAVED SURFACES. TRACKED SEDIMENT MUST BE REMOVED FROM ALL OFF-SITE PAVED SURFACES, WITHIN 24 HOURS OF DISCOVERY, OR IF APPLICABLE, WITHIN A SHORTER TIME TO COMPLY WITH PART IV.C.6 OF THE GENERAL PERMIT.

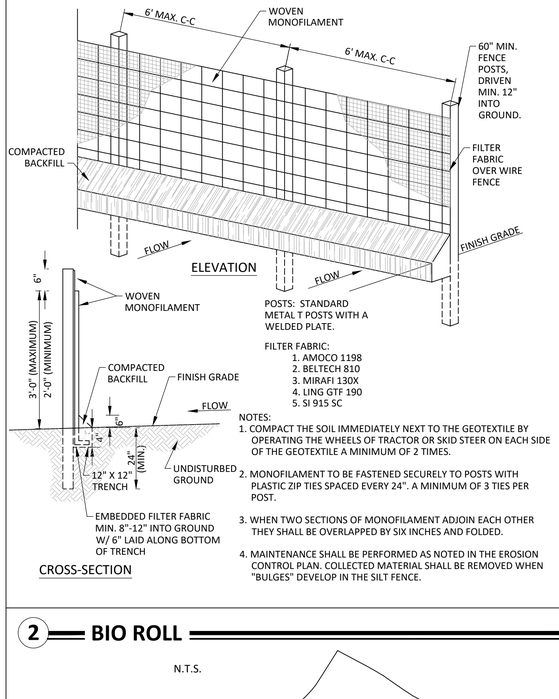
5. CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT BMPS, AS WELL AS ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS, FOR THE DURATION OF THE CONSTRUCTION WORK AT THE SITE. THE PERMITTEE(S) ARE RESPONSIBLE UNTIL ANOTHER PERMITTEE HAS ASSUMED CONTROL (ACCORDING TO PART II.B.5 OF THE MPCA GENERAL PERMIT) OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED OR THE SITE HAS UNDERGONE FINAL STABILIZATION, AND A (N.O.T.) HAS BEEN SUBMITTED TO THE MPCA.

6. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED IN A MANNER AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT IN STREETS COULD BE WASHED INTO STORM SEWERS BY THE NEXT RAIN AND/OR POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS).

7. ALL INFILTRATION AREAS MUST BE INSPECTED TO ENSURE THAT NO SEDIMENT FROM ONGOING CONSTRUCTION ACTIVITIES IS REACHING THE INFILTRATION AREA AND THESE AREAS ARE PROTECTED FROM COMPACTION DUE TO CONSTRUCTION EQUIPMENT DRIVING ACROSS THE INFILTRATION AREA.

1 MACHINE SLICED SILT FENCE

N.T.S.



POSTS: STANDARD METAL T POSTS WITH A WELDED PLATE.

FILTER FABRIC:
1. AMOCO 1198
2. BELTECH 810
3. MIRAFI 130X
4. LING GTF 190
5. SI 915 SC

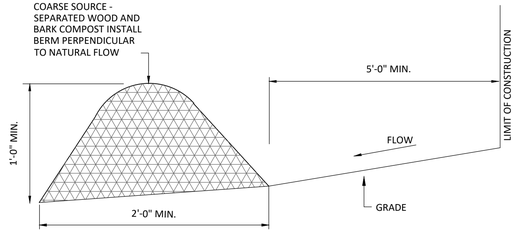
NOTES:
1. COMPACT THE SOIL IMMEDIATELY NEXT TO THE GEOTEXTILE BY OPERATING THE WHEELS OF TRACTOR OR SKID STEER ON EACH SIDE OF THE GEOTEXTILE A MINIMUM OF 2 TIMES.
2. MONOFILAMENT TO BE FASTENED SECURELY TO POSTS WITH PLASTIC ZIP TIES SPACED EVERY 24". A MINIMUM OF 3 TIES PER POST.
3. WHEN TWO SECTIONS OF MONOFILAMENT ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

2 BIO ROLL

N.T.S.

3 EROSION CONTROL BERM

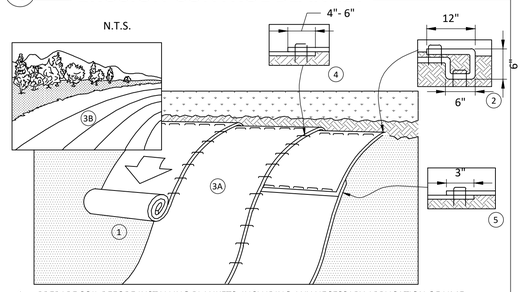
(MAY BE USED AS AN ALTERNATE TO SILT FENCE OR PLACED UPGRADIENT OF SILT FENCE



NOTES:
1. THE EROSION CONTROL MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS.
2. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>4") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS).
3. IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING.
4. THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS).

4 EROSION CONTROL BLANKET

N.T.S.



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS PER MANUFACTURES RECOMMENDATION.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 4"-6" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3"OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12"APART ACROSS ENTIRE BLANKET WIDTH.
6. PLACE STAPLES/STAKES PER MANUFACTURE RECOMMENDATION FOR THE APPROPRIATE SLOPE BEING APPLIED.

NOTES:
1. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
2. FOLLOW EROSION CONTROL TECHNOLOGY COUNCIL SPECIFICATION FOR PRODUCT SELECTION

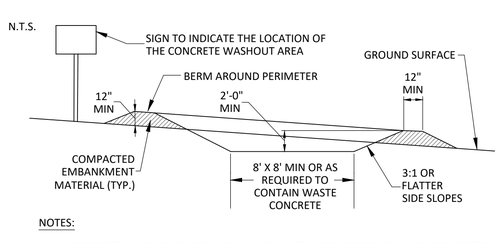
5 ROCK CONSTRUCTION ENTRANCE

N.T.S.

NOTE: ROCK EXITS SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE WORK. ROCK EXITS SHALL BE INSPECTED FOLLOWING EACH RAINFALL. MAINTENANCE OF ROCK EXITS SHALL INCLUDE A TOP DRESSING OF NEW GRAVEL, OR REMOVAL AND REPLACEMENT OF THE GRAVEL AS NEEDED, TO KEEP THE EXITS FREE FROM COLLECTED MUD.

6 CONCRETE WASHOUT AREA

N.T.S.



NOTES:
1. CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
2. CONCRETE WASHOUT AREA SHALL BE LINED WITH MINIMUM 10 MIL THICK PLASTIC LINER.
3. VEHICLE TRACKING CONTROL IS REQUIRED IF ACCESS TO CONCRETE WASHOUT AREA IS OFF PAVEMENT.
4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
5. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
6. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN ACCEPTED WASTE SITE.
7. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER ACCEPTED BY THE CITY.

Novel ENERGY SOLUTIONS
2303 Wycliff St, Suite 300
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info@novelenergy.biz
612-345-7188 telephone

Landowner
CLAUDE F DAIGLE JR.

GORHAM, ME

Project
ME GORHAM DAIGLE CSG LLC

Location
N43.7267°, W70.4428°

Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Maine.

PRELIMINARY
NOT FOR CONSTRUCTION

SCOTT GEDDES, P.E.
Registration No. 16864 Date: MONTH/DAY/YEAR

If applicable, contact us for a wet signed copy of this plan which is available upon request at Novel Energy Solutions - St. Paul, MN office.

Summary

Designed: DAP Drawn: DAP
Approved: SEG Project: 22 458. 08
Phase: PERMITTING Initial Issue: 2/16/23

Revisions

No.	Date	By	Chk	Description
1	XX/XX	AAA	AAA	DESCRIPTION
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Sheet Title
EROSION CONTROL NOTES & DETAILS

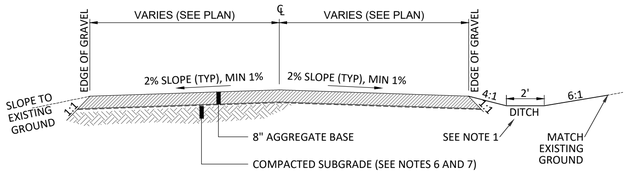
MAP 69 LOT 1-1

Sheet No. Revision
C5.02 IFP

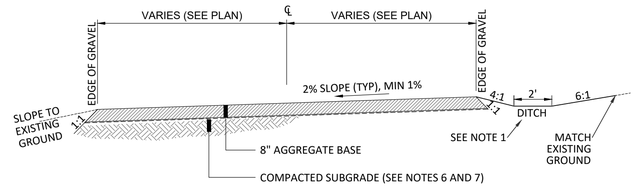
Project No. GRHM

1 GRAVEL ACCESS ROAD

N.T.S.



ROAD WITH CROWN



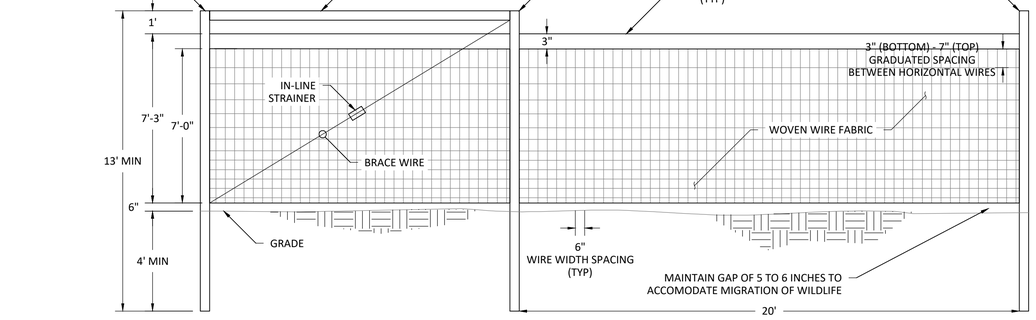
ROAD WITH SUPERELEVATION

NOTES:

1. THE CONTRACTOR SHALL COORDINATE WITH THE DEVELOPER, PRIOR TO CONSTRUCTION, TO DETERMINE IF THE ROAD WILL NEED TO BE CONSTRUCTED PER THIS DETAIL.
2. CONSTRUCT DITCH AS SHOWN ABOVE ONLY WHERE INDICATED BY CONTOURS ON THE GRADING PLAN.
3. IN THE ABSENCE OF A ROADSIDE DITCH, SLOPE FROM EDGE OF GRAVEL TO EXISTING GROUND @3:1.
4. 2% CROSS SLOPE IS TYPICAL, BUT CAN BE ADJUSTED DOWN TO MATCH EXISTING GROUND SLOPE IN ORDER TO PROMOTE CONTINUED SHEET DRAINAGE ACROSS ROAD. CROSS SLOPE SHALL NOT BE LESS THAN 1%.
5. ROAD GRADES ARE TYPICALLY INTENDED TO MATCH ADJACENT GRADE ALLOWING DRAINAGE TO SHEET ON AND OFF OF ROADS EVENLY. CARE SHOULD BE TAKEN TO FIELD ADJUST ROAD GRADES OR DITCH LOCATIONS AS NECESSARY TO PREVENT RUNOFF FROM CONCENTRATING ALONG ROAD EDGES CAUSING EROSION.
6. UNSTABLE AREAS IDENTIFIED DURING PROOF ROLL SHOULD BE EXCAVATED A MINIMUM OF 12 INCHES AND E-STABILIZED. PLACE GRANULAR BACKFILL IN MAXIMUM 12-INCH THICK LOOSE LIFTS. COMPACT TO A MINIMUM OF 95% OF STANDARD MAXIMUM DENSITY.
7. IF SITE CONDITIONS WARRANT USE OF A GEOTEXTILE FABRIC, CONTRACTOR SHALL USE TENSAR BX1100 OR EQUAL, PER GEOTECH REPORT.

2 WOVEN WIRE FENCE DETAIL

N.T.S.

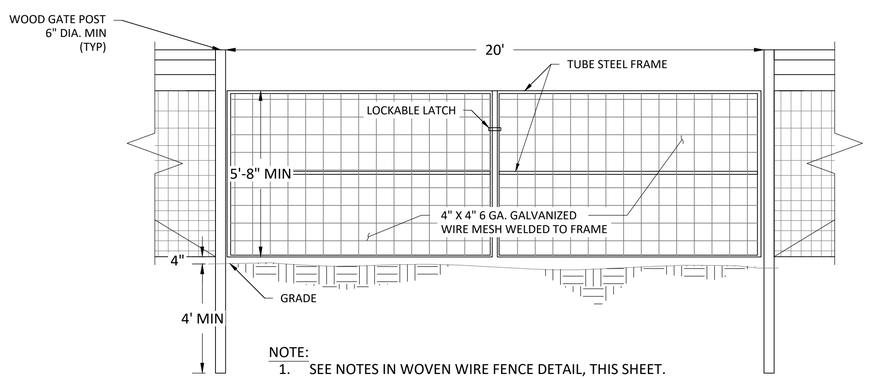


NOTE:

1. SEE SUPPLIER DRAWINGS FOR ADDITIONAL DETAIL.
2. WOVEN WIRE FABRIC SHALL BE GALVANIZED FIXED KNOT FENCE FABRIC WITH 3"X 6" OPENINGS AT BOTTOM.
3. ALL METALLIC PARTS SHALL BE GALVANIZED.
4. TOP WIRE SHALL REACH MIN 8' ABOVE GRADE.
5. MAXIMUM SPACING BETWEEN END POSTS SHALL BE 1,320' WITHOUT ADDITIONAL INLINE BRACES OR PER MANUFACTURER RECOMMENDATION.
6. MANUFACTURER DRAWINGS SHALL SUPERSEDE DETAIL IF CONFLICTS ARE PRESENT. ANY DEVIATIONS SHALL BE SUBMITTED TO THE OWNER FOR REVIEW.

3 SWING GATE

N.T.S.



NOTE:

1. SEE NOTES IN WOVEN WIRE FENCE DETAIL, THIS SHEET.

4 FLARED END SECTION/RIP-RAP APRON

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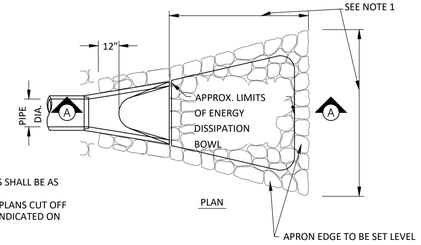
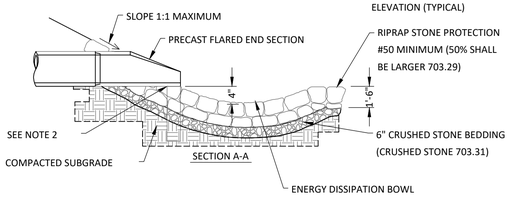


NOTES:

1. ALL RIP RAP DIMENSIONS SHALL BE AS NOTED ON
2. GRAVEL AND DRAINAGE PLANS CUT OFF WALL TO BE POURED IF INDICATED ON THE PLANS



5 GRASS-LINED SWALE

N.T.S.

Novel ENERGY SOLUTIONS

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Landowner
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GORHAM, ME

Project
ME GORHAM DAIGLE CSG LLC

Location
N43.7267°, W70.4428°

Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Maine.

PRELIMINARY NOT FOR CONSTRUCTION

SCOTT GOODS, P.E.
Registration No. 16864 Date: MONTH/DAY/YEAR

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Approved: SEG Project: 22 458. 08
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Sheet Title
CONSTRUCTION DETAILS

MAP 69
LOT 1-1

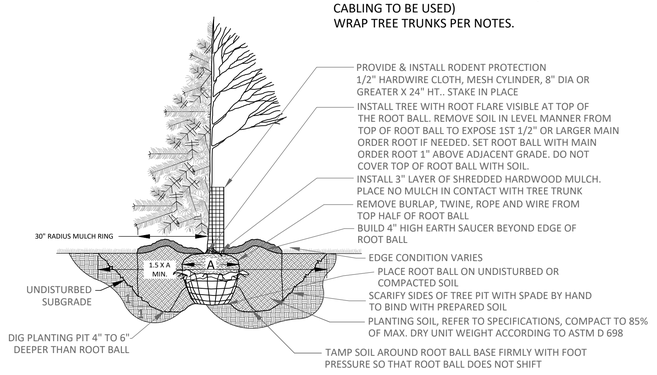
Sheet No. Revision
C9.01 IFP

Project No. GRHM

GENERAL NOTES

1. ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES (BMPS), PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION.
2. THE CONTRACTOR SHALL INSPECT THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS RELATING TO THE NATURE AND SCOPE OF THE WORK.
3. THE CONTRACTOR SHALL VERIFY PLAN LAYOUT AND BRING TO THE ATTENTION OF THE ENGINEER DISCREPANCIES WHICH MAY COMPROMISE THE DESIGN OR INTENT OF THE LAYOUT.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE CODES, REGULATIONS, AND PERMITS GOVERNING THE WORK.
5. THE CONTRACTOR SHALL PROTECT EXISTING ROADS, CURBS/GUTTERS, TRAILS, TREES, LAWNS AND SITE ELEMENTS DURING CONSTRUCTION. DAMAGE TO SAME SHALL BE REPAIRED AND/OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
6. LOCATE AND VERIFY ALL UTILITIES, INCLUDING IRRIGATION LINES, WITH THE OWNER FOR PROPRIETARY UTILITIES AND DIG SAFE 48 HOURS BEFORE DIGGING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ANY DAMAGES TO SAME. NOTIFY THE ENGINEER OF ANY CONFLICTS TO FACILITATE PLANT RELOCATION.
7. **THE LANDSCAPE CONTRACTOR SHALL COORDINATE THE PHASES OF CONSTRUCTION AND PLANTING INSTALLATION WITH OTHER CONTRACTORS WORKING ON SITE.**
8. THE CONTRACTOR SHALL REVIEW THE SITE FOR DEFICIENCIES IN SITE CONDITIONS WHICH MIGHT NEGATIVELY AFFECT PLANT ESTABLISHMENT, SURVIVAL OR WARRANTY. UNDESIRABLE SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO BEGINNING OF WORK.
9. THE PLAN TAKES PRECEDENCE OVER THE LANDSCAPE LEGEND IF DISCREPANCIES EXIST. QUANTITIES SHOWN IN THE PLANTING SCHEDULE ARE FOR THE CONTRACTOR'S CONVENIENCE. CONTRACTOR TO VERIFY QUANTITIES SHOWN ON THE PLAN.
10. THE SPECIFICATIONS TAKE PRECEDENCE OVER THE PLANTING NOTES AND GENERAL NOTES.
11. EXISTING TREES AND SHRUBS TO REMAIN SHALL BE PROTECTED TO THE DRIP LINE FROM ALL CONSTRUCTION TRAFFIC, STORAGE OF MATERIALS ETC. WITH 4' HT. ORANGE PLASTIC SAFETY FENCING ADEQUATELY SUPPORTED BY FENCE POSTS 6' O.C. MAXIMUM SPACING.
12. LONG-TERM STORAGE OF MATERIALS OR SUPPLIES ON-SITE WILL NOT BE ALLOWED.
13. CONTRACTOR SHALL REQUEST IN WRITING, A FINAL ACCEPTANCE INSPECTION.

NOTE:
CONTRACTOR SHALL MAINTAIN TREES IN A PLUMB POSITION THROUGHOUT THE WARRANTY PERIOD. IF STAKING IS REQUIRED BY SITE CONDITIONS, CONTRACTOR TO USE 2 OR 3 STAKE METHOD WITH 1" WEBBING AROUND TRUNK OF TREE (NO WIRE OR CABLING TO BE USED)
WRAP TREE TRUNKS PER NOTES.



1 C9.02 TREE PLANTING DETAIL

N.T.S. P-01

PLANTING NOTES

1. NO PLANTS SHALL BE INSTALLED UNTIL FINAL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
2. A GRANULAR PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AT THE MANUFACTURERS RECOMMENDED RATE PRIOR TO PLANT INSTALLATION.
3. ALL PLANTING STOCK SHALL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK," ANSI-Z60, LATEST EDITION, OF THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIALS.
4. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE AND BE CONTAINER GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE LANDSCAPE LEGEND.
5. PLANT MATERIALS TO BE INSTALLED PER PLANTING DETAILS.
6. ALL TREES MUST BE STRAIGHT TRUNKED AND FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
7. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY PLANTS WHICH ARE DEEMED UNSATISFACTORY BEFORE, DURING, OR AFTER INSTALLATION.
8. NO SUBSTITUTIONS OF PLANT MATERIAL SHALL BE ACCEPTED UNLESS APPROVED IN WRITING BY THE ENGINEER.
9. ALL PLANT MATERIAL QUANTITIES, SHAPES OF BEDS AND LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN AND ADJUSTED TO CONFORM TO THE EXACT CONDITIONS OF THE SITE. THE ENGINEER SHALL APPROVE THE STAKING LOCATION OF ALL PLANT MATERIALS PRIOR TO INSTALLATION.
10. ALL PLANTING AREAS MUST BE COMPLETELY MULCHED AS SPECIFIED.
11. MULCH: SHREDDED HARDWOOD MULCH, CLEAN AND FREE OF NOXIOUS WEEDS OR OTHER DELETERIOUS MATERIAL, IN ALL MASS PLANTING BEDS AND FOR TREES, UNLESS INDICATED AS ROCK MULCH ON DRAWINGS. SUBMIT SAMPLE TO ENGINEER PRIOR TO DELIVERY ON-SITE FOR APPROVAL. DELIVER MULCH ON DAY OF INSTALLATION. USE 3" FOR SHRUB BEDS, TREE RINGS, AND 3" FOR PERENNIAL/GROUND COVER BEDS, UNLESS OTHERWISE DIRECTED.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MULCHES AND PLANTING SOIL QUANTITIES TO COMPLETE THE WORK SHOWN ON THE PLAN.
13. USE ANTI-DESICCANT (WILTPRUF OR APPROVED EQUAL) ON DECIDUOUS PLANTS MOVED IN LEAF AND FOR EVERGREENS MOVED ANYTIME. APPLY AS PER MANUFACTURER'S INSTRUCTION. ALL EVERGREENS SHALL BE SPRAYED IN THE LATE FALL FOR WINTER PROTECTION DURING WARRANTY PERIOD.
14. WRAP ALL SMOOTH-BARKED DECIDUOUS TREES PLANTED IN THE FALL PRIOR TO DECEMBER 1 AND REMOVE WRAPPING AFTER MAY 1. TREE WRAPPING MATERIAL SHALL BE WHITE TWO-WALLED PLASTIC SHEETING APPLIED FROM TRUNK FLARE TO THE FIRST BRANCH.
15. ALL DECIDUOUS, PINE, AND LARCH PLANTINGS SHALL RECEIVE RODENT PROTECTION.
16. PLANTING SOIL FOR TREES, SHRUBS AND GROUND COVERS: FERTILE FRIABLE LOAM CONTAINING A LIBERAL AMOUNT (4% MIN.) OF HUMUS AND CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. MIXTURE SHALL BE FREE FROM HARDPACK SUBSOIL, STONES, CHEMICALS, NOXIOUS WEEDS, ETC. SOIL MIXTURE SHALL HAVE A PH BETWEEN 6.1 AND 7.5 AND 10-0-10 FERTILIZER AT THE RATE OF 3 POUNDS PER CUBIC YARD. IN PLANTING BEDS INCORPORATE THIS MIXTURE THROUGHOUT THE ENTIRE BED IN A 6" LAYER AND ROTO-TILLING IT INTO THE TOP 12" OF SOIL AT A 1:1 RATIO.ANY PLANT STOCK NOT PLANTED ON DAY OF DELIVERY SHALL BE HEELED IN AND WATERED UNTIL INSTALLATION. PLANTS NOT MAINTAINED IN THIS MANNER WILL BE REJECTED.
17. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THAT EACH EXCAVATED TREE AND SHRUB PIT WILL PERCOLATE PRIOR TO INSTALLING PLANTING MEDIUM AND PLANTS. THE CONTRACTOR SHALL FILL THE BOTTOM OF SELECTED HOLES WITH SIX INCHES OF WATER AND CONFIRM THAT THIS WATER WILL PERCOLATE WITHIN A 24-HOUR PERIOD. IF THE SOIL AT A GIVEN AREA DOES NOT DRAIN PROPERLY, A PVC DRAIN OR GRAVEL SUMP SHALL BE INSTALLED OR THE PLANTING SHALL BE RELOCATED IF DIRECTED BY THE ENGINEER.
18. ALL PLANTS SHALL BE GUARANTEED FOR TWO COMPLETE GROWING SEASONS (APRIL 1 - NOVEMBER 1), UNLESS OTHERWISE SPECIFIED. THE GUARANTEE SHALL COVER THE FULL COST OF REPLACEMENT INCLUDING LABOR AND PLANTS.
19. CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 3 DAYS PRIOR TO PLANNED DELIVERY. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 24 HOURS IN ADVANCE OF BEGINNING PLANT INSTALLATION.
20. SEASONS/TIME OF PLANTING AND SEEDING: NOTE: THE CONTRACTOR MAY ELECT TO PLANT IN OFF-SEASONS ENTIRELY AT HIS/HER RISK.
    - 20.1. DECIDUOUS /B&B: 4/1 - 6/1; 9/21 - 11/1
    - 20.2. EVERGREEN B&B: 4/1 - 5/1; 9/21 - 11/1
    - 20.3. NATIVE MIX SEEDING: 4/15 - 7/20; 9/20-10/20
21. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PORTION OF THE WORK IS IN PLACE. PLANT MATERIAL SHALL BE PROTECTED AND MAINTAINED UNTIL THE INSTALLATION OF THE PLANTS IS COMPLETE, INSPECTION HAS BEEN MADE, AND PLANTINGS ARE ACCEPTED EXCLUSIVE OF THE GUARANTEE. MAINTENANCE SHALL INCLUDE WATERING, CULTIVATING, MULCHING, REMOVAL OF DEAD MATERIALS, RE-SETTING PLANTS TO PROPER GRADE AND KEEPING PLANTS IN A PLUMB POSITION. AFTER ACCEPTANCE, THE OWNER SHALL ASSUME MAINTENANCE RESPONSIBILITIES. HOWEVER, THE CONTRACTOR SHALL CONTINUE TO BE RESPONSIBLE FOR KEEPING THE TREES PLUMB THROUGHOUT THE GUARANTEE PERIOD.

TREE GENERAL SPECIFICATIONS

1. ALL TREES SHALL HAVE SYMMETRICAL OR BALANCED BRANCHING ON ALL SIDES OF THE TREE.
2. TREES SHALL NOT BE TIPPED PRUNED.
3. TREES SHALL BE FREE OF PHYSICAL DAMAGE FROM SHIPPING AND HANDLING. DAMAGED TREES SHALL BE REJECTED.
4. SUMMER DUG TREES SHALL HAVE ROOTBALL SIZE INCREASED BY 20%

SEED AND MULCH SPECIFICATIONS

SEEDING

TYPE	LOCATION	NAME/SPECIES	SUPPLIER	SEEDING RATE
A/B	BETWEEN AND UNDER SOLAR PANELS	REBEL TALL FESCUE, CHEWINGS FESCUE OR HARD FESCUE		5#/1,000 SF
		ERNMX-129: CONSERVATION SHADE MIX	ERNSTSEED.COM	
C	OUTSIDE OF ARRAY	ERNMX-179: BUTTERFLY & HUMMINGBIRD GARDEN MIX	ERNSTSEED.COM	10#/ACRE
1. BETWEEN DECEMBER 1ST AND APRIL 1ST, EACH TYPE OF SEED SHALL HAVE AN ADDITIONAL 1#/1,000 SF OF WINTER RYEGRASS OR GRAIN RYE GRASS SEED.				
2. IT SHALL BE THE SUB-CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE PROJECT LIMIT OF WORK IS STABILIZED (IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS/REQUIREMENTS/PERMIT APPROVALS) DURING THE LENGTH OF THE PROJECT.				
3. ALL DISTURBED AREAS SHALL BE RESTORED WITH 4" MINIMUM TOPSOIL & SEED PER SEEDING SPECIFICATIONS LISTED IN THS TABLE.				

MULCH

CONDITION	TIMING	MULCH TYPE[2]	APPLICATION RATES[1]
TEMPORARY			
INACTIVE AREAS	IF NO ACTIVITY IN EXPOSED AREAS FOR 7 DAYS, OR PRIOR TO A STORM EVENT	STRAW MULCH OR WOOD FIBER MULCH OR EROSION CONTROL MIX	2 TONS/ACRE 1 TON/ACRE 2" THICK OVER AREA
ALL DISTURBED AREAS OF THE CONSTRUCTION WORKSPACE	APPLY MULCH TO ALL EXPOSED AREAS IF NO ACTIVITY OCCURS WITHIN 30 DAYS. APPLY MULCH AND TEMPORARY SEEDING SOONER WHEN IT CAN BE ANTICIPATED THAT ACTIVITY IS NOT GOING TO OCCUR WITHIN 30 DAYS	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRE 1 TON/ACRE[3]
ALL WORK AREAS EXPOSED ARE TO BE MULCHED DAILY EACH TIME SOIL IS DISTURBED[5]	NOVEMBER 1 - APRIL 15	STRAW MULCH OR WOOD FIBER MULCH	4 TONS/ACRE 2 TONS/ACRE
PERMANENT			
ON ALL EXPOSED AREAS AFTER SEEDING TO STABILIZE THE SOIL SURFACE	PERMANENT GRASS AND/OR LEGUME SEEDING COVERED BY STRAW MULCH ON ALL AREAS THAT HAVE BEEN RESTORED TO FINAL GRADE. THIS DOES NOT APPLY TO AREAS STABILIZED BY OTHER MEANS SUCH AS JUTE MATTING OR PERMANENT EROSION CONTROL MIX	CRIMPED STRAW MULCH OR PAPER MULCH OR WOOD FIBER MULCH	2 TONS/ACRE 1500 LC./ACRE[4] 1 TON/ACRE

NOTES:
1. IN ALL CASES, SUFFICIENT MULCH SHALL BE APPLIED SUCH THAT NO SOIL IS VISIBLE THROUGH THE MULCH.
2. DOUBLE RATE OF WOOD FIBER MULCH WHEN USED IN OR ADJACENT TO CRITICAL AREAS. INCREASE MULCH RATE BY HALF UNDER SOLAR ARRAY DRIP EDGE.
3. STRAW, HAY, OR HYDROMULCH (WOOD FIBER OR PAPER MULCH AS APPROPRIATE) SHALL PROVIDE MINIMUM 90 PERCENT GROUND COVERAGE.
4. PAPER MULCH IS ACCEPTABLE FOR USE DURING THE GROWING SEASON ON SLOPES >30 PERCENT AND IN AREAS WHERE VEGETATION HAS NOT ESTABLISHED WELL, ADDITIONAL HAY MULCH WILL BE ADDED AS A WINTERIZING MEASURE.
5. MULCH MAY NOT BE SPREAD ON TOP OF SNOW.

Novel ENERGY SOLUTIONS
2303 Wycliff St, Suite 300
St Paul, MN 55114
info@novelenergy.biz
612-345-7188 telephone

Landowner
CLAUDE F DAIGLE JR.

GORHAM, ME

Project
ME GORHAM DAIGLE CSG LLC

Location
N43.7267°, W70.4428°

Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Maine.

PRELIMINARY NOT FOR CONSTRUCTION

SCOTT GEDDES, P.E.
Registration No. 16864 Date: MONTH/DAY/YEAR

If applicable, contact us for a wet signed copy of this plan which is available upon request at Novel Energy Solutions - St. Paul, MN office.

Summary

Designed: DAP Drawn: DAP
Approved: SEG Project: 22 458. 08
Phase: PERMITTING Initial Issue: 2/16/23

Revisions

No.	Date	By	Chk	Description
1	XX/XX	AAA	AAA	DESCRIPTION
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Sheet Title
LANDSCAPING

MAP 69
LOT 1-1

Sheet No. Revision
C9.02 IFP

Project No. GRHM

APPENDIX C - Soil Report

Prepared By:
Novel Energy Solutions LLC
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United States Department of Agriculture

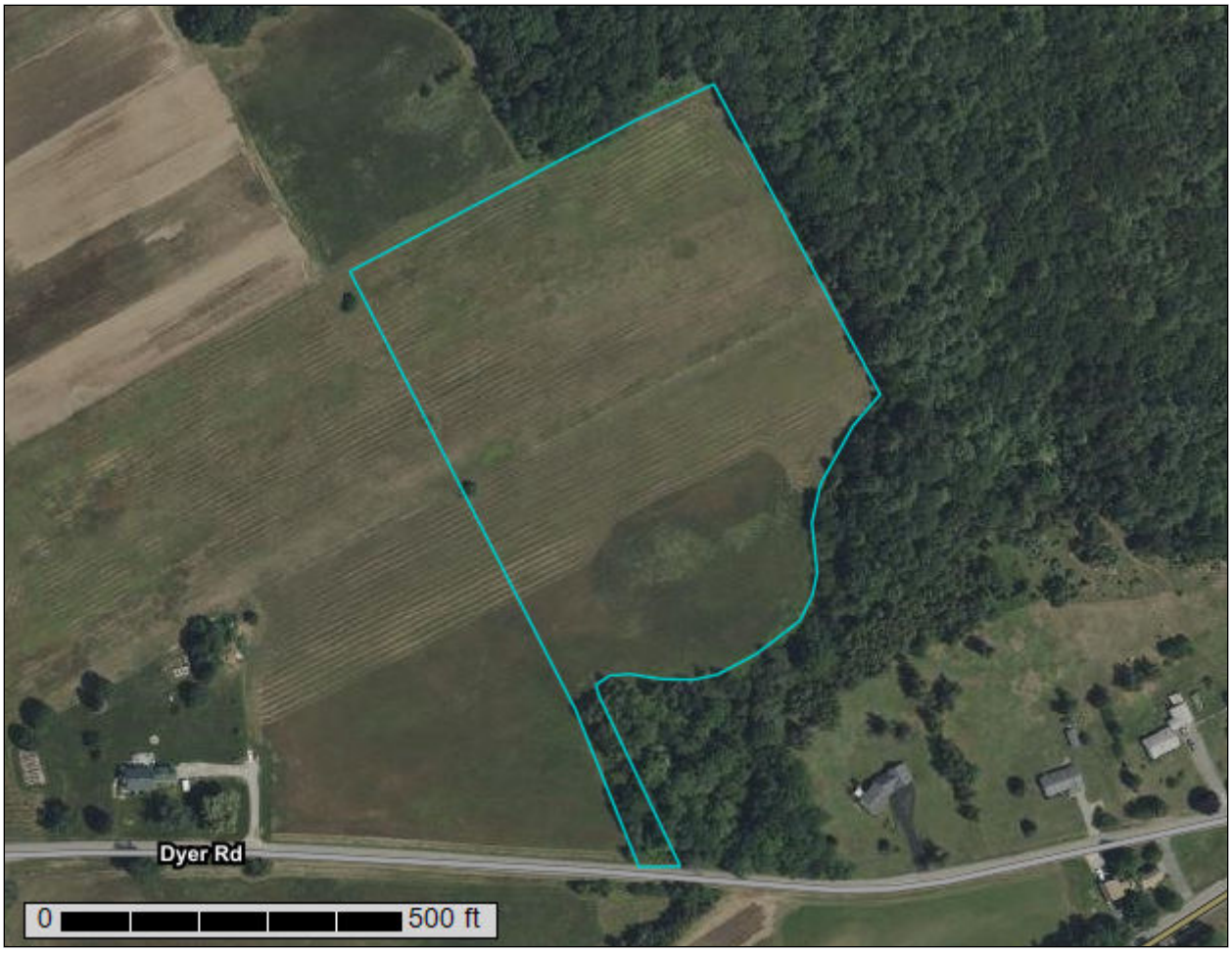
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine

ME Gorham Daigle CSG



March 20, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,040 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 19, Aug 30, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 22, 2021—Oct 7, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BgC2	Nicholville very fine sandy loam, 8 to 15 percent slopes	1.1	11.5%
DeB	Deerfield loamy fine sand, 3 to 8 percent slopes	0.4	4.5%
EmB	Elmwood fine sandy loam, 0 to 8 percent slopes	0.7	7.3%
MkB	Merrimac fine sandy loam, 3 to 8 percent slopes	4.3	43.4%
PbC	Paxton fine sandy loam, 8 to 15 percent slopes	2.9	29.8%
Sz	Swanton fine sandy loam	0.3	3.4%
Totals for Area of Interest		**9.9**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County and Part of Oxford County, Maine

BgC2—Nicholville very fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2yjg6
Elevation: 20 to 2,300 feet
Mean annual precipitation: 34 to 50 inches
Mean annual air temperature: 37 to 45 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Nicholville and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nicholville

Setting

Landform: Lakebeds (relict), eskers
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-silty glaciomarine deposits

Typical profile

Ap - 0 to 7 inches: very fine sandy loam
Bs - 7 to 19 inches: very fine sandy loam
BC - 19 to 30 inches: very fine sandy loam
C - 30 to 65 inches: loamy very fine sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods)
Hydric soil rating: No

DeB—Deerfield loamy fine sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2xfg9
Elevation: 0 to 1,190 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Deerfield and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Deerfield

Setting

Landform: Kame terraces, outwash plains, outwash terraces, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy outwash derived from granite, gneiss, and/or quartzite

Typical profile

Ap - 0 to 9 inches: loamy fine sand
Bw - 9 to 25 inches: loamy fine sand
BC - 25 to 33 inches: fine sand
Cg - 33 to 60 inches: sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: About 15 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Sodium adsorption ratio, maximum: 11.0
Available water supply, 0 to 60 inches: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A
Ecological site: F144AY027MA - Moist Sandy Outwash
Hydric soil rating: No

EmB—Elmwood fine sandy loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: blh8
Elevation: 10 to 900 feet
Mean annual precipitation: 38 to 55 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 130 to 195 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Elmwood and similar soils: 88 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Elmwood

Setting

Landform: Stream terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 25 inches: sandy loam
H3 - 25 to 65 inches: silty clay loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Ecological site: F144BY402ME - Clay Hills
Hydric soil rating: No

MkB—Merrimac fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyqs
Elevation: 0 to 1,290 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Merrimac and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Kames, eskers, moraines, outwash terraces, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A

Ecological site: F145XY008MA - Dry Outwash
Hydric soil rating: No

PbC—Paxton fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: bljg
Elevation: 0 to 1,020 feet
Mean annual precipitation: 48 to 50 inches
Mean annual air temperature: 45 to 46 degrees F
Frost-free period: 145 to 155 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Paxton and similar soils: 86 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Drumlinoid ridges
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Nose slope, crest
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from mica schist

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 20 inches: fine sandy loam
H3 - 20 to 65 inches: fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 18 to 40 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 30 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods)
Hydric soil rating: No

Sz—Swanton fine sandy loam

Map Unit Setting

National map unit symbol: blk4
Elevation: 10 to 900 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 39 to 46 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Swanton and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Swanton

Setting

Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy glaciolacustrine deposits

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 32 inches: fine sandy loam
H3 - 32 to 65 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

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APPENDIX D - Construction General Permit

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STATE OF MAINE

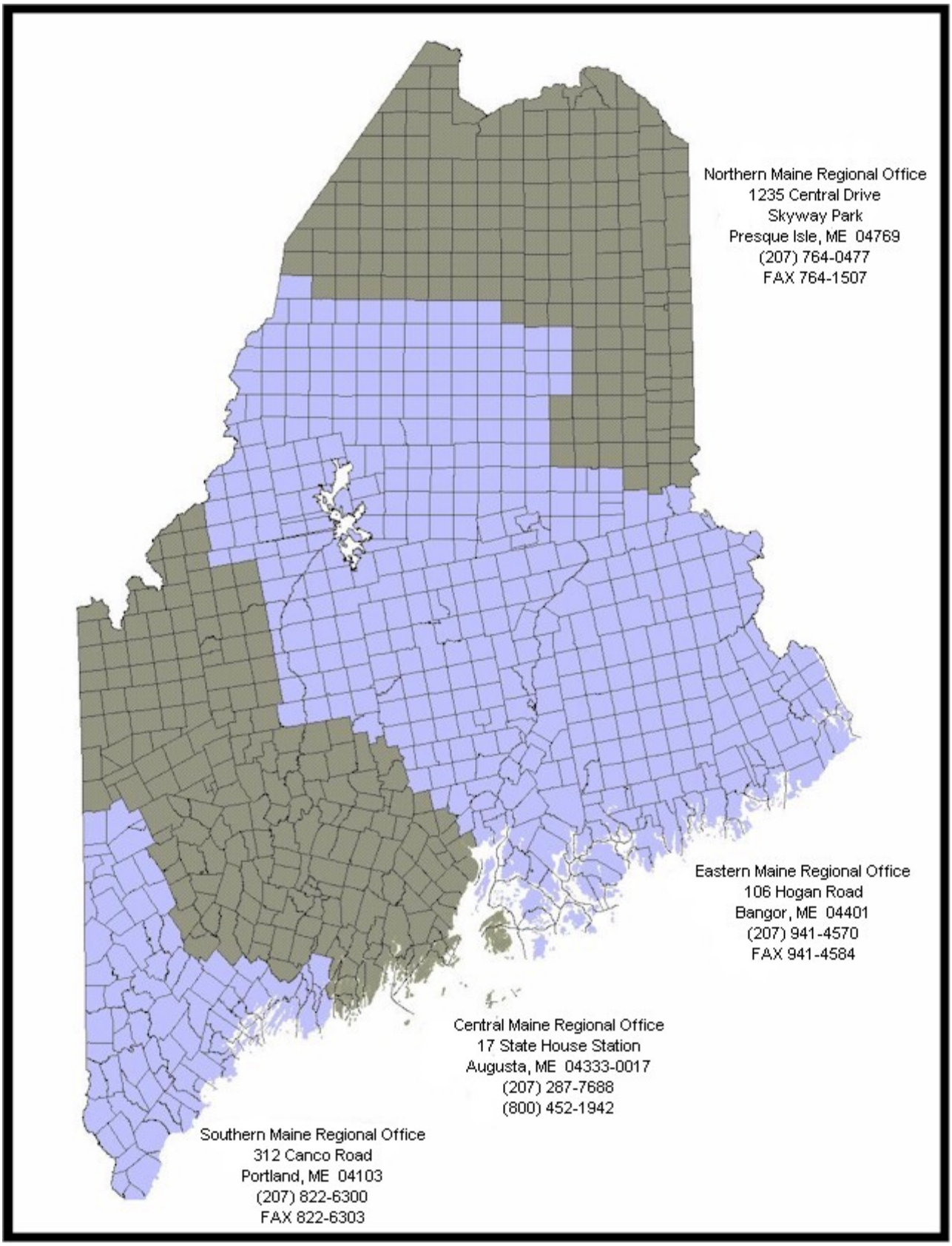
DEPARTMENT OF ENVIRONMENTAL PROTECTION

General Permit – Construction Activity

Maine Pollutant Discharge Elimination System (MPDES)
With Basic Performance Standards Appendices

Bureau of Land and Water Quality
No. DEPLW0801

July 21, 2006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GENERAL PERMIT -- CONSTRUCTION ACTIVITY
Maine Pollutant Discharge Elimination System (MPDES)

Contents

PART I -- General Permit Coverage

A. General coverage of this permit. This general permit authorizes the direct discharge (point source discharge) of stormwater associated with construction activity to waters of the state other than groundwater, provided that the discharge meets the requirements of this general permit and applicable provisions of Maine's waste discharge and water classification statutes and rules. This general permit also authorizes the direct discharge of stormwater from support activities. "Construction activity" is defined in Part II (page 2).

This general permit is effective July 21, 2006, and authorization to discharge under this general permit expires January 20, 2008. This general permit applies in those parts of the State of Maine for which the Department has received delegated authority under the federal NPDES program. See Part V (page 10), for a list of specific limitations on coverage of this general permit.

B. Authority. A permit is required for the direct or indirect discharge of pollutants to waters of the State.[1] A general permit may be issued for point discharges (direct discharges) of stormwater.[2] A violation of a condition or requirement of a general permit constitutes a violation of Maine's water quality laws and the federal Clean Water Act, and subjects the discharger to penalties under 38 M.R.S.A. § 349, and § 309 of the Clean Water Act. Nothing in this general permit is intended to limit the Department's authority under the waste discharge and water classification statutes or rules. This general permit does not affect requirements under other applicable Maine statutes such as Site Location of Development (Site Law), Stormwater Management, Land Use Regulation Commission (LURC), and Natural Resources Protection (NRPA).

C. Continuation of expired General Permit. If this permit is not reissued, revoked or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedures Act and remain in force and effect. Any permittee who was granted permit coverage prior to the expiration date will automatically remain covered by the continued permit until the earlier of:

[1] See 38 M.R.S.A. § 413.
[2] See 06-096 CMR 529(2)(a)(2)(i).

1. Reissuance or replacement of this general permit, at which time the permittee must comply with the notice of intent conditions of the new permit to maintain authorization to discharge; or
2. The permittee's submittal of a Notice of Termination; or
3. Issuance of an individual permit for the permittee's discharges; or
4. A formal permit decision by the Director not to reissue this general permit, at which time the permittee must seek coverage under an alternative general permit or individual permit.

This general permit does not prevent a municipality from adopting stricter standards than contained in this general permit, or in state or federal law.

PART II -- Definitions

The following terms have the following meanings when used in this general permit. Additional definitions are found in 06-096 CMR 520 and in the waste discharge and classification laws.

A. Construction activity. "Construction activity" or "activity" means:

1. Construction activity including one acre or more of disturbed area, or activity with less than one acre of total land area that is part of a common plan of development or sale, if the common plan of development or sale will ultimately disturb equal to or greater than one acre; or

2. Any other construction activity designated by the Department based on the potential for contribution to a violation of a water quality standard or for significant contribution of pollutants to waters of the State.

Note: Based upon Maine's soils, topography, and extensive water resources, the Department has determined that the great majority of construction activities disturbing one acre or more will result in discernable concentrated flows (direct discharges) to waters of the state.

B. Common plan of development or sale. A "common plan of development or sale" means a subdivision as determined by the Land Use Regulation Commission (LURC), or a subdivision under municipal law as determined by the municipality where the subdivision is located.

C. Department. "Department" means the State of Maine Department of Environmental Protection.

D. Direct discharge. "Direct discharge" or "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 or vessel or other floating craft, from which pollutants are or may be discharged.[3]

E. Direct watershed of a waterbody or wetland. "Direct watershed of a waterbody or wetland" is the land area that drains, via overland flow, natural or man-made drainage systems, or waterbodies or wetlands, to a given waterbody or wetland without first passing through an upstream waterbody classified as GPA.

F. Disturbed area. "Disturbed area" is clearing, grading and excavation, which means all the land areas that are stripped, graded, grubbed, filled, or excavated at any time during the site preparation or removing vegetation for, or construction of, a project. "Disturbed area" does not include routine

[3] 38 MRSA § 466(5) (definition of "direct discharge") and 06-096 CMR 520 (definition of "point source").

maintenance, but does include redevelopment and new impervious areas. "Routine maintenance" is maintenance performed to maintain the original line and grade, hydraulic capacity, and original purpose of the facility. Paving an impervious gravel surface while maintaining the original line and grade, hydraulic capacity and original purpose of the facility is considered *routine* maintenance. Cutting of trees, without grubbing, stump removal, disturbance or exposure of soil is not considered "disturbed area".

G. Drainageway. "Drainageway" is a natural or man-made channel or course within which and from which surface discharge of water may occur. Drainageways include, but are not limited to rivers, streams and brooks (whether intermittent or perennial), swales, ditches, pipes, culverts, and wetlands with localized discharge of water.

H. Impaired waterbody. An "impaired waterbody" means a waterbody that is not attaining water quality criteria or standards, as determined by the Department and listed in Chapter 502.[4]

1. Best currently available data. The Department may use the best currently available data to determine the status of a waterbody, rather than relying upon the list published in Chapter 502, Direct Watersheds of Lakes Most at Risk from New Development, and Urban Impaired Streams, when the activity itself may have caused or contributed to the impairment, or when the Department reviews an application for a permit such as an individual Waste Discharge license or Site Law permit.

I. Notice of Intent ("NOI"). "Notice of Intent or "NOI" means a notification of intent to seek coverage under this general permit made by the applicant to the Department on a notification form provided by the Department.

J. Notice of Termination ("NOT"). "Notice of Termination" or "NOT" means a notification of intent to end coverage under this general permit on a form provided by the Department.

K. Person. "Person" means an individual, firm, corporation, municipality, quasi-municipal corporation, state agency, federal agency or other legal entity.[5]

L. Stormwater. "Stormwater" means the part of precipitation, including runoff from rain or melting ice and snow that flows across the surface as sheet flow, shallow concentrated flow, or in drainageways. "Stormwater" has the same meaning as "storm water".

M. Stream. "Stream" means a river, stream or brook as defined in the Natural Resources Protection Act at 38 M.R.S.A. § 480-B.

N. Support activities. "Support activities" means support activities associated with a construction activity (e.g. concrete or asphalt batch plants, equipment storage yards, material storage areas, excavated material disposal areas, borrow areas) provided the following requirements are met.

1. **Direct relationship.** The support activity is directly related to a construction site that is required to have waste discharge permit coverage for discharges of storm water associated with construction activity.
2. **Type of operation.** The support activity is not a commercial operation serving multiple unrelated construction projects by different persons, and does not operate beyond the completion of the construction activity at the last construction project it supports.

[4] See 06-096 CMR 502
[5] See 38 M.R.S.A. § 361-A(4).

PART III -- Requirements

Part III describes the requirements for obtaining authorization under this general permit. See Part IV for general submission requirements and procedures related to Notices of Intent (NOIs) and Notices of Termination (NOTs).

A person may not construct or cause to be constructed or operate or cause to be operated or, in the case of a common plan of development or sale (subdivision), sell or lease, offer for sale or lease or cause to be sold or leased any area affected by construction activity without obtaining approval from the Department. A person having an interest in or undertaking an activity on a parcel of land affected by this general permit may not act contrary to this general permit.

A. Construction activity (other than a common plan of development or sale). Construction activity including one acre or more of disturbed area on the parcel, or other construction activity designated by the Department, must meet the following requirements.

1. Submit NOI and NOT.
2. Meet the standards in Appendices A-C of this general permit.
3. Erosion and sedimentation control (ESC) plan development and maintenance. This plan demonstrates how the standards in Appendix A will be met. An ESC plan is required pursuant to the Site Law and this general permit, however additional requirements may apply pursuant to the Site Law. See Part III (D) concerning referencing a plan submitted as part of a Site Law application.

B. Common plan of development or sale. A common plan of development or sale must meet the following requirements.

1. Site Law, Stormwater, or LURC. A common plan of development or sale is considered to meet the requirements of this general permit if:

a. A Site Law, Stormwater (38 M.R.S.A. § 420-D), or LURC permit is required, and the requirements of Part III (A) are met; and
b. If a Stormwater permit is required, the requirements of Part III(A) are also met on all associated lots in the subdivision, as determined by the Department.

The Department will assume that one acre of disturbed area will be created per 3 lots (1/3 ac. per lot), unless the person proposing the common plan of development or sale provides information concerning actual disturbed area.

2. Other. If the project does not require a Site Law, Stormwater, or LURC permit, and is not located within an area subject to the jurisdiction of LURC, then the project must meet the standards of the Maine Erosion and Sedimentation Control Law. An NOI is not required.

A lot buyer or subsequent transferee within a common plan of development or sale must submit an individual NOI if he or she proposes a construction activity as defined at Part II (A), regardless of whether the developer has filed an NOI.

The standards apply to the lots in the subdivision as well as associated facilities such as roads, pads, and ponds.

Note: The LURC Development Law only applies to areas of the state administered by the Land Use Regulation Commission (LURC). The Maine Site Law (in regard to subdivisions), Erosion and Sedimentation Control Law, and Stormwater Management Law, apply to projects or portions of projects outside the jurisdiction of LURC.

C. Total maximum daily load (TMDL). If the waterbody to which a direct discharge drains is impaired and has an EPA approved TMDL, then the discharge must be consistent with any waste load allocation (WLA) contained in the TMDL and any implementation plan.

D. ESC plan. Material submitted with an application for a Site Law or Stormwater Management Law permit may be referenced to the extent it substantively addresses the standards in Appendix A. If all the standards are not addressed, supplementary material must be provided with the NOI. If an applicant wishes the Department to rely in whole or part on a submission that is part of a Site Law or Stormwater Management Law application, the applicant should submit a letter with the NOI describing the previous submission and the extent to which it should be relied upon, and listing the standards addressed by any supplementary material.

PART IV. Procedure

A. Notice of Intent (NOI). When the applicant submits a notification form, NOI, he or she agrees to comply with the standards and requirements of this general permit. An NOI must be submitted to the Department with the appropriate fee.

1. Processing of NOI. An NOI must be reviewed and approved by the Department prior to beginning construction activity or causing soil disturbance except as provided in Part IV(K).

The NOI is deemed approved 14 calendar days after the Department receives the notification form, unless the Department approves the notification or finds the notification deficient prior to that date. Within the 14 day period, the Department may notify the applicant in writing or through verbal communication that the project is ineligible for coverage under this general permit, or that additional information is needed or further review is required.. If the DEP does not inform the applicant that the notification is unacceptable within this 14-day period, the notification is deemed accepted by the Department and the applicant may proceed to carry out the activity

Activities that require a permit under the Site Location of Development or the Storm Water Management Acts may not proceed until any required permit under those laws is obtained. Any NOI and supplementary information required by this subsection should be submitted at the same time as any required Stormwater Management or Site Law application for the activity in order to avoid delays in processing. The NOI may not be filed before these applications. The Department may consolidate application materials with these or other programs. When application materials are consolidated, the review period for the NOI is extended to coincide with the review period of the other program.

2. Submission. Applicants for a Maine CGP must submit the notification form, fee and other information for the Department's review and approval. This information includes a location map, site plan, erosion and sedimentation plan, and photographs of the area to be developed. Also, if the project is located in Essential Habitat, approval from Department of Inland Fisheries and Wildlife will need to be submitted. A landowner or leasehold owner, or his or her authorized representative, must file the NOI using a form provided by the Department. The NOI must contain information specified by the Department that is listed in this subsection. The Department

may require the submission of additional information as necessary. Send the completed NOI form to the DEP office serving the area where the project is located. This general permit contains a map showing the municipalities served by the Department regional offices and the regional office mailing addresses.

a. The legal name, address, telephone number, and any email address of the landowner or leasehold owner.
b. The legal name, address, telephone number, and any email address of the agent or contractor.
c. A narrative describing in detail how to get to and access the parcel and construction activities, and a USGS or similar map with the location marked.
d. A narrative describing the project and its purpose.
e. UTM Northing and UTM Easting (if known)
f. The size of disturbed area proposed.
g. Name of the receiving water(s) or if the discharge is through a municipal separate storm sewer system, the name of the municipal operator of the storm sewer.
h. Signature of applicant (landowner or lessee) or authorized representative with documentation showing authorization. For signatory requirements, see 06-096 CMR 521(5).
i. For any construction activity occurring within an essential habitat or that may violate protection guidelines, written approval of the activity from the Department of Inland Fisheries and Wildlife (IF&W). The applicant must follow any conditions stated in the IF&W approval.[6]

Note: Maps showing areas of essential habitat are available from the Department of Inland Fisheries and Wildlife regional headquarters, municipal offices, the Land Use Regulation Commission (or areas within LURC's jurisdiction) and DEP regional offices. If the activity is located in essential habitat, IF&W must be contacted to request and obtain a "certification of review and approval."

B. Location map. The Notification form must be accompanied by a photocopy of a portion of a 7.5 minute USGS topographic map or a DeLorme Atlas map showing the site's location and approximate property boundaries, if the size of the parcel and scale of the map allows it. A USGS topographic map can be useful for showing the general contour and topography of the project site.

C. Site plan. Submit a scaled plan showing, at a minimum, the locations of structures and roads, the extent of disturbed land, pre-construction site topography, post-construction site topography, on-site and adjacent surface waterbodies, and all erosion and sedimentation control measures to be used on the site. Such measures include, but are not limited to, sedimentation barriers, ditch lining, rip rap, and culvert inlet and outlet designs. Identify retained downgradient buffers, or explain in a narrative why such buffers will not be retained (see Pollution Prevention standard, Appendix A(1)). Identify protected natural resources, such as wetlands, streams, or high water line of ponds or coastal wetlands on the site plan. It is not necessary to have the plan professionally prepared. However, it must be legible and drawn to a scale that allows clear representation of distances and measurements on the plan.

An applicant may substitute the following information for surveyed pre-development and post-development site topography on the location plans:

1. the locations of high points on the site,
2. the locations of any ponds or other runoff storage depressions on the site,

[6] A state agency may not license a project that will significantly alter habitat of any species designated as threatened or endangered, or violate protection guidelines, without a determination from IF&W. See 12 M.R.S.A. § 7755-A.

3. the locations and flow direction of any drainage ditches, brooks, or streams,
4. the locations of any catch basin inlets or culvert inlets, and
5. arrows showing the general direction(s) of overland drainage for the site.

D. Erosion and Sedimentation Control plan. In addition to a site plan, an erosion control plan must be included which contains, at a minimum, permanent stabilization measures to be taken (e.g. paving or planting vegetation), installation details of the erosion control measures proposed to be used, seeding and mulching rates, and a construction schedule with the proposed construction dates and timeframe for major earth moving and construction events. **This plan and its details may be included on the site plan instead of being a separate submission.**

An erosion and sedimentation control plan must be designed by a professional who is registered, licensed, or certified in a related land-use field, or by education, training, or experience is knowledgeable in erosion and sedimentation control, or has received specific training in erosion and sedimentation control at a department-sponsored erosion and sedimentation control workshop.

Note: A person who conducts, or causes to be conducted, an activity that involves filling, displacing or exposing soil or other earthen materials shall take measures to prevent unreasonable erosion of soil or sediment beyond the project site or into a protected natural resource as defined in 38 M.R.S.A. § 480-B. Sediment control measures must be in place before the activity begins. Measures must remain in place and functional until the site is permanently stabilized. Adequate and timely temporary and permanent stabilization measures must be taken. The site must be maintained to prevent unreasonable erosion and sedimentation. See 38 M.R.S.A § 420-C (in part). Other or additional standards may apply, under the Natural Resources Protection Act, to a project located in or adjacent to a protected natural resource.

E. **Photos.** Provide photographs of the project site that show the existing character and topography of the area proposed for development.

F. Notice of Termination (NOT). The permittee shall submit a Notice of Termination (NOT) on a form provided by the Department within 20 days of the completion of permanent stabilization or within 20 days of obtaining coverage under an alternative MEPDES permit. If the property is transferred and construction activity is ongoing, the permittee is not required to file an NOT if the new owner or lessee files an NOI to continue authorization under this general permit for a continuing discharge.

1. Common plan of development or sale. A person who has filed an NOI for a common plan of development or sale shall file an NOT as follows.

a. For areas of the site over which the developer has control, the NOT must be filed after permanent stabilization has been completed.

b. For areas of the site over which the developer does not have control (ex. lots sold in an undeveloped or partially undeveloped state), the NOT must be filed after (i) temporary stabilization including perimeter controls for individual lots have been completed if the developer has done prep work (stripping or grading) on the lots, (ii) the developer has informed the lot buyers of the requirements of this general permit, and (iii) the developer has provided the buyers with copies of any erosion control plan, or portion of a plan applicable to the lots, required to be certified or provided to the Department under the requirements of this general permit.

A lot buyer within a common plan of development or sale is required to meet the standards of this general permit, except that residential lot buyers are not required to maintain inspection logs as provided in Appendix A(2).

2. Timing. A permittee's authorization to discharge under this permit terminates at midnight on the day the NOT is signed.

3. Submission. The NOT must include information specified by the Department, including the following:

a. The legal name, address, telephone number, and any email address of the landowner or leasehold owner.
b. The legal name, address, telephone number, of the agent or contractor.
c. Photographs showing the completed project and the affected area. Exception: a person filing an NOT for a common plan of development is not required to include photographs for disturbed areas created by lot buyers or lessees.
d. Signature of the permittee or authorized person together with documentation demonstrating authorization. If documentation has been previously submitted and is still current, it may be referenced.

G. Mail/copy. The notification forms must be sent to the DEP by certified mail (return receipt requested) or other service providing a record of DEP's receipt of the item to the sender, or hand delivered to the DEP and date stamped by the Department. The applicant must keep a copy of the notification forms and all materials provided to the Department.

H. Retention of records

1. Documents. The permittee shall retain copies of the ESC plan and any forms, submissions, reports, or other materials required by this general permit for a period of at least three years from the completion of permanent stabilization. This period may be extended by request of the Department.

2. Accessibility. Employees and agents of the Department may enter any property at reasonable hours in order to determine compliance.[7] The permittee shall retain a copy of the ESC plan and this general permit at the construction site or other location accessible to the Department, local government officials, and any operator of a municipal separate stormwater sewer receiving discharges from the site, from project initiation to permanent stabilization. The permittee shall ensure that a copy of the ESC plan and this general permit are available for the use of any contractors on the site undertaking work regulated by this general permit.

I. Changes in the activity or owner/lessee. Coverage under this general permit will be continued provided there are no changes in the discharge as described in the NOI and associated submissions. If any changes are proposed in the activity, the person having filed the NOI must notify the Department through the submission of updated information in writing, including submitting or obtaining certification for any revisions to an ESC plan required in Part III.

The updated information must be submitted with a new NOI if the permittee proposes to expand or relocate disturbed area of one acre or more beyond what was indicated in the original NOI, or to

[7] See 38 M.R.S.A. § 347-C(in part).

change the waterbody to which the stormwater will be discharged. Information concerning other changes may be submitted in a letter.

If the owner or lessee of the land changes, the new owner or lessee must file an NOI if he or she wishes to continue coverage under this general permit. Materials submitted with an NOI by a prior owner or lessee may be referenced if they are still current. Exception: a lot buyer or subsequent transferee of a lot within a common plan of development or sale is not required to file an NOI unless he or she proposes a construction activity as defined in Part II(A).

J. Request to be excluded. A person may request that an activity be excluded from coverage under this general permit and apply for an individual waste discharge permit pursuant to the Department's rules. When an individual permit is issued to a person otherwise subject to this general permit, the applicability of this general permit to that person is automatically terminated on the effective date of the individual permit.

K. Effect of prior approvals.

1. Construction activity including one acre or more of disturbed area. This subsection applies for purposes of determining jurisdiction under the "one acre" threshold only.

a. Persons disturbing less than 5 acres. A person with on-going construction activity as of July 21, 2006, who received authorization to discharge under a prior MCGP(s) and whose activity includes less than 5 acres of disturbed area and, that have not submitted a NOT do not have to submit a new NOI to obtain coverage under this general permit and are authorized under this general permit provided that the activity meets the standards of this general permit.

b. Persons disturbing 5 or more acres. A person with on-going construction activity as of July 21, 2006, who received authorization to discharge for the activity under a prior MCGP(s) and have or will disturb five or more acres shall submit a new notice of intent (NOI) prior to or on October 20, 2006. The new NOI may reference information in prior NOI submissions to the extent it is still current.

2. Common plan of development or sale. This subsection applies for purposes of determining jurisdiction under the "common plan of development or sale" threshold only.

A common plan of development or sale (subdivision) is not required to meet the requirements of this general permit if it received approval from LURC or the municipality where it is located before March 10, 2003.

a. If a subdivision that received municipal or LURC approval prior to March 10, 2003, is modified on or after the effective date of this permit so as to add three or more subdivision lots as determined by LURC or the municipality, this general permit applies to those lots and their associated facilities as provided in Part III.

b. If a subdivision receives approval on or after March 10, 2003, then this general permit does not apply to lots transferred before March 10, 2003.

Note: A person subdividing land must still file an NOI if he or she will undertake construction activity on the parcel that includes one or more acres of disturbed area, as provided in Part III(A). Examples of such activity would be road or pad construction, or stripping and grading. A single NOI may be filed for both the common plan of development or sale and this disturbed area.

PART V -- Limitations on Coverage

A. Individual permit or other general permit. This general permit does not authorize a stormwater discharge associated with construction activity that requires an individual waste discharge permit or is required to obtain coverage under another waste discharge general permit. See Part VI(A) for information on related waste discharge permits.

The Department may require any person with a discharge authorized by this general permit to apply for and obtain an individual permit.[8] When the DEP notifies an applicant than an individual permit is required, no work may be begun or continued unless and until the individual permit is obtained. Any interested person may petition the Department to take action under this paragraph. Examples of when an individual waste discharge permit may be required are specified in rule.[9]

B. Compliance with this general permit. This general permit does not authorize a stormwater discharge that is not in compliance with the requirements of this general permit. If the Department determines that the standards of this general permit have not been met, the Department shall notify the person and may:

1. Authorize coverage under this general permit after appropriate controls and implementation procedures designed to bring the discharge into compliance with this general permit and water quality standards have been implemented as determined by the Department;

2. Require an individual waste discharge permit; or

3. Inform the person that the discharge is prohibited.

Compliance with this subparagraph does not preclude any enforcement activity under Maine law for an underlying violation.

C. Non-stormwater. This general permit does not authorize a discharge that is mixed with a source of non-stormwater, other than those discharges in compliance with Appendix C(6).

D. Total maximum daily load (TMDL). This general permit does not authorize a direct discharge that is inconsistent with any EPA approved TMDL for the waterbody to which the direct discharge drains as provided in Part III(C).

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

F. Violation of water quality standards. This general permit does not authorize a discharge that may cause or contribute to a violation of a water quality standard.

G. Related laws. This general permit does not authorize stormwater discharges that are not in conformance with the terms and conditions of permits issued under Site Location of, 38 M.R.S.A. §§ 481-490; Stormwater Management, 38 M.R.S.A. § 420-D; Natural Resources Protection, 38 M.R.S.A. §§ 480-A - 480-Z; or the Land Use Regulation Commission §§ 481 et. seq.. This general permit does not authorize stormwater discharges that are not in conformance with the Maine Erosion and Sedimentation Control Law, 38 M.R.S.A. § 420-C.

[8] See 06-096 CMR 529(2)(B)(3).
[9] 06-096 CMR 529(2)(b)(3)

H. Post-construction discharges. This general permit does not authorize stormwater discharges after the completion of permanent stabilization.

I. Metallic mineral mining or advanced exploration. This general permit does not authorize discharges from metallic mineral mining or advanced exploration. Stormwater and erosion and sedimentation standards related to construction are specified in the Site Location of Development permit and LURC permit and, if required, an individual waste discharge permit.

J. Exemptions. Certain exemptions apply and are specified in the Maine Waste Discharge Law. An exemption in a Maine law other than the Maine Waste Discharge Law, such as the Site Law or Maine Stormwater Management Law, does not create an exemption to the Maine Waste Discharge Law or the requirements of this general permit. Each law has its own set of statutory exemptions.

K. Reopener. This general permit may be modified or reopened as provided in 38 M.R.S.A. § 414-A(5).

Part VI -- Relationship to other programs

An activity may include "construction activity" and also be regulated under other programs.

A. Related waste discharge permits

1. **Multi-sector.** A stormwater discharge requiring approval as an industrial activity other than 06-096 CMR 521(b)(14)(x) is not authorized under this general permit.

2. **Waste discharge permit (surface water).** A waste discharge permit may be required for activities such as combined sewer overflows (CSOs), spray irrigation, process water treatment systems, metallic mine drainage, and other discharges inadequately covered by this general permit, as determined by the Department.

3. **Waste discharge permit (groundwater).** A waste discharge permit may be required for the discharge of stormwater through any well or wells, including drywells and subsurface fluid distribution systems. For complete requirements, see 06-096 CMR 543.

   A "subsurface fluid distribution system" is an assemblage of perforated pipes, drain tiles, or similar mechanisms intended to distribute fluids below the surface of the ground. A "well" is a bored, drilled, or driven shaft the depth of which is greater than the largest surface dimension, whether the shaft is typically dry or contains liquid; or a dug hole the depth of which is greater than the largest surface dimension; or a subsurface fluid distribution system. "Well injection" means the subsurface discharge of fluids into or through a well.

B. Quarry or an excavation for borrow, clay, topsoil, or silt. Clearing, grading or excavation activities conducted as part of the exploration and construction phase of a mineral mining operation must meet the requirements of this general permit, if they will result in the direct discharge of stormwater to waters of the state other than groundwater, will disturb one or more acres of land, and occur on or after March 10, 2003. These requirements do not apply to an area that is internally drained. Construction activity includes the building of site access roads and removal of overburden and waste rock to expose mineable materials. If the activity must meet the requirements of this general permit, the following exceptions apply.

1. **Stabilization deadlines.** The 14 day time limit for temporary stabilization in Appendix A(3), and the one-year time limit for permanent stabilization in Appendix A(5) do not apply.

2. **If under the Gravel Pit or Quarry Program -- may need to do an ESC plan.** If the clearing, grading, or excavation activity subject to this general permit is also required to meet the Performance Standards for Excavations for Borrow, Clay, Topsoil or Silt,[10] or Performance Standards for Quarries[11], then the operator does not have to meet the requirements specified in Part III of this general permit, except for the ESC plan requirements in Part III(A)(2).

In some cases, an area that is not internally drained initially may become internally drained during construction. For an area that has become internally drained, it is not necessary to undertake stabilization as otherwise required under this general permit before filing the NOT.

C. Other programs such as Site Law, Stormwater, and Waste. The Department may combine application requirements for this general permit and other programs administered by the Department. Other programs may include facilities and projects regulated pursuant to programs such as 38 M.R.S.A. § 1310-N (Solid waste facility licenses), 1319-R (facility siting), 1319-X (criteria for development of waste oil facilities and biomedical facilities), 38 M.R.S.A. § 483-A (Site Location), 38 M.R.S.A. 420-C (Stormwater Management), and 12 M.R.S.A. § 685-A (LURC). In case of a conflict between the standards in Appendix A, B, and C and those adopted pursuant to any of these laws, the stricter standard applies, as determined by the Department. The review period for the NOI may be extended as provided in Part IV(A)(1)(b). The Department may waive the fee required with the NOI pursuant to this general permit for certain combined applications. Completing a stormwater Permit By Rule notification meets the requirements of this general permit.

D. Silvicultural activities. Authorization under this general permit is not required for non-point silvicultural activities as provided in 06-096 CMR 521(10).

E. Maine Department of Transportation. Construction activities conducted by the Maine Department of Transportation (MDOT) or the Maine Turnpike Authority (MTA) pursuant to a Memorandum of Agreement between the Department, and MDOT and MTA, are authorized under this general permit within the limits of coverage specified in this general permit. MDOT and MTA are considered qualifying state programs as provided in 40 CFR 122.44(s).

PART VII -- Standard Conditions

A. General restrictions. A discharge covered by a General Permit may not:

1. Be to a body of water classified as Class GPA, AA, A or SA;[12]
2. Be to a body of water having a drainage area of less than 10 square miles;
3. Contain any pollutant, including toxic substances, in quantities or concentrations, which may cause or contribute to any adverse impact on the receiving water;

[10] 38 M.R.S.A. §§ 490-A et. seq.
[11] 38 M.R.S.A. §§ 490-W et. seq.
[12] This standard condition is required by 06-096 CMR 529(3), effective January 12, 2001. However, note that 38 M.R.S.A. 465-A(1)(C), 465(1)(C) allow discharge of stormwater to GPA, AA and SA waters if the discharge is in compliance with state and local requirements. For requirements applicable to discharges to Class A waters, see 38 MRSA 465(2)(C). The Department is proposing emergency legislation to allow certain stormwater discharges to Class A waters and to watersheds of less than 10 square miles. The statutory provisions control for purposes of this general permit.

4. Be to a receiving water which is not meeting its classification standard for any characteristic which may be affected by the discharge; or

5. Impart color, taste, turbidity, radioactivity, settleable materials, floating substances or other properties that cause the receiving water to be unsuitable for the designated uses ascribed to its classification.

B. Removed substances. Pollutants removed or resulting from the treatment of wastewaters must be disposed of in a manner approved by the Department.

C. Monitoring requirement. The Department may require monitoring of an individual discharge as may be reasonably necessary in order to characterize the nature, volume or other attributes of that discharge or its sources.

D. Other information. When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report to the Department, he or she shall promptly submit such facts or information.

E. Other applicable conditions. The conditions in 06-096 CMR 523(2) also apply to discharges pursuant to this general permit[13] and are incorporated herein as if fully set forth. These conditions address areas such as: duty to comply; need to reduce or halt activity not a defense; duty to mitigate; permit actions; property rights; duty to provide information; and inspection and entry.

F. Duty to reapply. If the permittee wishes to continue an activity regulated by this general permit after the expiration date of this general permit, the permittee must apply for and obtain a new permit.

G. Severability. The conditions of this general permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

[13] See 06-096 CMR 529(3)(i).

APPENDICES -- BASIC PERFORMANCE STANDARDS

APPENDIX A. Erosion and sedimentation control

A person who conducts, or causes to be conducted, an activity that involves filling, displacing or exposing soil or other earthen materials shall take measures to prevent unreasonable erosion of soil or sediment beyond the project site or into a protected natural resource as defined in 38 MRSA § 480-B. Erosion control measures must be in place before the activity begins. Measures must remain in place and functional until the site is permanently stabilized. Adequate and timely temporary and permanent stabilization measures must be taken.

NOTE: The site must be maintained to prevent unreasonable erosion and sedimentation. See 38 M.R.S.A § 420-C (in part). A license is required for any stormwater discharge that the department "determines to contribute to a violation of a water quality standard or is a significant contributor of pollutants to waters of the State". 06-096 CMR 521(9)(a)(1)(v)(in part).

(1) Pollution prevention. Minimize disturbed areas and protect natural downgradient buffer areas to the extent practicable. The discharge may not result in erosion of any open drainage channels, swales, upland, or coastal or freshwater wetlands.

Note: Buffers improve water quality by helping to filter pollutants in run-off both during and after construction. Minimizing disturbed areas through phasing limits the amount of exposed soil on the site through retention of natural cover and by retiring areas as permanently stabilized. Less exposed soil results in fewer erosion controls to install and maintain. If work within an area is not anticipated to begin within two weeks time, consider leaving the area in its naturally existing cover.

(2) Sediment barriers. Prior to construction, properly install sediment barriers at the edge of any downgradient disturbed area and adjacent to any drainage channels within the disturbed area. Maintain the sediment barriers until the disturbed area is permanently stabilized.

(3) Temporary stabilization. Stabilize with mulch, or other non-erodable cover any exposed soils that will not be worked for more than 7 days. Stabilize areas within 75 feet of a wetland or waterbody within 48 hours of the initial disturbance of the soil or prior to any storm event, whichever comes first.

NOTE: For guidance on erosion and sedimentation controls, consult *the Maine Erosion and Sediment Control Handbook for Construction -- Best Management Practices* or *the Maine Erosion and Sedimentation Control Best Management Practices*.

(4) Removal of temporary measures. Remove any temporary control measures, such as silt fence, within 30 days after permanent stabilization is attained. Remove any accumulated sediments and stabilize.

NOTE: It is recommended that silt fence be removed by cutting the fence materials at ground level so as to avoid additional soil disturbance.

(5) Permanent stabilization. If the area will not be worked for more than one year or has been brought to final grade, then permanently stabilize the area within 7 days by planting vegetation, seeding, sod, or through the use of permanent mulch, or riprap, or road sub-base. If using vegetation for stabilization, select the proper vegetation for the light, moisture, and soil conditions; amend areas of disturbed subsoils with topsoil, compost, or fertilizers; protect seeded areas with mulch or, if necessary, erosion control blankets; and schedule sodding, planting, and seeding so to avoid die-off from summer drought and fall frosts. Newly seeded or sodded areas must be protected from vehicle traffic, excessive pedestrian traffic, and concentrated runoff until the vegetation is well-established. If necessary, areas must be reworked and restabilized if germination is sparse, plant coverage is spotty, or topsoil erosion is evident. One or more of the following may apply to a particular site.

(a) Seeded areas. For seeded areas, permanent stabilization means a 90% cover of the disturbed area with mature, healthy plants with no evidence of washing or rilling of the topsoil.

(b) Sodded areas. For sodded areas, permanent stabilization means the complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.

(c) Permanent Mulch. For mulched areas, permanent mulching means total coverage of the exposed area with an approved mulch material. Erosion Control Mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.

(d) Riprap. For areas stabilized with riprap, permanent stabilization means that slopes stabilized with riprap have an appropriate backing of a well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Stone must be sized appropriately. It is recommended that angular stone be used.

(e) Agricultural use. For construction projects on land used for agricultural purposes (e.g., pipelines across crop land), permanent stabilization may be accomplished by returning the disturbed land to agricultural use.

(f) Paved areas. For paved areas, permanent stabilization means the placement of the compacted gravel subbase is completed.

(g) Ditches, channels, and swales. For open channels, permanent stabilization means the channel is stabilized with mature vegetation at least three inches in height, with well-graded riprap lining, or with another non-erosive lining capable of withstanding the anticipated flow velocities and flow depths without reliance on check dams to slow flow. There must be no evidence of slumping of the lining, undercutting of the banks, or down-cutting of the channel.

(6) Winter Construction. "Winter construction" is construction activity performed during the period from November 1 through April 15. If areas within the construction activity are not stabilized with temporary or permanent measures outlined above by November 15, then the site must be protected with additional stabilization measures that are specific to winter conditions. No more than one acre of the site may be without stabilization at one time.

(a) Site Stabilization. For winter stabilization, hay mulch is applied at twice the standard temporary stabilization rate. At the end of each construction day, areas that have been brought to final grade must be stabilized. Mulch may not be spread on top of snow.

(b) Sediment Barriers. All areas within 75 feet of a protected natural resource must be protected with a double row of sediment barriers.

(c) Ditch. All vegetated ditch lines that have not been stabilized by November 1, or will be worked during the winter construction period, must be stabilized with an appropriate stone lining backed by an appropriate gravel bed or geotextile unless specifically released from this standard by the department.

(d) Slopes. Mulch netting must be used to anchor mulch on all slopes greater than 8% unless erosion control blankets or erosion control mix is being used on these slopes.

NOTE: For guidance on winter construction standards, see the "Maine Erosion and Sediment Control BMPs", Maine Department of Environmental Protection.

(7) Stormwater channels. Ditches, swales, and other open stormwater channels must be designed, constructed, and stabilized using measures that achieve long-term erosion control. Ditches, swales and other open stormwater channels must be sized to handle, at a minimum, the expected volume run-off. Each channel should be constructed in sections so that the section's grading, shaping, and installation of the permanent lining can be completed the same day. If the channel's final grading or lining installation must be delayed, then diversion berms must be used to divert stormwater away from the channel, properly-spaced check dams must be installed in the channel to slow the water velocity, and a temporary lining installed along the channel to prevent scouring. Permanent stabilization for channels is addressed under Appendix A(5)(g) above.

NOTE: (1) The channel should receive adequate routine maintenance to maintain capacity and prevent or correct any erosion of the channel's bottom or side slopes. (2) When the watershed draining to a ditch or swale is less than 1 acre of total drainage and less than ¼ acre of impervious area, diversion of runoff to adjacent wooded or otherwise vegetated buffer areas is encouraged where the opportunity exists.

(8) Roads. Gravel and paved roads must be designed and constructed with crowns or other measures, such as water bars, to ensure that stormwater is delivered immediately to adjacent stable ditches, vegetated buffer areas, catch basin inlets, or street gutters.

NOTE: (1) Gravel and paved roads should be maintained so that they continue to conform to this standard in order to prevent erosion problems. (2) The department recommends that impervious surfaces, including roads, be designed and constructed so that stormwater is distributed in sheet flow to natural vegetated buffer areas wherever such areas are available. Road ditches should be designed so that stormwater is frequently (at least every 100 to 200 feet) discharged via ditch turnouts in sheet flow to adjacent natural buffer areas wherever possible.

(9) Culverts. Culverts must be sized to avoid unintended flooding of upstream areas or frequent overtopping of roadways. Culvert inlets must be protected with appropriate materials for the

expected entrance velocity, and protection must extend at least as high as the expected maximum elevation of storage behind the culvert. Culvert outlet design must incorporate measures, such as aprons or plunge pools, to prevent scour of the stream channel. Outlet protection measures must be designed to stay within the channel limits. The design must take account of tailwater depth.

(10) Parking areas. Parking areas must be constructed to ensure runoff is delivered to adjacent swales, catch basins, curb gutters, or buffer areas without eroding areas downslope. The parking area's subbase compaction and grading must be done to ensure runoff is evenly distributed to adjacent buffers or side slopes. Catch basins must be located and set to provide enough storage depth at the inlet so to allow inflow of peak runoff rates without by-pass of runoff to other areas.

(11) Additional requirements. Additional requirements may be applied on a site-specific basis**.**

APPENDIX B. Inspection and maintenance

(1) Inspection and maintenance. Inspect disturbed and impervious areas, and erosion and stormwater control measures, areas used for storage that are exposed to precipitation, and locations where vehicles enter or exit the site. Inspect these areas at least once a week as well as and before and after a storm event, and prior to completion of permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards in this permit and any departmental companion document to this permit, must conduct the inspection. This person must be identified in the inspection log. If best management practices (BMPs) need to be modified or if additional BMPs are necessary, implementation must be completed within 7 calendar days and prior to any storm event (rainfall). All measures must be maintained in effective operating condition until areas are permanently stabilized.

(2) Inspection log (report). A log (report) must be kept summarizing the scope of the inspection, name(s) and qualifications of the personnel making the inspection, the date(s) of the inspection, and major observations relating to operation of erosion and sedimentation controls and pollution prevention measures. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to department staff and a copy must be provided upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

APPENDIX C. Housekeeping

These performance standards apply to all sites.

(1) Spill prevention. Controls must be used to prevent pollutants from construction and waste materials stored on-site, including storage practices to minimize exposure of the materials to

stormwater, and appropriate spill prevention, containment, and response planning and implementation.

(2) Groundwater protection. During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater may not be stored or handled in areas of the site draining to an infiltration area. An "infiltration area" is any area of the site that by design or as a result of soils, topography and other relevant factors accumulates runoff that infiltrates into the soil. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.

NOTE: Lack of appropriate pollutant removal best management practices (BMPs) may result in violations of the groundwater quality standard established by 38 M.R.S.A. §465-C(1). Any project proposing infiltration of stormwater must provide adequate pre-treatment of stormwater prior to discharge of stormwater to the infiltration area, or provide for treatment within the infiltration area, in order to prevent the accumulation of fines, reduction in infiltration rate, and consequent flooding and destabilization.

(3) Fugitive sediment and dust. Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil may not be used for dust control.

Examples of BMPS -- Operations during wet months, that experience tracking of mud off the construction site onto public roads, should provide for sweeping of road areas at least once a week and prior to significant storm events. Where chronic mud tracking occurs, a stabilized construction entrance should be provided. Operations during dry months, that experience fugitive dust problems, should wet down the access roads once a week or more frequently if needed.

NOTE: Dewatering a stream without a permit from the department violates state water quality standards and the Natural Resources Protection Act.

(4) Debris and other materials. Litter, construction debris, and construction chemicals exposed to stormwater must be prevented from becoming a pollutant source.

NOTE: To prevent these materials from becoming a source of pollutants, construction activities related to a project may be required to comply with applicable provision of rules related to solid, universal, and hazardous waste, including, but not limited to, the Maine solid waste and hazardous waste management rules; Maine hazardous waste management rules; Maine oil conveyance and storage rules; and Maine pesticide requirements.

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(5) Trench or foundation de-watering. Trench de-watering is the removal of water from trenches, foundations, coffer dams, ponds, and other areas within the construction area that retain water after excavation. In most cases the collected water is heavily silted and hinders correct and safe construction practices. The collected water removed from the ponded area, either through gravity or pumping, must be spread through natural wooded buffers or removed to areas that are specifically designed to collect the maximum amount of sediment possible, like a cofferdam sedimentation basin. Avoid allowing the water to flow over disturbed areas of the site.

NOTE: For guidance on de-watering controls, consult the Maine Erosion and Sediment Control BMPs", Maine Department of Environmental Protection."

(6) Non-stormwater discharges. Identify and prevent contamination by non-stormwater discharges. Where allowed non-stormwater discharges exist, they must be identified and steps should be taken to ensure the implementation of appropriate pollution prevention measures for the non-stormwater component(s) of the discharge. Authorized non-stormwater discharges are:

(i) Discharges from firefighting activity;
(ii) Fire hydrant flushings;[1]
(iii) Vehicle washwater if detergents are not used and washing is limited to the exterior of vehicles (engine, undercarraige and transmission washing is prohibited);
(iv) Dust control runoff in accordance with permit conditions and Appendix (C)(3);
(v) Routine external building washdown, not including surface paint removal, that does not involve detergents;
(vi) Pavement washwater (where spills/leaks of toxic or hazardous materials have not occurred, unless all spilled material had been removed) if detergents are not used;
(vii) Uncontaminated air conditioning or compressor condensate;
(viii) Uncontaminated groundwater or spring water;
(ix) Foundation or footer drain-water where flows are not contaminated; and
(x) Uncontaminated excavation dewatering (see requirements in Appendix C(5)).
(vi) Potable water sources including waterline flushings.[2]

Allowable non-stormwater discharges cannot be authorized under this permit unless they are directly related to and originate from a construction site or dedicated support activity (e.g., a pressure washing company cannot broadly use this general permit for their business operations, because general vehicle washing is not associated with a construction site). It is not necessary to list these sources of non-stormwater in the NOI.

[1] This non-stormwater discharge is authorized under this general permit until the Department issues a separate general permit containing requirements specific to this type of discharge, which would replace this authorization.
[2] See previous footnote.

APPENDIX E - Permit Application and NOT Forms

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STATE OF MAINE

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Stormwater Management Law

38 M.R.S.A. § 420-D

STORMWATER
PERMIT BY RULE (PBR) APPLICATION

Bureau of Land Resources

Rev. February, 2022

Table of Contents

Section 1. Information Concerning the Application Process

A. When a project qualifies for a stormwater PBR. A project qualifies for a stormwater PBR if it results in one or more acres of disturbed area and the following:

(1) Less than 20,000 square feet of impervious area and 5 acres of developed area in the direct watershed of a lake most at risk or urban impaired stream; and

(2) Less than one acre of impervious and five acres of developed area in any other watershed.

B. When a project <u>does not</u> qualify for a stormwater PBR. A project does not qualify for a PBR when it takes place on a parcel subject to a Site Location of Development Act permit or an individual permit under the Stormwater Management Law.

C. Notification. An applicant must file notice of the project with the department prior to beginning work on the project. The applicant shall use the notification form (Section 2) provided by the department and must include the required submissions (Section 3). The applicant must keep a copy to serve as the permit. The Department is now requiring the submission of stormwater PBR notifications electronically. Instructions on how to file applications electronically: https://www.maine.gov/dep/land/permits/pbr/index.html.
Email the completed form with attachments to DEP.PBRNotification@maine.gov

The stormwater PBR becomes effective 14 calendar days after the department receives the notification form, unless the department approves the notification or finds the notification deficient prior to that date. Within this 14 day period, the department may notify the applicant in writing or through verbal communication that the project is ineligible for stormwater PBR or that additional information or further review is needed. If the department does not inform the applicant that the notification is unacceptable within the 14-day period, the notification is deemed accepted by the department.

By signing the notification form, the applicant is representing that the activity will meet the applicability requirements and standards of the rule. In addition, by signing the notification form the applicant represents that the applicant has sufficient title, right, or interest in the property where the proposed activity is to take place.

D. Essential habitat. Essential habitats include areas critical to the survival of threatened and endangered species such as the bald eagle, least tern, roseate tern, and piping plover. If the activity is located in essential habitat, such as near an eagle nesting site, a PBR is only available if the applicant obtains written approval from the Department of Inland Fisheries and Wildlife (IF&W). This approval from IF&W must be submitted to the DEP with the PBR notification form, and the applicant must follow any conditions stated in the IF&W approval.

NOTE: Maps showing areas of essential habitat are available from the Department of Inland Fisheries and Wildlife regional headquarters, municipal offices, the Land Use Planning Commission (for unorganized territories) and DEP regional offices. If the activity is located in essential habitat, IF&W must be contacted to request and obtain a "certification of review and approval."

E. Where to send your PBR application. Email the completed form with attachments to DEP.PBRNotification@maine.gov.

F. Assistance and materials. Questions concerning your project's eligibility or application requirements should be directed to the Division of Land Resource Regulation at any of the Department's regional offices. The following list includes other materials that may also be helpful.

Maine Erosion and Sediment Control Handbook: Best Management Practices (October 2016). Available from the Nonpoint Source Training and Resource Center at the DEP office in Augusta (215-9237) online at: http://www.maine.gov/dep/land/erosion/escbmps/index.html

Stormwater Management for Maine: Best Management Practices (March 2016). The Nonpoint Source Training and Resource Center, at the DEP office in Augusta (215-9237) available online at: http://www.maine.gov/dep/land/stormwater/stormwaterbmps/

Stormwater Management Law, 38 M.R.S.A. § 420-D. Available from any DEP office or on the DEP's web site at: http://www.mainelegislature.org/legis/statutes/38/title38sec420-D.html

Stormwater Management Rules, Chapters 500 and 502. Available from any DEP office. Links to the stormwater rules and other information can be found at: https://www.maine.gov/sos/cec/rules/06/096/096c500.docx

General Permit – Construction Activity, Maine Pollutant Discharge Elimination system (MPDES) with Basic Performance Standards Appendices. Also on the web at: http://www.maine.gov/dep/land/stormwater/construction.html

G. Fees. Pay the application fee by credit card at the **Payment Portal**. The *stormwater PBR* fee is set in the Department's fee schedule, available at: https://www.maine.gov/dep/feeschedule.pdf.

H. Appeal and Failure to Comply. The denial of a PBR by the Department is not a final agency action and is therefore not able to be appealed. Persons aggrieved by an approval of a PBR may appeal the decision within 30 days following final action. Failure to comply with PBR standards may lead to action by department enforcement staff, including fines and revocation of the permit.

I. Permit Renewals. An individual permit issued under the Stormwater Management Law may be extended one time using a Stormwater PBR, provided that the approved project has not begun and the permit has not expired. If a Stormwater PBR needs to be extended, the applicant may file a revised Stormwater PBR notification form for a one-time extension.

J. Approval of variations from plans. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents must be reviewed and approved by the department prior to implementation. Any variation undertaken without approval of the department is in violation of 38 M.R.S. §420-D(8) and is subject to penalties under 38 M.R.S. **§349.**

K. Meeting Maine Construction General Permit (MCGP) requirements. The DEP has made it possible to also meet the requirements of the MCGP when filing for a stormwater PBR. To do so, a separate signature block, stating a Notice of Intent, included in this packet, must be signed. By signing, you agree to meet the MCGP standards and must file a Notice of Termination (NOT) within 20 days of completing permanent stabilization of the project site. A NOT form is included in this packet (Appendix A) and there is no fee for filing one.

L. Discretionary Authority. Notwithstanding compliance with the PBR requirements and standards contained in this document and in Chapter 500, the department may require an individual stormwater permit application to be obtained in any case where the department determines that the activity:

(1) May violate the standards of the Stormwater Management Law;
(2) Could lead to significant environmental impacts, including cumulative impacts; or
(3) Could have an unreasonable adverse impact on a protected natural resource.

Section 2. Application Form Instructions

Most of the information requested on the application form is self-explanatory. However, guidance on filling out some requested information on the form is included below.

Blocks 1 through **4. "**Applicant" refers to the name of the landowner or the entity that has title, right or legal interest in the property. If the applicant is an agency, company, corporation, or other organization, please include the organization's name and the name of a staff person that can be contacted about the application.

Blocks 5 through **8.** An "agent" is someone who represents the applicant. If the applicant chooses to have an agent, please provide the name of the person chosen and a letter of authorization from the applicant. The agent may be a consultant, contractor, engineer, or other person willing to provide assistance. If the DEP has any questions about the application, the agent will be contacted first. The applicant will always be sent a copy of any letters written about the activity. If an agent is not being retained, do not fill in Blocks 5, 6, 7, and 8.

Block 9. Location of project. Write in the street address of the project or the name of the nearest road, street, or route number.

Blocks 10 and **11. Town and County.** Write in the name of the town or city and county where the project site is located.

Block 12. Renewal of an individual Stormwater permit or stormwater PBR and/or transfer of a stormwater PBR. Indicate whether or not that this application is for renewal of an individual stormwater permit, or stormwater PBR and/or the transfer of a stormwater PBR..

Block 13. Type of direct watershed. Check the box next to the type of watershed the project is located in. If more than one watershed is affected, please check all that apply. The Department and some municipal offices can help you with this information.

Block 14. Amount of developed area. Write in the amount of developed area in square feet or acres that will be created by the project. The definition of "developed area" is found in an appendix to this application pamphlet.

Block 15. Amount of impervious area. Write in the amount of impervious area in square feet or acres that will be created by the project. The definition of "impervious area" is found in an appendix to this application pamphlet.

Block 16. Amount of occupied area. Indicate the amount of oocupied area.

Block 17. Part of Subdivision. Indicate whether the project is a subdivision as defined by the Land Use Planning Commission (LUPC), or determined by the municipality in which the project is located.

Block 18. Is the activity part of a larger project? Indicate "yes" or "no."

Block 19. Identify the waterbody or waterbodies to which the project site area drains. If your project area drains to a named waterbody, please identify it.

Block 20. **If the site drains to an Impaired Waterbody (C), identify waterbody**.

Block 21. Brief project description. In several sentences, describe the project.

Block 22. Size of lot or parcel and UTM locations, if known. Indicate the total area of the parcel on which the project is located in either square feet or acres.

Block 23. Deed Reference Numbers. Deed reference numbers showing book and page may be obtained at the Registry of Deeds in the County where the project is located or from tax records at the town office.

Block 24. Tax Map # and Tax Lot #. This information may be obtained from the local tax bill, tax assessor or town office in the town where the project is located.

Block 25. DEP staff previously contacted. Write the name of any staff person you may have consulted with regarding your project.

Block 26. Project started prior to application? Check yes or no regarding whether any part of the project, including land clearing has been started before the application was submitted to the department. Is this application being submitted after the project was completed ("After the Fact")? Check yes or no. [Note: After-the-fact projects are subject to double application fees.]

Block 27. Resubmission of PBR application? If an application was previously submitted to the DEP for this project, and was then either withdrawn by the applicant or returned as deficient by the DEP, check yes. Enter the prior DEP application number (e-g.#00000) and the name of the project manager you were assigned.

Block 28. Written Notice of Violation. If you have received a written notice of violation from the DEP for all or part of this project, check yes. If you checked yes, write in the name of the staff person as identified on the notice of violation.

Block 29. Detailed directions to the project site. Provide detailed directions to the project site from a known location or landmark so that a site visit may be made, if necessary. Include highway and street numbers as well as names. Also provide distances from known locations or landmarks and any other information that may be helpful in locating the site.

Block 30A. Submissions for New stormwater PBR. This block outlines what attachments to the application form are required. This is a summary of application requirements.

Block 30B. Submissions for renewal of an individual stormwater permit or PBR and/or transfer of a stormwater PBR. This block outlines what attachments to the application form are required. This is a summary of application requirements.

STORMWATER PBR APPLICATION FORM

[1] **Name of Applicant:**	[5] **Name of Agent:**
[2] **Applicant's Mailing Address:**	[6] **Agent's Mailing Address:**
[3] **Applicant's Daytime Phone:**	[7] **Agent's Daytime Phone:**
[4] **Applicant's Email Address:**	[8] **Agent's Email Address:**

[9] **Location of Project: (Road, Street, Rt.)**	[10] **Location Town:**	[11] **Location County:**

[12] **Is this PBR for renewal of an individual Stormwater permit or Stormwater Permit-by-Rule?** ❑ Yes ❑ No

Is this PBR for transfer of a Stormwater Permit-by-Rule? ❑ Yes ❑ No

If Yes, DEP Permit Number: _____ **Prior Project Manager (if known):** _____

NOTE: If either box is checked Yes, skip to Box 30B below.

[13] **Type of Direct Watershed: (Check all that apply.)** ❑ Lake not most at risk ❑ Lake most at risk ❑ Lake most at risk, severely blooming ❑ River, stream or brook ❑ Urban impaired stream ❑ Freshwater wetland ❑ Coastal wetland ❑ Wellhead of public water supply	[14] **Amount of Developed Area:** Total _____acres **OR** Total_____SF [15] **Amount of Impervious Area:** Total _____acres **OR** Total_____SF [16] **Amount of Occupied Area:** Total _____acres

[17] **Part of a Subdivision?** ❑ Yes ❑ No	[18] **Is this Activity Part of a Larger Project?** ❑ Yes ❑ No
[19] **Name of Waterbody(ies) Drained to:**	[20] **Name of Impaired Waterbody (if applicable)**
[21] **Brief Project Description:**	

[22] **Size of Lot or Parcel:** Total _____acres **OR** Total_____SF	**UTM Northing, if known:**	**UTM Easting, if known:**
[23] **Deed Reference Numbers:** Book: Page:	[24] **Map and Lot Numbers:** Map:	Lot:
[25] **DEP Staff Previously Contacted:**	[26] **Project started prior to Application?** ❑ Yes ❑ No	**If yes, Completed?** ❑ Yes ❑ No

[27] **Resubmission of PBR Application?** ❑ No ❑ Yes➔	**If Yes, Prior Application Number:**	**Prior Project Manager**:
[28] **Written Notice of Violation?** ❑ No ❑ Yes➔	**If Yes, Name of DEP Enforcement Staff Involved:**	
[29] **Detailed Directions to the Project Site:**		

SUBMISSIONS

[30A] **For a new Stormwater PBR:** ❒ This Form (signed and dated) ❒ Fee ❒ Dept. of Inland Fisheries & Wildlife Approval (if in Essential Habitat) ❒ Photos of Area ❒ ESC Plan ❒ Location Map ❒ Site Plan	[30B] **For renewal of an individual Stormwater permit or Stormwater PBR and/or transfer of a Stormwater PBR:** ❒ This Form (signed and dated) ❒ Copy of original Stormwater permit or PBR ❒ Fee ❒ For a transfer: A copy of the deed, lease, purchase option or other evidence of applicant's title, right or interest in project site, and proof of legal name if the applicant is a corporation or other legal entity.

FEE: Pay by credit card at the Payment Portal. The SW Permit-by-Rule fee may be found here: https://www.maine.gov/dep/feeschedule.pdf.

❑ **Attach payment confirmation from the Payment Portal when filing this notification form.**

STORMWATER PBR APPLICATION FORM

CERTIFICATION / SIGNATURE for NEW STORMWATER PBR or RENEWAL

Applicant Statement:

I am applying for a Stormwater PBR or permit renewal and have attached the required submissions. I have read the requirements and I affirm that my project satisfies the applicable stormwater management standards. I authorize staff of State and Federal agencies having jurisdiction over this activity to access the project site for the purpose of determining compliance with the rules.

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Signature (may be typed):_____ Title:_____ Date:_____

Print or Type Name: _____

CERTIFICATION / SIGNATURES for TRANSFER of a STORMWATER PBR

Current Permittee Statement: By signing below, the current permittee certifies that they agree to the transfer of the Stormwater PBR identified on this application form to the applicant named on this form.

Signature (may be typed):_____ Title:_____ Date:_____

Print or Type Name: _____

Applicant Statement: By signing below the applicant certifies that they have received, read, and understand and will comply with the Stormwater PBR being transferred.

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Signature (may be typed):_____ Title:_____ Date:_____

Print or Type Name: _____

NOTICE OF INTENT TO COMPLY with the MAINE CONSTRUCTION GENERAL PERMIT (Must be Completed by All Applicants)

Applicant Statement: With this Stormwater PBR form and my signature below, I am filing notice of my intent to carry out work that meets the requirements of the Maine Construction General Permit (MCGP). I have read and will comply with all of the MCGP standards. In addition, I will file a Notice of Termination (NOT) within 20 days of project completion.

If this form is not being signed by the landowner or lessee of the property, attach documentation showing authorization to sign. *If typing your signature below, you are agreeing to and acknowledging the above information is true.*

Signature (may be typed):_____ Title:_____ Date:_____

Print or Type Name: _____

Section 3. Stormwater PBR Submissions.

Submissions. Applicants for a stormwater PBR, **renewal of an individual Stormwater permit or stormwater PBR and/or transfer of a stormwater PBR** must submit the notification form, fee and other information for the Department's review and approval. This information includes a location map, site plan, erosion and sedimentation control plan, and photographs of the area to be developed. Also, if the project is located in Essential Habitat, approval from the Maine Department of Inland Fisheries and Wildlife will need to be submitted. Specific submission requirements are described below. For a transfer: A copy of the deed, lease, purchase option or other evidence of applicant's title, right or interest in project site, and proof of legal name if the applicant is a corporation or other legal entity.

1. **Plan preparation.** An erosion and sedimentation control plan accompanying a stormwater PBR must be designed by a professional who is registered, licensed, or certified in a related land-use field, or by education, training, or experience is knowledgeable in erosion and sedimentation control, or has received specific training in erosion and sedimentation control at a department-sponsored erosion and sedimentation control workshop.

   NOTE: An applicant may use erosion and sedimentation control BMPs described in the "Citizen's Guide to Best Management Practices for Use with Maine Construction General Permit" or in "Maine Erosion and Sediment Control BMPs," Maine Department of Environmental Protection.

2. **Location map.** The Notification form must be accompanied by a photocopy of a portion of a 7.5 minute USGS topographic map or a DeLorme Atlas map showing the site's location and approximate property boundaries, if the size of the parcel and scale of the map allows it. A USGS topographic map can be useful for showing the general contour and topography of the project site.

3. **Site plan.** Submit a scaled plan showing, at a minimum, the locations of structures and roads, the extent of disturbed land, pre-construction site topography, post-construction site topography, on-site and adjacent surface waterbodies, and all erosion and sedimentation control measures to be used on the site. Such measures include, but are not limited to, sedimentation barriers, ditch lining, rip rap, and culvert inlet and outlet designs.

   An applicant may substitute the following information for surveyed pre-development and post-development site topography on the location plans:

   a. the locations of high points on the site,
   b. the locations of any ponds or other runoff storage depressions on the site,
   c. the locations and flow direction of any drainage ditches, brooks, or streams,
   d. the locations of any catch basin inlets or culvert inlets, and
   e. arrows showing the general direction(s) of overland drainage for the site.

4. **Erosion and Sedimentation Control plan.** In addition to a site plan, an erosion control plan must be included which contains, at a minimum, permanent stabilization measures to be taken (e.g. paving or planting vegetation), installation details of the erosion control measures proposed to be used, seeding and mulching rates, and a construction schedule with the proposed construction dates and timeframe for major earth moving and construction events. See Section 4A of this packet for expanded and more detailed guidance on erosion and sedimentation control plans. **This plan and its details may be included on the site plan instead of being a separate submission.**

NOTE: A person who conducts, or causes to be conducted, an activity that involves filling, displacing or exposing soil or other earthen materials shall take measures to prevent unreasonable erosion of soil or sediment beyond the project site or into a protected natural resource as defined in 38 M.R.S. § 480-B.

Sediment control measures must be in place before the activity begins. Measures must remain in place and functional until the site is permanently stabilized. Adequate and timely temporary and permanent stabilization measures must be taken. The site must be maintained to prevent unreasonable erosion and sedimentation. See 38 M.R.S. § 420-C (in part). Other or additional standards may apply, under the Natural Resources Protection Act, to a project located in or adjacent to a protected natural resource.

5. **Photos.** Provide photographs of the project site that show the existing character and topography of the area proposed for development.

6. **Certificate of Good Standing**. If new applicant is a registered corporation, provide either a *Certificate of Good Standing* (available from Secretary of State) or a statement signed by a corporate officer affirming that the corporation is in good standing.

Section 4. Stormwater PBR Standards

A. ***IN ACCORDANCE WITH THE EROSION AND SEDIMENTATION CONTROL PERFORMANCE STANDARDS REQUIRED BY CHAPTER 500, ALL PROJECTS MUST COMPLY WITH THE FOLLOWING STANDARDS, AT A MINIMUM:***

1. **Pollution prevention.** Minimize disturbed areas and protect natural downgradient buffer areas to the extent practicable. The discharge may not result in erosion of any open drainage channels, swales, upland, or coastal or freshwater wetlands.

   NOTE: Buffers improve water quality by helping to filter pollutants in run-off both during and after construction. Minimizing disturbed areas through phasing limits the amount of exposed soil on the site through retention of natural cover and by retiring areas as permanently stabilized. Less exposed soil results in fewer erosion controls to install and maintain. If work within an area is not anticipated to begin within two weeks time, consider leaving the area in its naturally existing cover.

2. **Sediment barriers.** Prior to construction, properly install sediment barriers at the edge of any down-gradient disturbed area and adjacent to any drainage channels within the disturbed area. Maintain the sediment barriers until the disturbed area is permanently stabilized.

3. **Temporary stabilization.** Stabilize with mulch or other non-erodable cover any exposed soils that will not be worked for more than 7 days. Stabilize areas within 75 feet of a wetland or waterbody within 48 hours of the initial disturbance of the soil or prior to any storm event, whichever comes first.

4. **Removal of temporary sediment control measures.** Remove any temporary sediment control measures, such as silt fence, within 30 days after permanent stabilization is attained. Remove any accumulated sediments and stabilize.

   NOTE: It is recommended that silt fence be removed by cutting the fence materials at ground level to avoid additional soil disturbance.

5. **Permanent stabilization.** If the area will not be worked for more than one year or has been brought to final grade, then permanently stabilize the area within 7 days by planting vegetation, seeding, sod, or through the use of permanent mulch, or riprap, or road sub-base. If using vegetation for stabilization, select the proper vegetation for the light, soil and moisture conditions; amend areas of disturbed subsoils with topsoil, compost, or fertilizers; protect seeded areas with mulch or, if necessary, erosion control blankets; and schedule sodding, planting, and seeding to avoid die-off from summer drought and fall frosts. Newly seeded or sodded areas must be protected from vehicle traffic,

excessive pedestrian traffic, and concentrated runoff until the vegetation is well-established. If necessary, areas must be seeded and mulched again if germination is sparse, plant coverage is spotty, or topsoil erosion is evident. One or more of the following may apply to a particular site.

(a) Seeded areas. For seeded areas, permanent stabilization means a 90% cover of healthy plants with no evidence of washing or rilling of the topsoil.

(b) Sodded areas. For sodded areas, permanent stabilization means the complete binding of the sod roots into the underlying soil with no slumping of the sod or die-off.

(c) Permanent Mulch. For mulched areas, permanent mulching means total coverage of the exposed area with an approved mulch material. Erosion control mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.

(d) Riprap. For areas stabilized with riprap, permanent stabilization means that slopes stabilized with riprap have an appropriate backing of a well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Stone must be sized appropriately. It is recommended that angular stone be used.

(e) Agricultural use. For construction projects on land used for agricultural purposes (e.g., pipelines across crop land), permanent stabilization may be accomplished by returning the disturbed land to agricultural use.

(f) Paved areas. For paved areas, permanent stabilization means the placement of the compacted gravel subbase is completed.

(g) Ditches, channels, and swales. For open channels, permanent stabilization means the channel is stabilized with a 90% cover of healthy vegetation, with a well-graded riprap lining, or with another non-erosive lining such as concrete or asphalt pavement. There must be no evidence of slumping of the channel lining, undercutting of the channel banks, or down-cutting of the channel.

6. Winter construction. "Winter construction" is construction activity performed during the period from November 1 through April 15. If disturbed areas are not stabilized with permanent measures by November 1 or new soil disturbance occurs after November 1, but before April 15, then these areas must be protected and runoff from them must be controlled by additional measures and restrictions.

NOTE:. For guidance, see "Maine Erosion and Sediment Control Handbook: Best Management Practices (October 2016)."

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7. Stormwater channels. Ditches, swales, and other open stormwater channels must be designed, constructed, and stabilized using measures that achieve long-term erosion control. Ditches, swales, and other open stormwater channels must be designed to handle, at a minimum, the expected volume of run-off. Each channel should be constructed in sections so that the section's grading, shaping, and installation of the permanent lining can be completed the same day. If a channel's final grading or lining installation must be delayed, then diversion berms must be used to divert stormwater away from the channel, properly-spaced check dams must be installed in the channel to slow the water velocity, and a temporary lining installed along the channel to prevent scouring. Permanent stabilization of channels is addressed under Appendix A(5)(g) above.

8. **Roads.** Gravel and paved roads must be designed and constructed with crowns or other measures, such as water bars, to ensure that stormwater is delivered immediately to adjacent stable ditches, vegetated buffer areas, catch basin inlets, or street gutters.

9. **Culverts.** Culverts must be sized to avoid unintended flooding of upstream areas or frequent overtopping of roadways. Culvert inlets must be protected with appropriate materials for the expected entrance velocity, and protection must extend at least as high as the expected maximum elevation of storage behind the culvert. Culvert outlet design must incorporate measures, such as aprons or plunge pools, to prevent scour of the stream channel. The design must take account of tailwater depth.

10. **Parking areas**. Parking areas must be constructed to ensure runoff is delivered to adjacent swales, catch basins, curb gutters, or buffer areas without eroding areas downslope. The parking area's subbase compaction and grading must be done to ensure runoff is evenly distributed to adjacent buffers or side slopes. Catch basins must be located and set to provide enough storage depth at the inlet to allow inflow of peak runoff rates without by-pass of runoff to other areas.

11. **Additional requirements.** Additional requirements may be applied on a site-specific basis.

B. ***IN ACCORDANCE WITH THE INSPECTION AND MAINTENANCE PERFORMANCE STANDARDS REQUIRED BY CHAPTER 500, ALL PROJECTS MUST COMPLY WITH THE FOLLOWING STANDARDS:***

1. Inspect disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site. Inspect these areas at least once a week as well as before and after a storm event, and prior to completing permanent stabilization measures. A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct the inspections.

2. Maintain all measures in effective operating condition until areas are permanently stabilized. If best management practices (BMPs) need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation must be completed within 7 calendar days and prior to any storm event (rainfall).

3. Keep a log (report) summarizing the inspections and any corrective action taken. The log must include the name(s) and qualifications of the person making the inspections, the date(s) of the inspections, and major observations about the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicles access points to the parcel. Major observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and location(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken. The log must be made accessible to department staff and a copy must be provided upon request. The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.

Section 5. Definitions

The following definitions are taken directly from the Maine Construction General Permit, July 21, 2006 and Chapter 500, Section 3, August 12, 2015.

A. Common plan of development or sale. A "common plan of development or sale" means a subdivision as determined by the Land Use Planning Commission (LUPC), or a subdivision under municipal law as determined by the municipality where the subdivision is located.

B. Developed area. "Disturbed area" excluding areas that are returned to a condition with the same drainage patterns and vegetative cover type that existed prior to the disturbance. An area is not considered developed if planting to restore the previous cover type and restoration of any altered drainage patterns occur within one calendar year of disturbance. "Same vegetative cover type" may include hydrologically improved cover type. For example, an area that was previously a pasture may be replanted as forest.

C. Direct watershed of a waterbody or wetland. The land area that drains, via overland flow, natural or man-made drainage systems, or waterbodies or wetlands, to a given waterbody or wetland without first passing through an upstream waterbody classified as GPA.

D. Disturbed area. All land areas that are stripped, graded, grubbed, filled, or excavated at any time during the site preparation or removing vegetation for, or construction of, a project.

"Disturbed area" does not include routine maintenance, but does include re-development and new impervious areas. "Routine maintenance" is maintenance performed to maintain the original line and grade, hydraulic capacity, and original purpose of the facility. Paving impervious gravel surfaces while maintaining the original line and grade, hydraulic capacity and original purpose of the facility is considered routine maintenance. Cutting of trees, without grubbing, stump removal, disturbance or exposure of soil is not considered "disturbed area."

A disturbed area continues to be considered as disturbed area if it meets the definition of "developed area" or "impervious area" following final stabilization.

E. Erosion and sedimentation control best management practices (erosion control BMPs). Methods, techniques, designs, practices, and other means to control erosion and sedimentation, as approved or required by the department.

NOTE: For guidance, see "Maine Erosion and Sediment Control Handbook: Best Management Practices (October 2016)."

F. Erosion control mix. A type of mulch that consists primarily of organic material such as shredded bark, stump grindings, composted bark, or fragmented wood generated as a by-product from log handling at wood mills. It includes a well-graded mixture of particle sizes with a mineral content that is less than 20% by weight, and is free from construction debris, refuse, and contaminants.

G. Impervious area. The total area of a parcel that consists of buildings and associated constructed facilities or areas that will be covered with a low-permeability material, such as asphalt or concrete, and areas such as gravel roads and unpaved parking areas that will be compacted through design or use to reduce their permeability. Common impervious areas include, but are not limited to, rooftops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and macadam or other surfaces which similarly impede the natural infiltration of stormwater. A

natural or man-made waterbody is not considered an impervious area, but is treated as an immediate runoff surface in curve number calculations.

H. Stormwater. The part of precipitation, including runoff from rain or melting ice and snow, that flows across the surface as sheet flow, shallow concentrated flow, or in drainageways.

I. Watershed. The land area that drains, via overland flow, drainageways, waterbodies, or wetlands to a given waterbody or wetland.

NOTICE OF TERMINATION
for use with
CONSTRUCTION GENERAL PERMIT

Name of Applicant (Owner):	**Applicant Mailing Address:**	
Town/City/State:		**Zip Code:**
Daytime Phone: (with area code):	**Email Address:**	
Name of Agent:	**Agent Phone #:**	**Permit Number (if known):**
Project Location: (Town/City):	**UTM Northing (if known):**	**UTM Easting (if known):**
Map #: **Lot #:**		**County:**
Name of Waterbody(ies) to Which the Disturbed Area Drains:		**PBR or MCGP Application #:**
Name/Description of Project:		

I am filing notice of my Notice of Termination indicating that permanent stabilization has been completed or, if the project was a common plan of development or sale, that the requirements of the Construction General Permit (MCGP) at Part IV (F)(1) have been completed. I have attached all the required submittals. *Notification forms cannot be accepted without the necessary attachments.*

- ❑ ALL: Photographs showing the completed project and affected area, except as provided in Part IV(F))(3)(c) of the MCGP.
- ❑ IF this form is not being signed by the landowner or lessee of the property, attach documentation showing authorization to sign; OR
- ❑ Check here to reference documentation showing authorization to sign that was submitted with the Notice of Intent if the documentation showing authorization to sign applies and is still current.

I authorize staff of the Departments of Environmental Protection to access the project site for the purpose of determining compliance with the general permit.

Signature of Applicant:	**Date:**

Retain your records. The permittee is required to retain copies of any forms, submissions, reports, or other materials required by this general permit for a period of at least three years from the completion of permanent stabilization**.**

OFFICE USE ONLY		Date	Staff	Staff	After Photos ❑ Yes ❑ No
NOI #	FP		Acc. Date	Def. Date	

APPENDIX F - Delegation of Authority

Prepared By:
Novel Energy Solutions LLC
2303 Wycliff Street | Suite 300 | St. Paul, MN 55114 | Phone 612.345.7188 | https://www.novelenergysolutions.com

Delegation of Authority

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the _____ construction site. The designee is authorized to sign any reports, stormwater management plans and all other documents required by the permit.

_____ (name of person or position)
_____ (company)
_____ (address)
_____ (city, state, zip)
_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in _____ (Reference State Permit), and that the designee above meets the definition of a “duly authorized representative” as set forth in _____ (Reference State Permit).

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.

Name:
Company:
Title:
Signature:
Date:

APPENDIX G - Procore Inspection Template and Maintenance Record

Prepared By:
Novel Energy Solutions LLC
2303 Wycliff Street | Suite 300 | St. Paul, MN 55114 | Phone 612.345.7188 | https://www.novelenergysolutions.com

Novel Energy Solutions
2303 Wycliff St Ste 1E
Saint Paul, Minnesota 55118
P: (651) 492-0462

Inspection Template: SWPP Weekly Inspection

Type	Environmental	**Trade**	
Description	Each Novel Energy Solutions (NES) employee certified to conduct Stormwater Pollution Prevention Plan (SWPPP) inspections will be assigned to a group of projects. It will be the assigned individual's responsibility to conduct the weekly and triggered SWPPP inspections till the National Pollutant Discharge Elimination System (NPDES) permit is terminated. The Minnesota Pollution Control Agency (MPCA) NPDES Permits requires that the entire construction site be inspected once every 7 days. Inspectors must identify a day during the week that the inspection will occur and conduct the inspection on the same day each week. **Note – if the inspector for the site, has a schedule conflict and cannot make it out within the 7-day timeframe, it is the inspector's responsibility to find someone to conduct the inspection in their place.** Familiarize yourself with the project specific SWPPP Report and Erosion Control Plans for your assigned site and identify the BMP measures used. On-Site Inspection Process and Report Generation a. Review available files such as permit, copies of the SWPPP or erosion and sediment control plans, past inspection reports. b. Arrive on site: Go to the site message board and retrieve the clear plastic folder containing the inspection reports. Review the previous weeks inspection (noting any corrective actions (CAs) that were identified) and grab a blank report form. c. Walk entire site: observe surroundings, note areas of violations, inspect construction exits, discharge points, and perimeter controls. d. Compare BMPs in the SWPPP with construction conditions. e. Fill out report and note any corrective actions or modifications. f. Before leaving the site – i. On active construction sites: Stop by the job site trailer and notify the foreman on site of any CAs needed ii. On inactive sites: Notify the Construction Manager (Dane Lundgren – 612.403.6773) of any CAs.		
Attachments	Biosecurity presentation.pptx, Biosecurity Protocol_Employee 10.27.2021.docx, EPA_SWPPP_GUIDE.pdf, MPCA_Construction.Stormwater.Permit.Overview_21.05.03 (1).pdf, Novel_Recommeneded.SWPPP.Inspection.Sequence_20.07.14.pdf		

Safety & Customer Service

1.1	**Biosecurity protocols observed to prevent spreading germs to livestock (SEE PROTOCAL ATTACHED IN DESCRIPTION)**
1.2	**Introduced yourself to landowner and thanked them for working with us (If landowner not present, click NA).**
1.3	**If site is empty, gate was locked and secure.**
1.4	**Site is clean, no trash or debris present. Construction material storage areas orderly.**
1.5	**Site looks well kept, no egregious weeds or landscaping that could be an eyesore to landowner or neighbors.**
1.6	**Solar array looks physically operating as normal, no defects from a glance.**
1.7	**NPDES Permit Number**

24 Hour Items - If repair needed, click FAIL. If item is FAIL, need corrections within 1 day.

2.1	**Silt Fence: must be repaired, replaced, or supplemented when they are nonfunctional or sediment reaches 1/2 of the height.**
2.2	**Construction Exits: tracked sediment must be removed from all off-site paved surfaces.**
2.3	**Are liquid materials (vehicle fluids, paints, oils, lubricants, etc.) properly stored (covered and/or contained)?**

2.4	Are all portable toilets secured on bare soil and located away from stormwater flow patterns that may convey spillage to a storm drain inlet or channel?
2.5	Is the site free of leaks or spills?

72 Hour Items - If repair needed, click FAIL. If item is FAIL, need corrections within 3 days.

3.1	Sediment Basin: must be drained and sediment removed when depth of sediment collected in basin reached 1/2 of storage volume.
3.2	Is the site free of illicit discharges or stain, odors, sheens, etc. on stormwater drainages?
3.3	Are concrete washouts properly installed, maintained, and functioning?

7 Day Items - If repair needed, click FAIL. If item is FAIL, need corrections within 7 Days.

4.1	Surface Waters: must remove all deltas and sediment deposited in drainage ways, catch basins, and other drainage systems.

14 Day Items - If repair needed, click FAIL. If item is FAIL, need corrections within 14 Days.

5.1	Erosion Prevention BMPs: Measures used to prevent erosion (soil stabilization, mulch, temporary and permanent cover, blankets, sod, mats).
5.2	Sediment Control BMPs: Methods to prevent sediment from leaving site (inlet protection, check dams, drainage swales or bio-logs).
5.3	Infiltration Areas: No sediment from construction activities reaching infiltration area and protected from compaction.
5.4	Have modifications been made to SWPP plan?
5.5	Additional recommendations (if any).

General

6.1	Met with Construction Manager or Assistant on site and informed them of SWPP results (Enter Name).
6.2	Called Shane Sauer to let him know if any Corrective Actions needed. 651.358.9715 is his cell.

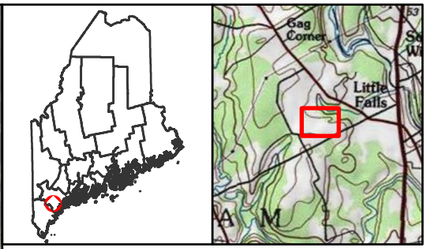
Appendix H – SWMP Maintenance Log

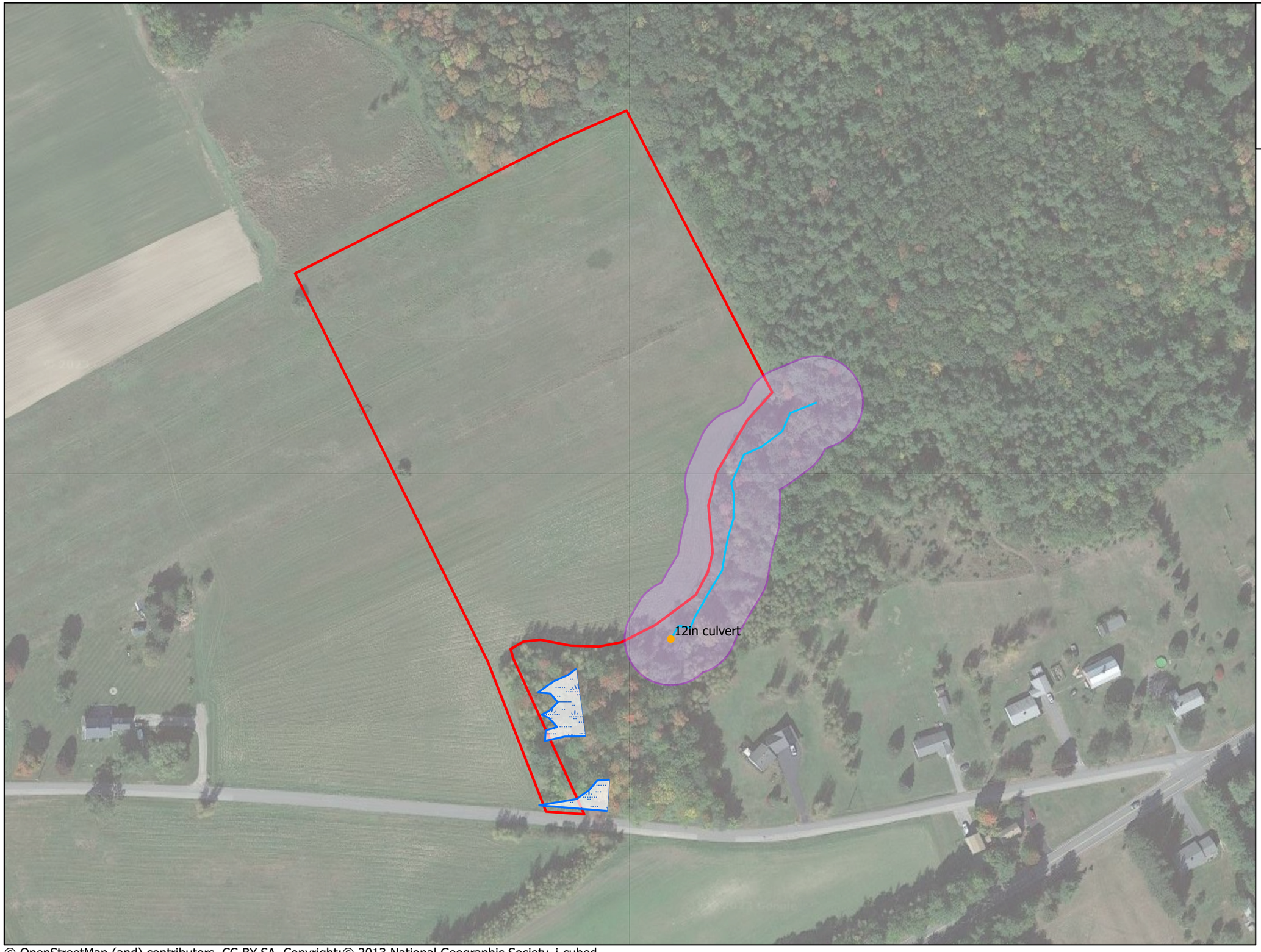
SWMP Contact:

Maintenance No.	Description of the Amendment	Date of Maintenance	Maintenance Prepared by: (Names and Title)

APPENDIX H - Protected Natural Resource Analysis Desktop Review

Prepared By:
Novel Energy Solutions LLC
2303 Wycliff Street | Suite 300 | St. Paul, MN 55114 | Phone 612.345.7188 | https://www.novelenergysolutions.com





Legend

- Resource Survey Limit
- Delineated Wetland Boundary
- Delineated Wetland Area
- Delineated Stream
- 75Ft Stream Permitting Zone
- Observation Point

MAP NOTES:

1. MAP IS PROJECTED USING UTM ZONE19 COORDINATES, AND REFERENCES THE NORTH AMERICAN DATUM OF 1983 (NAD83).

2. NORTH ARROW IS ORIENTED TO GRID NORTH IN ALL MAP EXTENTS DEPICTED HEREIN.

3. BASE MAP CURTESY OF GOOGLE MAPS IMAGERY.

4. NATURAL RESOURCE FIELD SURVEYS WERE COMPLETED BY HALEY WARD, INC. IN APRIL 2023 WITHIN THE NATURAL RESOURCE LIMIT. WETLANDS WERE IDENTIFIED IN ACCORDANCE WITH 1987 CORPS OF ENGINEERS WETLAND DELINEATION MANUAL AND THE 2012 NORTHCENTRAL AND NORTHEAST REGIONAL SUPPLEMENT (VERSION 2.0).

5. VERNAL POOL FIELD SURVEYS WERE COMPLETED IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS AND DEFINITIONS, AND THE MAWS VERNAL POOL SURVEY PROTOCOL.

6. NATURAL RESOURCE SITE FEATURES WERE LOCATED USING A SUB-METER CAPABLE TRIMBLE GEO XH (6000 SERIES). DATA WAS POST-PROCESSED ACCORDING TO MANUFACTURER'S RECOMMENDED POST-PROCESSING SETTINGS USING CORS REFERENCE STATIONS. UNDER CERTAIN CONDITIONS, THE POSITIONAL ERROR OF THE GPS DATA MAY EXCEED SUB-METER.

0 75 150
Feet
1 inch equals 150 feet

HALEY WARD
ENGINEERING | ENVIRONMENTAL | SURVEYING
1 Merchants Plaza, Suite 701
Bangor, ME 04401
WWW.HALEYWARD.COM 207-989-4824

CLIENT	ME GORHAM DAIGLE CSG
PROJECT	GORHAM SOLAR ARRAY DYER ROAD, GORHAM, MAINE
TITLE	NATURAL RESOURCE MAP
DATE	4/27/2023
PROJECT No.	13861.036
DRAWN BY	NASHFORD
SCALE	1" = 150 '

PROTECTED NATURAL RESOURCE
DESKTOP ANALYSIS

NOVEL ENERGY SOLUTIONS LLC

FOR

ME GORHAM DAIGLE CSG LLC

DATE

Prepared By:
Benjamin Hansen
Novel Energy Solutions LLC
2303 Wycliff Street | Suite 300 | St. Paul, MN 55114 | Phone 612.345.7188 | https://www.novelenergysolutions.com

Table of Contents

List of Acronyms

IPaC	Information, Planning, and Conservation
MDIFW	Maine Department of Inland Fisheries and Wildlife
MNAP	Maine Natural Areas Program
MW	Megawatt
NES	Novel Energy Solutions LLC
NRCS	Natural Resource Conservation Service
NRPA	Natural Resource Protection Act
NWI	National Wetlands Inventory
PNR	Protected Natural Resources
RTE	Rare, Threatened, or Endangered
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
WSS	Web Soil Survey

1. Purpose and Need

Novel Energy Solutions LLC (NES) has completed a desktop analysis of available data to identify potential protected natural resource (PNR) concerns that may impact the proposed development. This report contains a description of findings, a site location map, and maps depicting mapped resources for the ME Gorham Daigle CSG project in Gorham, Maine. The purpose of this desktop review was to identify known PNR based on published maps and data and gather additional site information for planning and permitting purposes.

1.1 Methodology

NES Environmental Specialists completed a desktop analysis of published and historical data for the Proposed Project Area. This data was reviewed to identify known PNR and to identify potential resources not listed in the available data to determine suitability of the site for development of a solar array. NES conducted a review of published State and Federally listed rare, threatened, or endangered species (RTE) and critical habitats within the Proposed Project Area. NES also completed a review of other published resources including aerial photography, topographic data, National Wetlands Inventory (NWI) maps, and United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Surveys.

In addition to the public data analyzed, NES Environmental Specialists utilized the Real-Time Environmental Due Diligence software program Transect, to provide additional data, maps, and resources. A copy of the Transect Report is included at the end of this document.

2. Site Location and Description

The ME Gorham Daigle CSG Project is a solar array which will be located at 43.726750, -70.442861 off Dyer Rd in Gorham, Maine. The Proposed Project will be situated on 10 acres (Proposed Project Area) of a larger, parent parcel identified as parcel number 69-0001-0001.

The Proposed Project will consist of the installation of a .700-megawatt (MW) ground-mounted photovoltaic (PV) system. The Proposed Project would include the development of a ground mounted solar array facility, supporting utility infrastructure, limited gravel access drives and equipment pad areas, fencing, landscape buffers, and native ground cover establishment. The estimated duration of construction is approximately 9 months. The primary equipment and machinery that will be on-site includes forklifts for material transportation, pile drivers to install the steel pilings, and small excavators for trenching electrical equipment. When the Proposed Project has reached its operation end, the Proposed Project Area can be returned to its pre-construction state.

The Proposed Project would be accessed from Dyer Rd. An interior road would be constructed inside the perimeter, and it is anticipated to be flat and will match existing grade as much as possible to minimize earth work. The Proposed Project Area will be secured by a fence with standard gates for emergency and maintenance vehicles to access.

3. Results

3.1 Slopes and Topography

The Proposed Project Area generally slopes from the south to north and contains 0-10 percent slopes, with elevation ranging from 180ft to 200ft. An elevation contour map is included in the Appendix at the end of this report.

3.2 Soil Survey

A custom soil resource report and hydric soil report was generated for the Proposed Project through the USDA NRCS - Web Soil Survey (WSS). The report includes the soil map for the Proposed Project Area, a list of the map units, the extent of each map unit, and cartographic symbols displayed on the map. Note, Hydric Soils have the potential to contain jurisdictional wetlands, in conjunction with other wetland parameters.

Mapped soils within the Proposed Project Area as listed in the table below. The majority of the Proposed Project Area is identified as containing not hydric soils. Please note, Area of Interested (AOI) is approximated. WSS Reports are included in the appendix at the end of this report.

Map Unit Symbol	Map Unit Name	Hydric Soil Rating	Rating Description	Drainage Classification	Percent of AOI
BgC2	Nicholville very fine sandy loam, 8 to 15 percent slopes	0	Not Hydric	Moderately Well Drained	11.5
DeB	Deerfield loamy fine sand, 3 to 8 percent slopes	0	Not Hydric	Moderately Well Drained	4.5
EmB	Elmwood fine sandy loam, 0 to 8 percent slopes	0	Not Hydric	Moderately Well Drained	7.3
MkB	Merrimac fine sandy loam, 3 to 8 percent slopes	0	Not Hydric	Somewhat Excessively Drained	43.4
PbC	Paxton fine sandy loam, 8 to 15 percent slopes	0	Not Hydric	Well Drained	29.8
Sz	Swanton fine sandy loam	85	Hydric	Poorly Drained	3.4

Table 1 – Soil Resource Report - Map Unit Legend

3.3 Protected Natural Resources and Wetlands

Digital NWI data was obtained from the U.S. Fish and Wildlife Service National Wetlands Inventory, Wetlands Mapper. According to the NWI data, there are no NWI mapped wetlands within the Proposed Project Area. Based on review of aerial photography, topography, and soils, NES has not identified potential PNR within the Proposed Project Area. Related maps and resources are included in the appendix at the end of this report.

3.4 Maine Priority Watersheds

The Proposed Project will be located within the Dundee Pond-Upper Presumpscot River watershed (Hydrological Unit Code: 010600010304). The closest named surface water body is the Presumpscot River, approximately 1 mile east of the Proposed Project Area. According to the Maine NPS priority Watersheds GIS mapper tool, the Proposed Project is not located in a 'Lake Most at Risk' or 'Urban Impaired Stream.'

3.5 Critical Habitats and Rare, Threatened, or Endangered Species

This section describes the desktop review and agency correspondence regarding critical habitats and RTE species. A copy of all related maps and correspondence are presented in the attached appendix.

United States Fish and Wildlife Service (USFWS)

An official species list obtained from the USFWS Information, Planning, and Conservation (IPaC) database identified 2 federally listed species with potential to occur within the Proposed Project area. A copy of this report is included in the attached appendix.

Species	Federal Status	Critical Habitat	ESA Determination
Northern Long-eared Bat	Threatened	No	No Effect
Monarch Butterfly	Candidate	No	May Occur

Maine Department of Inland Fisheries and Wildlife (MDIFW)

NES reviewed the MDIFW Beginning with Habitat (BwH) publicly available data for the Proposed Project Area, no areas of concern were noted within the project area, however the project does border the McLaughlin Preserve. In addition, NES requested information on the known or suspected locations of any rare, threatened, or endangered plants or wildlife, Significant Wildlife Habitat, or other significant natural resources within the vicinity of the Proposed Project from MDIFW. At the time of this report, a response is still pending.

Maine Natural Areas Program

NES requested information on the presence of any known or suspected locations of rare, threatened, or endangered plants, exemplary natural communities, or other significant natural resources documented within the vicinity of the Proposed Project Area from the MNAP. In a response dated March 8, 2023, MNAP confirmed that according to the information currently in the Biological and Conservation Data System files, there are no rare botanical features documented specifically within the Proposed Project Area.

4. Summary of Findings

Based on the desktop review, no NWI Mapped wetlands, hydric soils, or wetland signatures were identified in the Proposed Project Area. No critical habitats or sensitive environmental areas were identified within the site, with a Preserve bordering the site based on available mapping.

The overall development potential of the Proposed Project Area is high due to the lack of probability of PNR in the area of development. NES will schedule a field visit by qualified wetland scientists to identify and locate field-observable resources that could be present on the site.

5. Conclusion

This PNR Analysis desktop review provides an overview of previously recorded data and studies from publicly available sources to identify the potential for PNR within the Proposed Project Area.

This data has been created using digital modeling, review of aerial photography, and publicly available data. The results of the PNR Analysis desktop review identified the lack of potential for PNR to be present within the Proposed Project Area. The results of this desktop review are preliminary in nature and not an actual delineation. The information provided in this analysis does not replace actual field investigations for the purposes of planning and permitting. A field visit by a professional wetland scientist to identify and locate field-observable resources will be scheduled.

6. Appendix

The below list of resources is attached at the end of this report.

- Site Map
- USGS Topo 1:24000 Map
- Elevation Contours Map
- Proposed Project Plan
- Custom Soil Report
- Hydric Soils Map
- Firm Panel
- NWI map
- USFWS IPaC Report – Official Species List
- MDIFW Beginning with Habitat Map
- MDIFW Correspondence
- MNAP Correspondence
- Transect Due Diligence Report

7. References

"Beginning with Habitat." Bwh Map Viewer, Maine Department of Inland Fisheries and Wildlife, https://webapps2.cgis-solutions.com/beginningwithhabitat/mapviewer/#.

"FEMA Flood Map Service Center: Search by Address." *View/Print FIRM: View an Image of the FIRM Panel or Print a FIRMette for Your Chosen Location. NOTE: This Is a Static Map and Has Not Been Updated since the Effective Date. Please Refer to Any Amendments or Revisions (LOMC) in the Changes to This FIRM Section.*, FEMA - Department of Homeland Security, https://msc.fema.gov/portal/search?AddressQuery=47.309314%2C+-68.377162#searchresultsanchor.

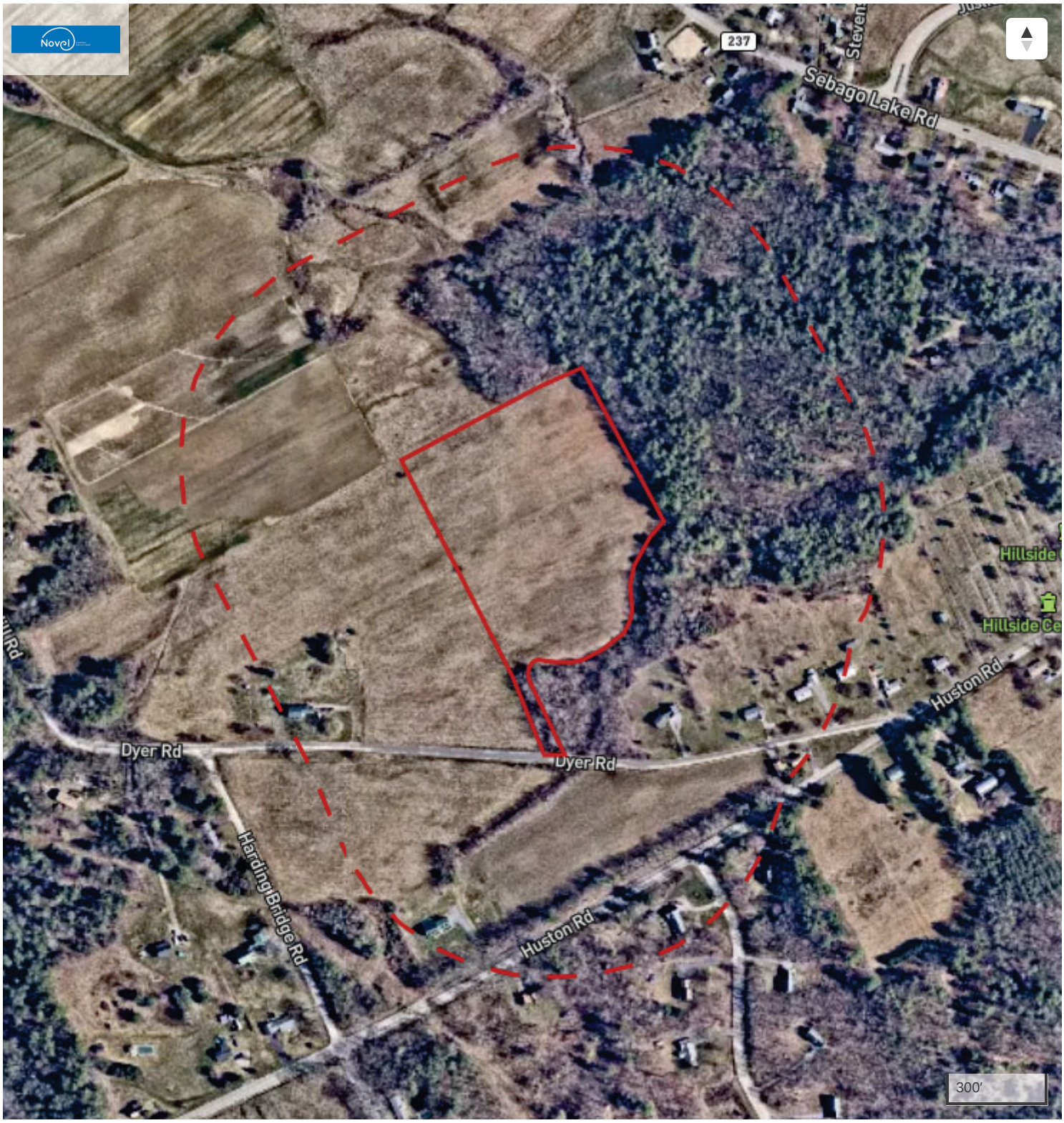
"IPAC: Information for Planning and Consultation." *IPaC: Home*, U.S. Fish and Wildlife Service, https://ecos.fws.gov/ipac/.

Nrcs. "Custom Soil Survey Report." *Web Soil Survey*, United States Department of Agriculture, https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

Nrcs. "Hydric Soil Report." *Web Soil Survey*, United States Department of Agriculture, https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

Protected Areas Database of the United States (PAD-US) 2.1
U.S. Geological Survey (USGS) Gap Analysis Project (GAP) (Accessed: 2021-01)

U.S. Fish and Wildlife Service; National Wetlands Inventory; National Standards and Support Team. "National Wetlands Inventory Mapper." *Wetlands Mapper*, U.S. Fish and Wildlife Service, https://www.fws.gov/wetlands/data/mapper.html.



Site Location Map

Novel Energy Solutions

ME Gorham Daigle CSG LLC

9.9 acres

Maine

Cumberland County

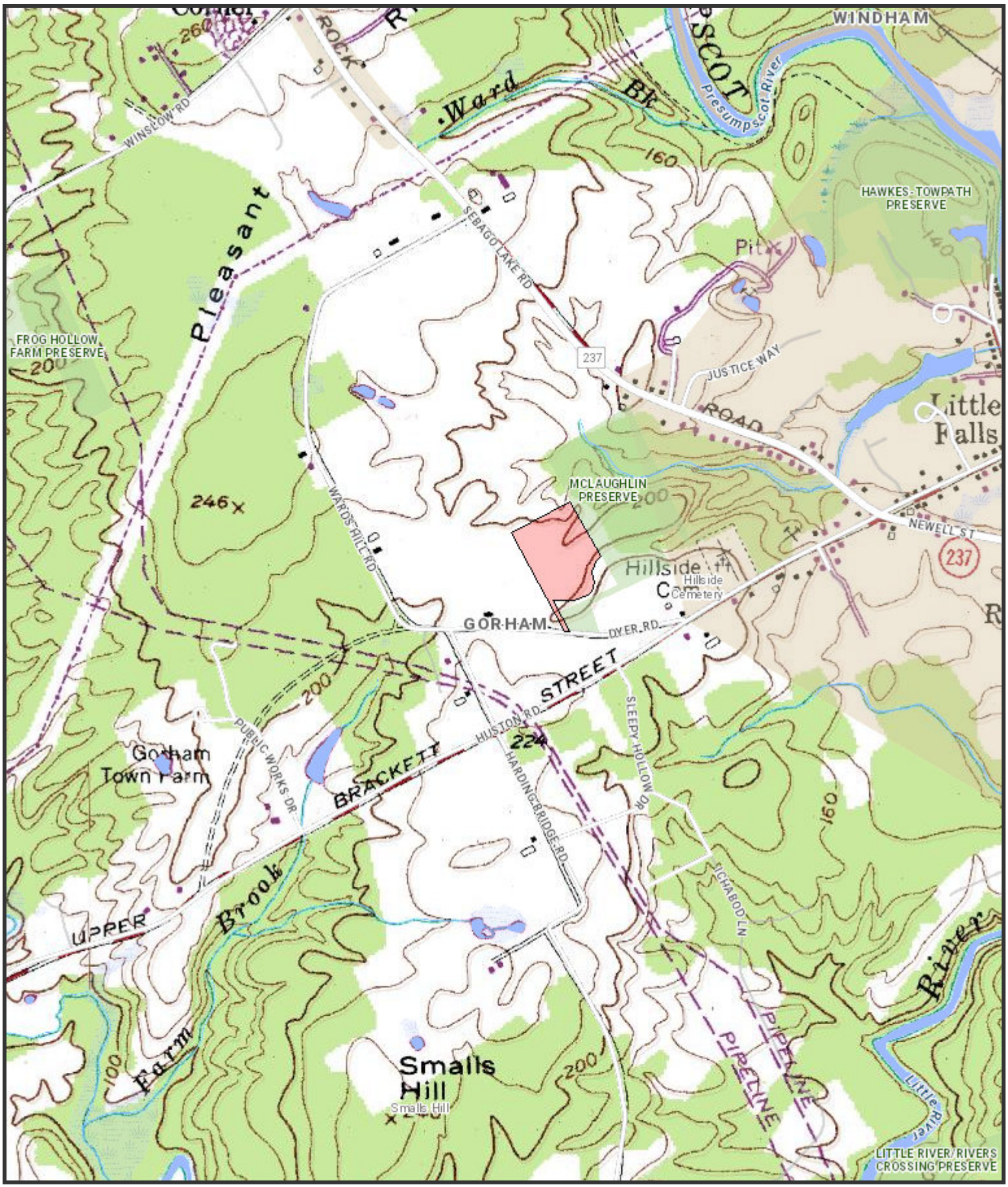
43.728320, -70.442250

transect

Legend

Buffer AOI

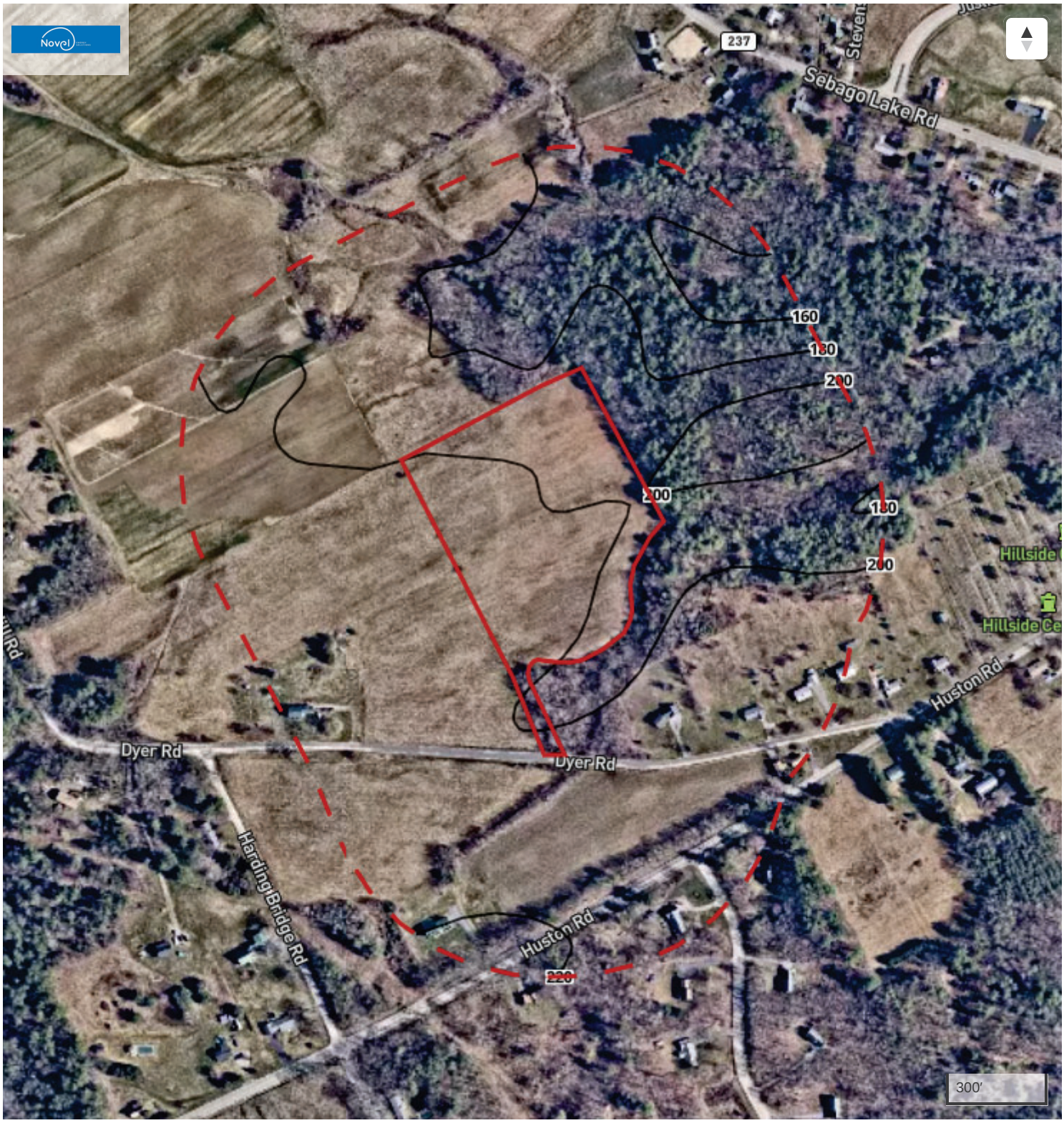
ME GORHAM DAIGLE CSG



0.25 Miles

1 inch = 0.28 miles

Date: 3/6/2023
Time: 4:26:30 PM



Elevation Contours Map

Novel Energy Solutions

ME Gorham Daigle CSG LLC

9.9 acres

Maine

Cumberland County

43.728320, -70.442250

transect

Legend

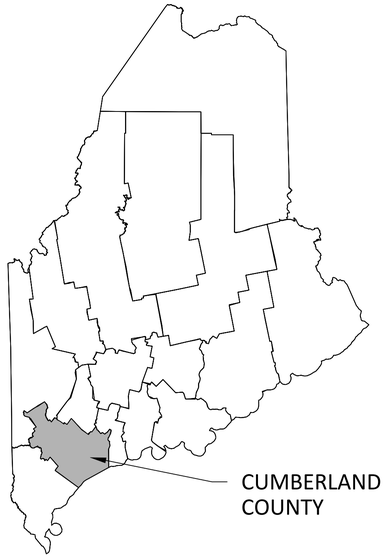
Elevation Contours Buffer AOI

ME GORHAM DAIGLE CSG LLC

CUMBERLAND COUNTY, ME

SOLAR PV PROJECT - 700 KW AC

CIVIL SUBMITTAL - ISSUED FOR PERMITTING (IFP)



COUNTY MAP

LOCATION MAP

SHEET INDEX

Sheet Number	Sheet Title
C1.01	COVERSHEET
C1.02	CONSTRUCTION NOTES
C2.01	EXISTING CONDITIONS & REMOVALS
C3.01	SITE PLAN
C5.01	EROSION CONTROL PLAN
C5.02	EROSION CONTROL NOTES & DETAILS
C9.01	CONSTRUCTION DETAILS
C9.02	LANDSCAPING DETAILS

QUANTITIES

CIVIL SITE ITEMS		
GRADING AREA		ACRE
EARTHWORK CUT		CUBIC YARDS
EARTHWORK FILL		CUBIC YARDS
2-3" GRAVEL		TONS
AGGREGATE DRIVE 8" (CL V)		TONS
AGGREGATE (LAYDOWN YARD)		TONS
POROUS GRANULAR BASE 12"		TONS
EROSION CONTROL ITEMS		
SILT FENCE		LINEAR FEET
ROCK CONSTRUCTION ENTRANCE		UNITS
12" CULVERT		LINEAR FEET
FLARED END SECTIONS		EACH
FENCE		
20' GATE		UNITS
FENCE		LINEAR FEET
LANDSCAPING		
TREE - WHITE SPRUCE		UNITS
TREE - EASTERN WHITE PINE		UNITS
ARRAY MIX - NATIVE GRASSES		POUNDS
ARRAY MIX - WILDFLOWERS		POUNDS
POLLINATOR MIX - GRASSES		POUNDS
POLLINATOR MIX - WILDFLOWERS		POUNDS

ELECTRICAL REFERENCE

THIS CIVIL PLAN SET IS TO BE USED IN COORDINATION WITH THE ELECTRICAL PLAN SETS PREPARED FOR THIS PROJECT.
ELECTRICAL "IC / IFP / IFC" PLAN SET DATED ####
MODULE TYPE: WAAREE BI-31-445
MODULE QUANTITY: 2184

PROJECT CONTACT LIST

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St Paul, MN 55114

info@novelenergy.biz
612-345-7188 telephone

Landowner
CLAUDE F DAIGLE JR.

GORHAM, ME

Project
ME GORHAM DAIGLE CSG LLC

Location
N43.7267°, W70.4428°

Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional engineer in the laws of the state of Maine

PRELIMINARY
NOT FOR CONSTRUCTION

SCOTT GEDDES, P.E.
Registration No. 16864 Date: MONTH/DAY/YEAR

If applicable, contact us for a wet signed copy of this plan which is available upon request at Novel Energy Solutions - St. Paul, MN office.

Summary

Designed: DAP Drawn: DAP
Approved: SEG Project: 22 458. 08
Phase: PERMITTING Initial Issue: 2/16/23

Revisions

No.	Date	By	Chk	Description
1	XX/XX	AAA	AAA	DESCRIPTION
-	--	--	--	--
-	--	--	--	--
-	--	--	--	--
-	--	--	--	--
-	--	--	--	--
-	--	--	--	--

Sheet Title
COVERSHEET

Sheet No. Revision
C1.01 IFP

Project No. GRHM

811 DigSafe MA·ME·NH·RI·VT

GENERAL NOTES

1. THE DESIGN SHOWN IS BASED ON ENGINEER'S UNDERSTANDING OF EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED UPON ALTA AND TOPOGRAPHIC MAPPING PREPARED BY OTHERS PRIOR TO DESIGN. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS WITHOUT EXCEPTION, CONTRACTOR SHALL HAVE MADE, AT OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.

2. CONTRACTOR IS SPECIFICALLY CAUTIONED THAT LOCATIONS OF EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM INFORMATION AVAILABLE. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE UTILITY MAPPING ACCURACY. PRIOR TO START OF ANY DEMOLITION ACTIVITY, THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES 48 HOURS PRIOR TO ANY EXCAVATION FOR ON-SITE LOCATIONS OF EXISTING UTILITIES. DIGSAFE SHALL BE NOTIFIED A MINIMUM 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION. FULL UTILITY COORDINATION WITH NON-MEMBER UTILITIES AND USE OF GROUND PENETRATING RADAR TO LOCATE UTILITIES SHOULD BE PERFORMES AS NECCESSARY.

3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING VEHICULAR AND PEDESTRIAN TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MINNESOTA DEPARTMENT OF TRANSPORTATION STANDARDS.

5. IF REQUIRED, CONTRACTOR SHALL PREPARE AND SUBMIT TO THE GOVERNING AUTHORITY A TRAFFIC AND/OR PEDESTRIAN TRAFFIC PLAN PER STATE STANDARDS TO BE APPROVED BY THE LOCAL GOVERNING AUTHORITY.

6. EXISTING TREES AND OTHER NATURAL VEGETATION WITHIN THE PROJECT AND/OR ADJACENT TO THE PROJECT ARE OF PRIME CONCERN TO THE CONTRACTOR'S OPERATIONS AND SHALL BE A RESTRICTED AREA. CONTRACTOR SHALL PROTECT TREES TO REMAIN AT ALL TIMES. EQUIPMENT SHALL NOT NEEDLESSLY BE OPERATED UNDER NEARBY TREES AND EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING ADJACENT TO TREES. SHOULD ANY PORTION OF THE TREE BRANCHES REQUIRE REMOVAL TO PERMIT OPERATION OF THE CONTRACTOR'S EQUIPMENT, CONTRACTOR SHALL OBTAIN THE SERVICES OF A PROFESSIONAL TREE TRIMMING SERVICE TO TRIM THE TREES PRIOR TO THE BEGINNING OF OPERATION. SHOULD CONTRACTOR'S OPERATIONS RESULT IN THE BREAKING OF ANY LIMBS, THE BROKEN LIMBS SHOULD BE REMOVED IMMEDIATELY AND CUTS SHALL BE PROPERLY PROTECTED TO MINIMIZE ANY LASTING DAMAGE TO THE TREE. NO TREES SHALL BE REMOVED WITHOUT AUTHORIZATION BY THE ENGINEER. COSTS FOR TRIMMING SERVICES SHALL BE CONSIDERED INCIDENTAL TO THE GRADING CONSTRUCTION AND NO SPECIAL PAYMENT WILL BE MADE.

   6.a. RESTRICTED AREAS SHALL INCLUDE ALL DESIGNATED TREED AREAS OUTSIDE OF THE DESIGNATED CONSTRUCTION ZONE. ALL VEGETATION WITHIN THE RESTRICTED AREAS SHALL REMAIN.

   6.b. CONTRACTOR SHALL RESTRICT ALL GRADING AND CONSTRUCTION ACTIVITIES TO AREAS DESIGNATED ON THE PLANS. ACTIVITIES WITHIN THE CONSTRUCTION MAY BE RESTRICTED TO A NARROWER WIDTH IN THE FIELD TO SAVE ADDITIONAL TREES AS DIRECTED BY THE OWNER.

   6.c. ACTIVITIES PROHIBITED OUTSIDE OF THE CONSTRUCTION BOUNDARIES WOULD INCLUDE, BUT NOT BE LIMITED TO: SOIL AND OTHER MATERIAL STOCKPILING, EQUIPMENT OR MACHINERY STORAGE, DRIVING OF ANY VEHICLE, LEAKAGE OR SPILLAGE OF ANY "WASHOUT" OR OTHER TOXIC MATERIAL. THE COLLECTION OF OTHER DEBRIS AND SOIL STOCKPILING WILL BE IN AN AREA DETERMINED ON-SITE BY THE ENGINEER.

   6.d. ALL RESTRICTED AREAS SHALL BE FENCED OFF WITH SILT FENCE AS NOTED ON THE PLANS.

   6.e. BEFORE COMMENCING WITH ANY EXCAVATION CONTRACTOR SHALL COMPLETE ALL PREPARATORY WORK REGARDING TREE REMOVAL, ROOT PRUNING, TREE PRUNING AND STUMP REMOVAL TO THE SATISFACTION OF THE OWNER.

   6.f. PREPARATORY WORK SHALL INCLUDE THE FOLLOWING AND SHALL BE COMPLETED UNDER THE DIRECT SUPERVISION OF THE OWNER'S REPRESENTATIVE:

   6.f.a. TREE REMOVAL: CONTRACTOR SHALL FELL THE TREES. AT NO TIME SHALL TREES BE BULLDOZED OUT, BUT SHALL BE CUT DOWN AND STUMPS REMOVED SEPARATELY. PRIOR TO THE FELLING OF ALL TREES, PROPER REMOVAL OF A PORTION OR ALL OF THE CANOPY SHALL BE COMPLETED SO THAT TREES IN THE RESTRICTED AREAS SHALL NOT BE INJURED IN THE PROCESS.

   6.f.b. ROOT PRUNING: BEFORE ANY STUMPS ARE TO BE REMOVED, ALL ROOTS SHALL BE SEVERED FROM ROOTS IN THE RESTRICTED AREAS BY SAW CUTTING WITH A VERMEER DESIGNED FOR ROOT PRUNING, BY HAND, OR WITH A CHAINSAW. TREE ROOTS PROJECTING INTO THE CONSTRUCTION ZONE SHALL BE EXPOSED PRIOR TO ROOT PRUNING WITH SMALL MACHINERY, I.E..., BOBCAT.

   6.f.c. STUMP REMOVAL: AT SUCH TIME THAT ROOTS HAVE BEEN PROPERLY SEVERED, STUMPS MAY BE REMOVED. WHERE REMOVAL OF CERTAIN STUMPS COULD CAUSE DAMAGE TO EXISTING PROTECTED TREES, TREE STUMPS SHALL BE GROUND OUT. ALL STUMP REMOVAL SHALL BE UNDER THE DIRECT SUPERVISION OF THE OWNER'S REPRESENTATIVE.

   6.f.d. TREE PRUNING: PROPER PRUNING OF TREES IN THE RESTRICTED ZONE SHALL BE DIRECTED BY AND SUPERVISION AT ALL TIMES BY THE OWNER'S REPRESENTATIVE.

   6.g. AN OWNER'S REPRESENTATIVE WILL BE AVAILABLE AT ALL TIMES DURING THE PREPARATORY AND CONSTRUCTION PERIOD.

   6.h. MULCH RATHER THAN SEED OR SOD WILL BE USED AT THE BASE OF QUALITY TREES TO A PERIMETER DETERMINED BY THE OWNER'S REPRESENTATIVE. AREAS TO BE SEEDED FOR EROSION CONTROL PURPOSES WITHIN THE CONSTRUCTION ZONE ARE TO BE DETERMINED BY THE OWNER'S REPRESENTATIVE. NATURAL GROUND COVER WILL BE MAINTAINED WHEREVER POSSIBLE.

SUBSURFACE UTILITY NOTES

THE SUBSURFACE UTILITY INFORMATION SHOWN ON THESE PLANS IS A UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF ASCE/CI 38-02, TITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA." THE CONTRACTOR AND/OR SUBCONTRACTORS SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, BY CONTACTING THE UTILITY NOTIFICATION CENTER. THE CONTRACTOR AND/OR SUBCONTRACTOR AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT BE OCCASIONED BY HIS OR HER FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES (UNDERGROUND AND OVERHEAD).

DEMOLITION NOTES

1. DEMOLITION NOTES ARE NOT COMPREHENSIVE. CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION TO OBTAIN A CLEAR UNDERSTANDING OF THE INTENDED SCOPE OF WORK.

2. THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION, REMOVAL, AND DISPOSING IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES AND IN ACCORDANCE WITH APPLICABLE CODES, OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THE PLANS CAN BE CONSTRUCTED. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE GEOTECHNICAL REPORT AND/OR GEOTECHNICAL ENGINEER.

3. CLEARING AND GRUBBING: CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.

4. CONTRACTOR IS RESPONSIBLE FOR THE DISCONNECTION OF UTILITY SERVICES TO EXISTING BUILDINGS PRIOR TO DEMOLITION OF THE BUILDINGS.

5. CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO REMOVAL AND/OR RELOCATION OF UTILITIES. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANIES' FORCES AND ANY FEES WHICH ARE TO BE PAID TO UTILITY COMPANIES FOR SERVICES. CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.

6. THE MAPPING LOCATION OF ALL EXISTING SEWERS, PIPING, AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PROCEEDING WITH WORK. UTILITIES DETERMINED TO BE ABANDONED SHALL BE REMOVED IF UNDER THE BUILDING INCLUDING 10' BEYOND FOUNDATIONS.

7. ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC CABLE AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN THE ROAD RIGHT OF WAY DURING CONSTRUCTION.

8. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC., TO THE BEST PRACTICES.

9. CONTINUOUS ACCESS SHALL BE MAINTAINED FOR THE SURROUNDING PROPERTIES AT ALL TIMES DURING DEMOLITION OF THE EXISTING FACILITIES.

10. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED AND APPROVED BY THE LOCAL AUTHORITY.

11. CONTRACTOR SHALL LIMIT SAW-CUT & PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.

12. CONTRACTOR TO PROTECT EXISTING FEATURES WHICH ARE TO REMAIN. DAMAGE TO ANY EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.

LEGEND

EXISTING FEATURES

- PROPERTY LINE
- ROAD RIGHT OF WAY
- EDGE OF EXISTING ROAD
- STORM CULVERT
- DRAIN TILE
- UNDERGROUND ELECTRIC
- OVERHEAD ELECTRICAL
- POWER POLE
- MAJOR CONTOUR (200)
- MINOR CONTOUR (196)
- TREE LINE
- WETLAND (WL / WM)
- SB — SOIL BORING

PROPOSED FEATURES

- TEMPORARY AGGREGATE ROAD
- AGGREGATE ROAD BASE, PER DETAIL 1/C9.01
- AGGREGATE BASE - LAYDOWN YARD
- PERIMETER SECURITY FENCE
- TEMPORARY FENCE
- SETBACK LINE
- LEASE BOUNDARY
- CMP CULVERT
- MAJOR CONTOUR
- MINOR CONTOUR
- PROPOSED POWER POLE & LINE

EROSION CONTROL FEATURES

- SILT FENCE (SF)
- BIO LOG (BIO)
- ROCK CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET

REMOVALS

- TREE REMOVAL
- TREE REMOVAL
- FENCE POST REMOVAL
- FENCE REMOVAL
- PROP GRAD LIMITS (LoD)

GRADING NOTES

1. PROPOSED CONTOURS ARE TO FINISHED SURFACE ELEVATION.

2. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.

3. SAFETY NOTICE TO CONTRACTORS: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER OR THE DEVELOPER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES IN, ON OR NEAR THE CONSTRUCTION SITE.

4. CONTRACTOR SHALL COMPLETE DEWATERING AS REQUIRED TO COMPLETE THE SITE GRADING CONSTRUCTION.

5. PRIOR TO PLACEMENT OF THE AGGREGATE BASE, A TEST ROLL SHALL BE PERFORMED ON THE STREET AND PARKING AREA SUBGRADE. CONTRACTOR SHALL PROVIDE A LOADED TANDEM AXLE TRUCK WITH A GROSS WEIGHT OF 25 TONS. THE TEST ROLLING SHALL BE AT THE DIRECTION OF THE SOILS ENGINEER AND SHALL BE COMPLETED IN AREAS AS DIRECTED BY THE SOILS ENGINEER. CORRECTION OF THE SUBGRADE SOILS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS ENGINEER.

6. REPLACE ALL SUBGRADE SOIL DISTURBED DURING THE CONSTRUCTION THAT HAVE BECOME UNSUITABLE AND WILL NOT PASS A TEST ROLL. REMOVE UNSUITABLE SOIL FROM THE SITE AND IMPORT SUITABLE SOIL AT NO ADDITIONAL COST TO THE OWNER.

7. EXCAVATE TOPSOIL FROM AREAS TO BE FURTHER EXCAVATED OR REGRADED AND STOCKPILE IN AREAS DESIGNATED ON THE SITE. CONTRACTOR SHALL SALVAGE ENOUGH TOPSOIL FOR RESPREADING ON THE SITE AS SPECIFIED. EXCESS TOPSOIL SHALL BE PLACED IN EMBANKMENT AREAS, OUTSIDE OF EQUIPMENT PADS, ROADWAYS AND THE ARRAY LAYOUTS.

8. TRENCH BORROW CONSTRUCTION: IF ALLOWED BY THE OWNER, CONTRACTOR SHALL COMPLETE "TRENCH BORROW" EXCAVATION IN AREAS DIRECTED BY THE ENGINEER IN ORDER TO OBTAIN STRUCTURAL MATERIAL. TREES SHALL NOT BE REMOVED OR DAMAGED AS A RESULT OF THE EXCAVATION, UNLESS APPROVED BY THE ENGINEER. THE EXCAVATION SHALL COMMENCE A MINIMUM OF 10 FEET FROM THE LIMIT OF THE BUILDING PAD. THE EXCAVATION FROM THIS LIMIT SHALL EXTEND AT A MINIMUM SLOPE OF 1 FOOT HORIZONTAL TO 1 FOOT VERTICAL (1:1) DOWNWARD AND OUTWARD FROM THE FINISHED SURFACE GRADE ELEVATION. THE TRENCH BORROW EXCAVATION SHALL BE BACKFILLED TO THE PROPOSED FINISHED GRADE ELEVATION, AND SHALL BE COMPACTED IN ACCORDANCE WITH REQUIREMENTS OF THE QUALITY COMPACTION METHOD AS OUTLINED IN MN/DOT SPECIFICATION 2105.3F2. SNOW FENCE SHALL BE FURNISHED AND PLACED ALONG THE PERIMETER OF THE TRENCH BORROW AREA WHERE THE SLOPES EXCEED 2 FOOT HORIZONTAL TO 1 FOOT VERTICAL (2:1).

9. FINISHED GRADING SHALL BE COMPLETED, CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING, INCLUDING ADJACENT TRANSITION AREAS. PROVIDE A SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCES, WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS AND EXISTING GRADES. AREAS THAT HAVE BEEN FINISHED GRADED SHALL BE PROTECTED FROM SUBSEQUENT CONSTRUCTION OPERATIONS, TRAFFIC AND EROSION. REPAIR ALL AREAS THAT HAVE BECOME RUTTED, ERODED OR HAS SETTLED BELOW THE CORRECT GRADE. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION OR TO THE REQUIREMENTS OF THE NEW WORK. CONTRACTOR MUST REGRADE/RECOMPACT ACCESS ROAD AS FINAL RESTORATION.

10. TOLERANCES
    10.a. THE EQUIPMENT PAD SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.10 FOOT ABOVE, OR 0.10 FOOT BELOW, THE PRESCRIBED ELEVATION AT ANY POINT WHERE MEASUREMENT IS MADE.

11. CONTRACTOR SHALL USE THE PROPOSED ACCESS ROADS FOR HAULING OF MATERIALS REQUIRED TO COMPLETE THE SOLAR INSTALLATION. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE GOVERNING AUTHORITY OF EACH PUBLIC ROADWAY. FOR OFFSITE MATERIAL TRANSPORT CONTRACTOR SHALL POST WHATEVER SECURITY, AND COMPLY WITH ALL CONDITIONS WHICH ARE REQUIRED BY EACH GOVERNING AUTHORITY OF EACH ROADWAY.

12. WETLAND AREAS DESIGNATED TO BE PROTECTED SHALL BE AVOIDED. ANY WETLAND AREAS DAMAGED BY SITE OPERATIONS SHALL BE RESTORED AS REQUIRED BY THE JURISDICTIONAL AGENCY.

ZONING REQUIREMENTS

1. APPROVALS

   A. MEDEP STORMWATER PERMIT BY RULE DATED XXXXXXX XX, 2021 (#XXXXX).
   B. MEDEP NOTICE OF INTENT APPROVAL DATED XXXXXXX XX, 2021 (#XXXXX).
   C. RANDOLPH SITE PLAN APPROVAL DATED XXXXXXXXXXXX.
   D. MAINE DOT ACCESS PERMIT#XXXXXXXX DATED XXXXX XX, 2021.
   E. MEDEP SECTION 401 PERMIT FOR XXX SF OF WETLAND IMPACT. PERMIT #_____ DATED _____.
   F. ARMY CORPS OF ENGINEERS (ACOE) MAINE GENERAL PERMIT #XXXXXXXXXXX DATED XXXXXXX XX, 2021. THE ACOE ISSUED A CLARIFICATION LETTER DATED XXXX XX, 2021.

2. ZONING DISTRICTS SUMMARY

   GENERAL ZONING DISTRICT: RURAL FARM RESIDENTIAL DISTRICT (RF)
   OVERLAY ZONING DISTRICT: NONE

3. DIMENSIONAL STANDARDS

   RURAL FARM RESIDENTIAL DISTRICT

	REQUIRED	PROVIDED
FRONT YARD SETBACK	50	XX
SIDE YARD SETBACK	50	XX
REAR YARD SETBACK	50	XX
STRUCTURE HEIGHT, MAX	N/A	12

4. PROJECT SCHEDULE

   SPECIFICS OF HOW WORK IS TO BE COMPLETED SHALL ALSO BE BASED ON ENVIRONMENTAL CONSIDERATIONS ASSOCIATED WITH SEASONAL CHANGES. THE FOLLOWING DATES ARE PROVIDED TO ESTABLISH A GENERAL GUIDELINE FOR THESE SEASONS:

WINTER	NOVEMBER 1 TO MARCH 15
MUD SEASON	MARCH 20 TO APRIL 30
SPRING	MAY 1 TO JUNE 21
SUMMER	JUNE 22 TO SEPTEMBER 21
FALL	SEPTEMBER 22 TO OCTOBER 31

EARTHWORK NOTES

1. SITE CLEARING AND GRUBBING IS AS FOLLOWS:

   1.a. STANDARD CLEARING AND GRUBBING: SUBCONTRACTOR SHALL CLEAR AND GRUB ALL AREAS (EXCEPT IN WETLANDS) OF PROJECT SITE WITHIN PERIMETER FENCING, REMOVING ALL VEGETATION HIGHER THAN 3" AND OTHER DELETERIOUS MATERIALS. SUBCONTRACTOR SHALL GRADE OUT MINOR TOPOGRAPHIC UNDULATIONS, MOUNDS, AND DEPRESSIONS, AS NECESSARY, TO PRODUCE A SMOOTH, SAFE WORKING SURFACE FOR PLANT CONSTRUCTION AND OPERATIONS.

   1.b. TEMPORARY WETLAND DISTURBANCE: SUBCONTRACTOR MAY PERFORM TEMPORARY WETLAND DISTURBANCES WHICH SHALL INCLUDE CLEARING BUT NOT STUMP REMOVAL. THESE INDIRECT WETLAND DISTURBANCES MAY OCCUR WITHIN PERIMETER FENCING OR JUST OUTSIDE OF PERIMETER FENCING FOR SHADE MANAGEMENT PURPOSES.

   1.c. PERMANENT WETLAND DISTURBANCE: WHERE EXPLICITLY APPROVED AND NECESSARY, THE SUBCONTRACTOR MAY PERFORM CLEARING AND GRUBBING WITHIN WETLANDS. THIS MAY ALSO COME IN THE FORM OF GRADING WITHIN WETLANDS. GRADING OR GRUBBING WITHIN WETLANDS SHALL BE CONSIDERED A PERMANENT WETLAND IMPACT AND SHALL COUNT TOWARDS THE TOTAL DIRECT IMPACTS ALLOWED BY THE AUTHORITY HAVING JURISDICTION.

   1.d. SUBCONTRACTOR SHALL CLEAR AND GRUB, STRIP AND REMOVE TOPSOIL, VEGETATION, AND OTHER DELETERIOUS ORGANIC MATERIAL FROM PROPOSED EQUIPMENT PADS, ROADWAYS, AND AREAS TO RECEIVE FILL. STOCKPILE TOPSOIL AND IMMEDIATELY STABILIZE UNTIL RE-SPREAD FOR USE TO RE-VEGETATE DISTURBED AREAS AFTER GRADING OPERATIONS ARE COMPLETE.

2. SUBGRADE PREPARATION FOR EQUIPMENT PADS, SPREAD FOOTINGS, AND ROADWAYS IS AS FOLLOWS:

   2.a. SCARIFY TO A MINIMUM DEPTH OF 12 INCHES.
   2.b. MOISTURE CONDITION SOILS TO BETWEEN 1% BELOW AND 3% ABOVE OPTIMUM MOISTURE CONTENT.
   2.c. COMPACT TO A MINIMUM OF 95% OF STANDARD PROCTOR MAXIMUM DENSITY. EXCAVATION SHALL EXTEND 5' BEYOND EXTENTS OF IMPROVEMENTS FOR PADS OR FOOTINGS.
   2.d. PROOF ROLL WITH FULLY LOADED DUMP TRUCK OR OTHER SIMILARLY WEIGHTED PNEUMATIC TIRED EQUIPMENT.
   2.e. UNSTABLE AREAS IDENTIFIED DURING PROOF ROLL SHOULD BE EXCAVATED A MINIMUM OF 12 INCHES AND RE-STABILIZED.

3. SUBGRADE PREPARATION FOR NON-STRUCTURAL FILL AREAS SHALL CONSIST OF COMPACTION TO 90% OF STANDARD PROCTOR MAXIMUM DENSITY.

FILL PLACEMENT

1. ENGINEERED FILL - SOILS CLASSIFIED AS GW, GP, GM, GC, SW, SP, SM, SC, ML, AND CL BY THE USCS ARE ACCEPTABLE FOR USE AS STRUCTURAL FILL. MOST ON-SITE SOILS ARE EXPECTED TO BE SUITABLE FOR USE AS ENGINEERED FILL IF THEY ARE FREE OF ORGANIC SOIL AND DEBRIS.
2. SELECT GRANULAR FILL - GRANULAR, WELL GRADED MATERIAL WITH NO ORGANICS, A MAXIMUM PARTICLE SIZE OF 2 INCHES, AND LESS THAN 12 PERCENT PASSING THE U.S. NO. 200 SEIVE.
3. IN THE EVENT CLAY FILL IS ENCOUNTERED, CLAY FILL SHALL BE MOISTENED TO BETWEEN 1 PERCENT BELOW AND 3 PERCENT ABOVE OPTIMUM MOISTURE CONTENT. SAND FILL SHALL BE MOISTENED TO BETWEEN 3 PERCENT BELOW AND 3 PERCENT ABOVE OPTIMUM MOISTURE CONTENT.
4. FILL SHALL BE PLACED IN LIFTS OF LESS THAN 8 INCHES LOOSE DEPTH AND COMPACTED TO AT LEAST 90% OF STANDARD PROCTOR MAXIMUM DENSITY PER ASTM D698.
5. TRENCH BACKFILL FOR PROPOSED CULVERT OR POND OUTLET SHALL BE COMPACTED TO AT LEAST 85 PERCENT OF STANDARD PROCTOR MAXIMUM DENSITY, EXCEPT IN STRUCTURAL AREAS WHICH SHALL BE COMPACTED TO 95 PERCENT.

EARTHWORK BALANCE

THE INTENTION OF THE GRADING DESIGN IS TO BALANCE THE EARTHWORK ON SITE WITHOUT THE NEED FOR IMPORT OR EXPORT. THE CONTRACTOR SHALL FIELD ADJUST CUT AND FILL AS NECESSARY TO CREATE A BALANCED SITE WITHOUT NEGATIVELY IMPACTING DRAINAGE PATTERNS OR INCREASING MAXIMUM SLOPES.

AGGREGATES

1. AGGREGATE BASE AND COARSE AGGREGATE SHALL BE MOISTENED TO WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT AND COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR MAXIMUM DENSITY. PROOF ROLL WITH FULLY LOADED DUMP TRUCK OR OTHER SIMILARLY WEIGHTED PNEUMATIC TIRED EQUIPMENT.

   AGGREGATE GRADATION - SHALL COMPLY WITH THE GRADATION REQUIREMENTS OF TABLE 3138-3, CLASS 5, OF SECTION 3126 "AGGREGATE", OF THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

   RIP RAP GRADATION - SHALL COMPLY WITH THE GRADATION REQUIREMENTS OF CLASS 1 RIP RAP, SECTION 3601 OF THE MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

GEOTEXTILE FABRIC

IF SITE CONDITIONS WARRANT USE OF A GEOTEXTILE FABRIC, CONTRACTOR SHALL USE TENSAR BX1100 OR EQUAL, PER GEOTECH REPORT.

EROSION CONTROL BLANKET

EROSION CONTROL BLANKET SHALL CONFORM TO MNDOT APPROVED/QUALIFIED PRODUCTS LIST, EROSION CONTROL BLANKETS, CATEGORY 3.

TESTING REQUIREMENT NOTES

DEFINITION

1. CONTRACTOR SHALL COMPLETE THE SITE GRADING CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER'S SOILS ENGINEER. ALL SOIL TESTING SHALL BE COMPLETED BY THE OWNER'S SOILS ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE SOILS ENGINEER.

2. SUBGRAGE PROOFROLLING TEST SHALL BE CONSIDERED ACCEPTABLE IF RUTTING IS NO GREATER THAN 3", AND NO "PUMPING" OF THE SOIL BEHIND THE PROOF ROLL.

3. STANDARD PROCTOR DENSITY TESTS SHALL BE IN CONFORMANCE WITH ASTM D698.

4. SOIL DENSITY IN PLACE TESTING SHALL BE IN CONFORMANCE WITH ASTM D2922.

5. MOISTURE CONTENT TEST OF IN PLACE SOIL SHALL BE IN CONFORMANCE WITH ASTM D3017.

EXECUTION

1. COMPACTED SUBGRADE IN STRUCTURAL AREAS SHALL BE TESTED AS FOLLOWS:

   1.1. ONE TEST PER 200 LF OF ROAD.

   1.2. ONE TEST PER ELECTRICAL EQUIPMENT PAD

2. FILL MATERIAL SHALL BE TESTED AT A MINIMUM ONCE PER SOIL TYPE FOR GRAIN SIZE, SOIL CLASSIFICATION, PROCTOR TESTS, AND MOISTURE CONTENT. FILL PLACEMENT SHALL BE TESTED FOR DENSITY AT A MINIMUM OF ONE TEST PER 2,500 SF PER LIFT.

3. AGGREGATE BASE DENSITY SHALL BE TESTED BY PROOF ROLLING WITH A FULLY LOADED DUMP TRUCK (MINIMUM GROSS WEIGHT OF 25 TONS) OR OTHER SIMILARLY WEIGHTED PNEUMATIC TIRED EQUIPMENT. AGGREGATE PROOFROLLING TEST SHALL BE CONSIDERED ACCEPTABLE IF RUTTING IS NO GREATER THAN 3".

   3.1. AT THE COMPLETION OF CONSTRUCTION, RE-GRADE AGGREGATE ROAD SURFACES TO DESIGNED SURFACE PROFILE, ELIMINATING RUTS CAUSED BY CONSTRUCTION TRAFFIC.

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Landowner
CLAUDE F DAIGLE JR.

GORHAM, ME

Project
ME GORHAM DAIGLE CSG LLC

Location
N43.7267°, W70.4428°

Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Maine

PRELIMINARY NOT FOR CONSTRUCTION

SCOTT GEDDES, P.E.
Registration No. 16864 Date: MONTH/DAY/YEAR

If applicable, contact us for a wet signed copy of this plan which is available upon request at Novel Energy Solutions - St. Paul, MN office.

Summary

Designed: DAP Drawn: DAP
Approved: SEG Project: 22 458. 08
Phase: PERMITTING Initial Issue: 2/16/23

Revisions

No.	Date	By	Chk	Description
1	XX/XX	AAA	AAA	DESCRIPTION
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Sheet Title
NOTES

Sheet No. Revision
C1.02 IFP

Project No. GRHM

Feb 17, 2023 - 11:47am - GRHM-CIVBASE.dwg

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Sheet Title
EXISTING CONDITIONS

Sheet No. Revision
C2.01 IFP

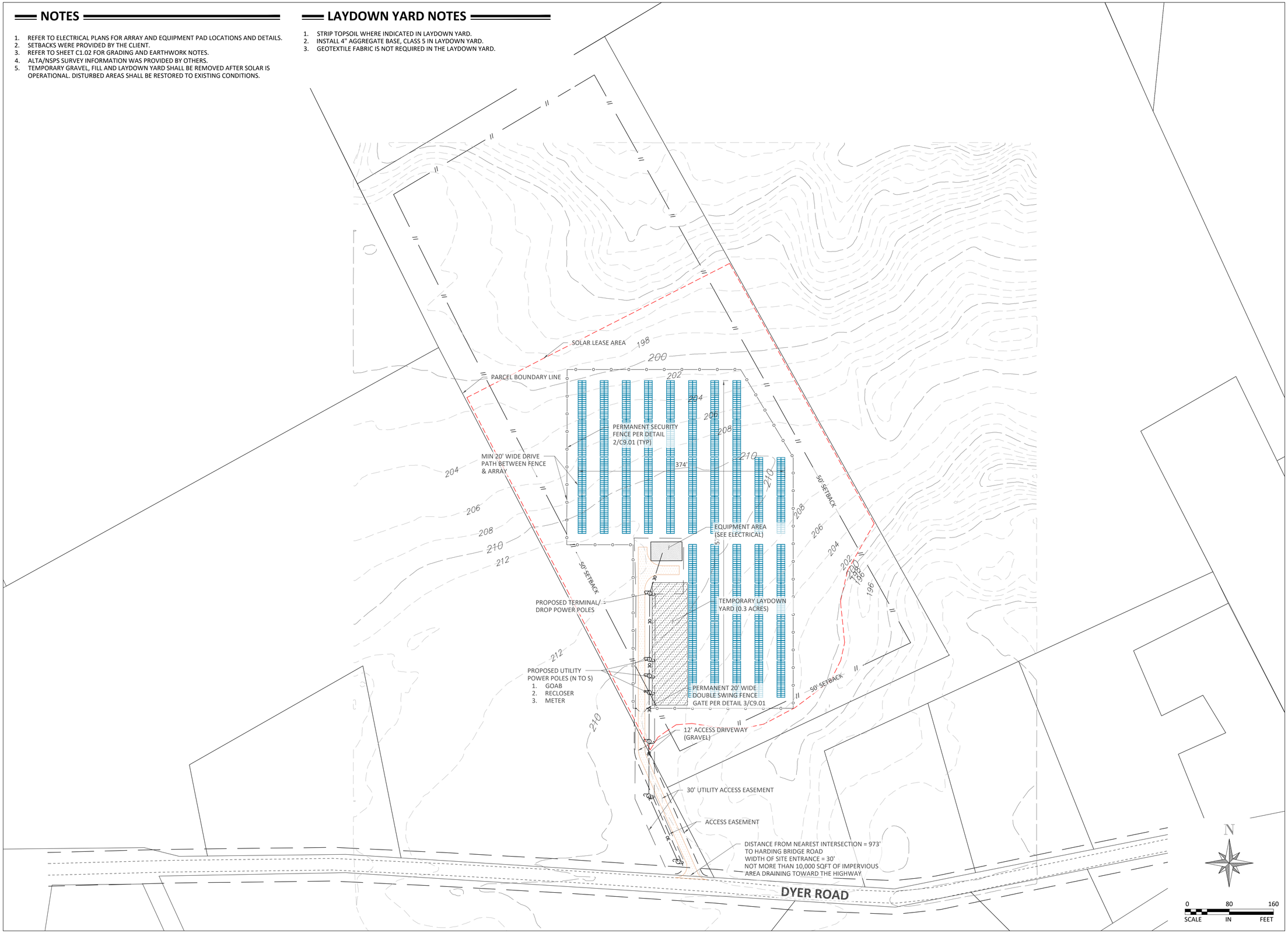
Project No.
GRHM

NOTES

1. REFER TO ELECTRICAL PLANS FOR ARRAY AND EQUIPMENT PAD LOCATIONS AND DETAILS.
2. SETBACKS WERE PROVIDED BY THE CLIENT.
3. REFER TO SHEET C1.02 FOR GRADING AND EARTHWORK NOTES.
4. ALTA/NSPS SURVEY INFORMATION WAS PROVIDED BY OTHERS.
5. TEMPORARY GRAVEL, FILL AND LAYDOWN YARD SHALL BE REMOVED AFTER SOLAR IS OPERATIONAL. DISTURBED AREAS SHALL BE RESTORED TO EXISTING CONDITIONS.

LAYDOWN YARD NOTES

1. STRIP TOPSOIL WHERE INDICATED IN LAYDOWN YARD.
2. INSTALL 4" AGGREGATE BASE, CLASS 5 IN LAYDOWN YARD.
3. GEOTEXTILE FABRIC IS NOT REQUIRED IN THE LAYDOWN YARD.



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Sheet Title
SITE PLAN

Sheet No. Revision
C3.01 IFP

Project No. GRHM

STORMWATER BASIN NOTES

1. IF CONSTRUCTION REQUIRES A BASIN TO BE CONSTRUCTED TO FINAL GRADE PRIOR TO FINAL STABILIZATION, THE CONTRACTOR SHALL EMPLOY RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS TO KEEP SEDIMENT AND RUNOFF AWAY FROM THE BASIN.
2. IF THE SOLAR ARRAY IS LOCATED WITHIN THE BASIN AND REQUIRES CONSTRUCTION EQUIPMENT TO DRIVE WITHIN THE BASIN, THE CONTRACTOR SHALL BE REQUIRED TO CLEAN OUT ANY SEDIMENT AND RIP THE SOILS TO A MINUIMUM OF 12" DEEP TO LOOSEN THE COMPACTED SOIL AND RE-GRADE WITH EQUIPMENT SIMILAR TO A RUBBER TRACKED SKID LOADER PRIOR TO SEED AND MULCH.
3. MARK EDGE OF BASINS WITH IDENTIFYING FLAGS, STAKES, OR EQUIVALENT.

EROSION CONTROL QUANTITIES

ITEM	QUANTITY	UNIT
SILT FENCE	1980	LF
BIO-ROLL	0	LF
CONSTRUCTION ENTRANCE	1	EA
EROSION CONTROL BLANKET*	0	SY

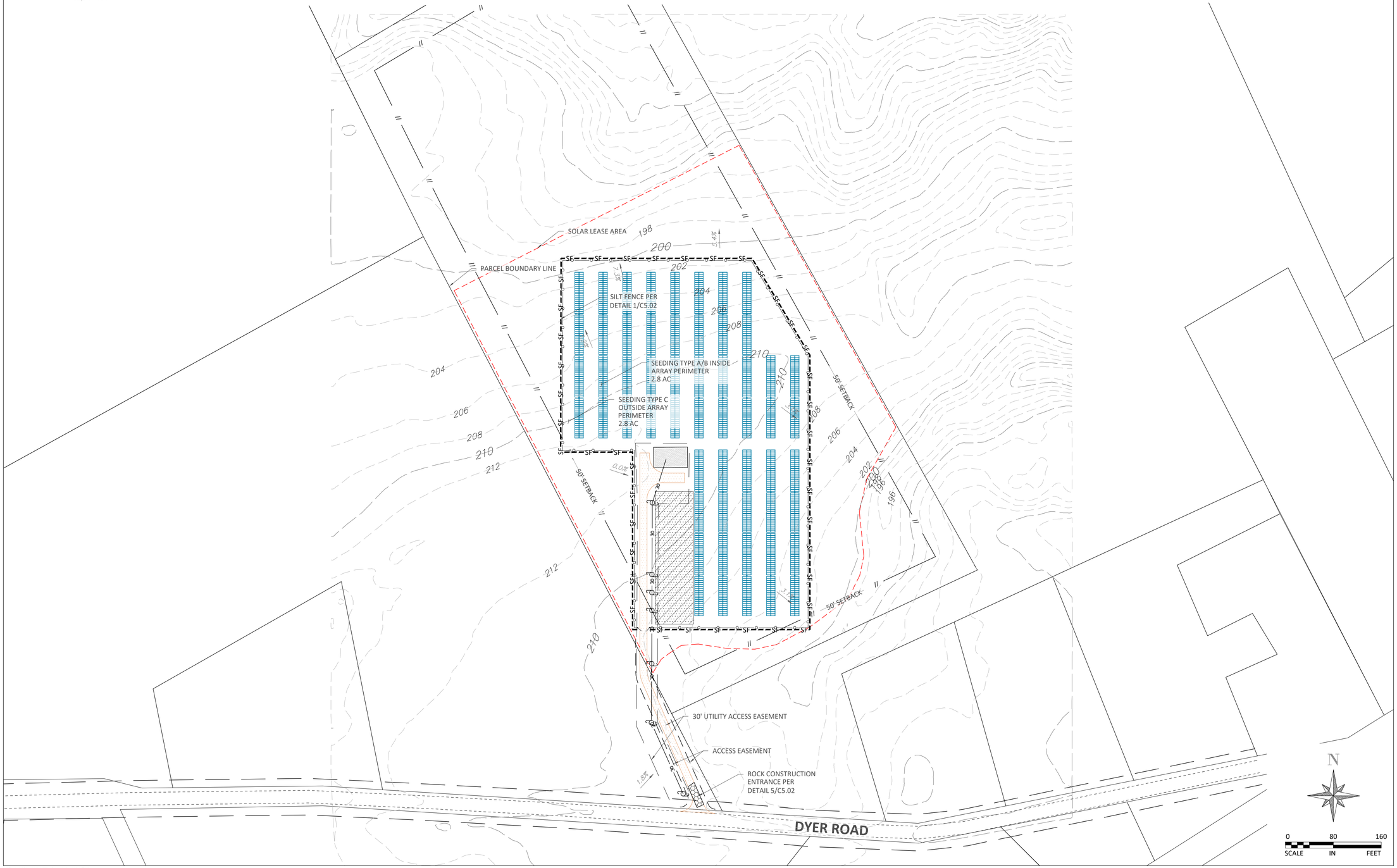
*EROSION CONTROL BLANKET CAN BE ADDED AT THE END OF CONSTRUCTION

CIVIL IMPACT QUANTITIES

ITEM	SQFT	ACRES
IMPERVIOUS AREA	10,170	0.23
DEVELOPED AREA	10,170	0.23
OCCUPIED AREA	208,000	4.78
TREE REMOVAL AREA	0	0.00
TEMP WETLAND IMPACT AREA	0	0.00
PERM WETLAND IMPACT AREA	0	0.00
FENCED AREA	208,000	4.78

NOTES

1. REFER TO SHEET C5.02 FOR EROSION CONTROL NOTES AND DETAILS.
2. DUST CONTROL MUST BE PROVIDED ON GRAVEL ROAD DURING CONSTRUCTION.



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Sheet Title
EROSION CONTROL PLAN

Sheet No. Revision
C5.01 IFP

Project No. GRHM

SEQUENCE OF CONSTRUCTION

1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
2. CONSTRUCT THE SILT FENCES ON THE SITE.
3. INSTALL RIPRAP AROUND OUTLET STRUCTURES.
4. PREPARE SITE FOR CONSTRUCTION.
5. PILE DRIVING FOR SOLAR FEATURES, AND TRENCHING FOR UNDERGROUND UTILITIES WILL COMMENCE, AND CONCRETE PADS WILL BE POURED.
6. RACKING AND SOLAR MODULES WILL BE INSTALLED ON PILES.
7. COVER ACCESS ROAD WITH GRAVEL.
8. RESTABILIZE DISTURBED AREAS.
9. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER SITE HAS BEEN STABILIZED, IF REQUIRED BY CONTRACT.

EROSION CONTROL NOTES

1. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME. WHERE A CONFLICT EXISTS BETWEEN LOCAL JURISDICTIONAL STANDARD SPECIFICATIONS AND NES STANDARD SPECIFICATIONS, THE MORE STRINGENT SPECIFICATION SHALL APPLY.

2. THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS COMPRISED OF THIS DRAWING (EROSION & SEDIMENTATION CONTROL PLAN-ESC PLAN), THE STANDARD DETAILS, THE PLAN NARRATIVE, AND ITS APPENDICES, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING & SUBMITTING THE APPLICATION FOR THE GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE SWPPP AND THE STATE OF MAINE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THE CONTENTS. THE SWPPP AND ALL OTHER RELATED DOCUMENTS MUST BE KEPT AT THE SITE DURING CONSTRUCTION.

4. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED BY THE SWPPP & PERMITS. CONTRACTOR SHALL OVERSEE THE INSPECTION & MAINTENANCE OF THE BMP'S AND EROSION PREVENTION FROM BEGINNING OF CONSTRUCTION AND UNTIL CONSTRUCTION IS COMPLETED, IS APPROVED BY ALL AUTHORITIES, AND THE NOTICE OF TERMINATION (NOT) HAS BEEN FILED WITH THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION BY EITHER THE OWNER OR OPERATOR AS APPROVED ON PERMIT. ADDITIONAL BMP'S SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

5. BMP'S AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

6. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THESE PLANS SHALL BE CLEARLY DELINEATED (E.G. WITH FLAGS, STAKES, SIGNS, SILT FENCE, ETC.) ON THE DEVELOPMENT SITE BEFORE WORK BEGINS. GROUND DISTURBING ACTIVITIES MUST NOT OCCUR OUTSIDE THE LIMITS OF DISTURBANCE.

7. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.

8. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) MUST BE LIMITED TO A DEFINED AREA OF THE SITE AND SHALL BE CONTAINED AND PROPERLY TREATED OR DISPOSED. NO ENGINE DEGREASING IS ALLOWED ON SITE.

9. ALL LIQUID AND SOLID WASTES GENERATED BY CONCRETE WASHOUT OPERATIONS MUST BE CONTAINED IN A LEAK-PROOF CONTAINMENT FACILITY OR IMPERMEABLE LINER. A COMPACTED CLAY LINER IS NOT ACCEPTABLE. THE LIQUID AND SOLID WASTES MUST NOT CONTACT THE GROUND, AND THERE MUST NOT BE RUNOFF FROM THE CONCRETE WASHOUT OPERATIONS OR AREAS. LIQUID AND SOLID WASTES MUST BE DISPOSED OF PROPERLY AND IN COMPLIANCE WITH STATE REGULATIONS. A SIGN MUST BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES. SELF-CONTAINED CONCRETE WASHOUTS ON CONCRETE DELIVERY TRUCKS ARE ALLOWED.

10. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

11. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

12. SOLID WASTE: COLLECTED SEDIMENT, ASPHALT & CONCRETE MILLINGS, FLOATING DEBRIS, PAPER, PLASTIC, FABRIC, CONSTRUCTION & DEMOLITION DEBRIS & OTHER WASTES MUST BE DISPOSED OF PROPERLY & MUST COMPLY WITH STATE DISPOSAL REQUIREMENTS.

13. HAZARDOUS MATERIALS: OIL, GASOLINE, PAINT & ANY HAZARDOUS SUBSTANCES MUST BE PROPERLY STORED, INCLUDING SECONDARY CONTAINMENT, TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. RESTRICTED ACCESS TO STORAGE AREAS MUST BE PROVIDED TO PREVENT VANDALISM. STORAGE & DISPOSAL OF HAZARDOUS WASTE MUST BE IN COMPLIANCE WITH STATE REGULATIONS.

14. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE SWPPP, SHALL BE INITIATED AS SOON AS PRACTICABLE AND PRIOR TO SOIL DISTURBING ACTIVITIES UP-SLOPE.

15. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED SHALL BE TEMPORARILY SEEDED, WITHIN 14 DAYS OF INACTIVITY. SEEDING MIXES, METHOD AND APPLICATION RATE SHALL CONFORM TO SPECIFICATION CONTAINED WITHIN THIS PLAN. TEMPORARY MULCH SHALL BE APPLIED. ALTERNATIVELY, HYDRAULIC SOIL STABILIZER MAY BE USED IN PLACE OF TEMPORARY MULCH.

16. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED. THESE AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE TIME TABLE DESCRIBED ABOVE. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN FOR VEGETATIVE COVER.

17. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM CONVEYANCES & FROM TEMPORARY SEDIMENTATION BASINS THAT ARE TO BE USED AS PERMANENT WATER QUALITY MANAGEMENT BASINS. SEDIMENT MUST BE STABILIZED TO PREVENT IT FROM BEING WASHED BACK INTO THE BASIN, CONVEYANCES, OR DRAINAGE-WAYS DISCHARGING OFF-SITE OR TO SURFACE WATERS. THE CLEAN-OUT OF PERMANENT BASINS MUST BE SUFFICIENT TO RETURN THE BASIN TO DESIGN CAPACITY.

18. ON-SITE & OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BMP'S. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

19. TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS & CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB & GUTTER SYSTEMS OR CONDUITS & DITCHES.

20. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

21. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, CHECK DAMS, INLET PROTECTION DEVICES, ETC.) TO PREVENT EROSION.

22. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

MAINTENANCE NOTES

ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. THE DESIGNATED CONTACT PERSON NOTED ON THIS PLAN MUST ROUTINELY INSPECT THE CONSTRUCTION ON SITE ONCE EVERY SEVEN DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. ALL SILT FENCES MUST BE REPAIRED, REPLACED, OR SUPPLEMENTED WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/3 OF THE HEIGHT OF THE FENCE. THESE REPAIRS MUST BE MADE WITHIN 24 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS.

2. TEMPORARY AND PERMANENT SEDIMENTATION BASINS MUST BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY, OR AS SOON AS FIELD CONDITIONS ALLOW ACCESS (SEE PART IV.D. OF THE GENERAL PERMIT).

3. SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS, MUST BE INSPECTED FOR EVIDENCE OF SEDIMENT BEING DEPOSITED BY EROSION. CONTRACTOR MUST REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS, AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. THE REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. CONTRACTOR SHALL USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) CALENDAR DAYS OF OBTAINING ACCESS. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK.

4. CONSTRUCTION SITE VEHICLE EXIT LOCATIONS MUST BE INSPECTED FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING ONTO PAVED SURFACES. TRACKED SEDIMENT MUST BE REMOVED FROM ALL OFF-SITE PAVED SURFACES, WITHIN 24 HOURS OF DISCOVERY, OR IF APPLICABLE, WITHIN A SHORTER TIME TO COMPLY WITH PART IV.C.6 OF THE GENERAL PERMIT.

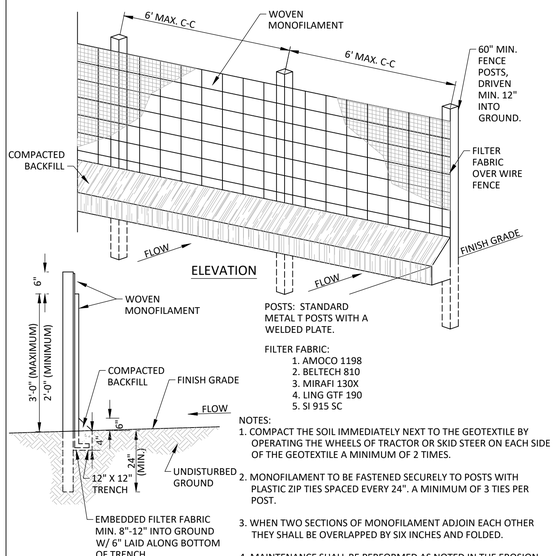
5. CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT BMPS, AS WELL AS ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS, FOR THE DURATION OF THE CONSTRUCTION WORK AT THE SITE. THE PERMITTEE(S) ARE RESPONSIBLE UNTIL ANOTHER PERMITTEE HAS ASSUMED CONTROL (ACCORDING TO PART II.B.5 OF THE MPCA GENERAL PERMIT) OVER ALL AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED OR THE SITE HAS UNDERGONE FINAL STABILIZATION, AND A (N.O.T.) HAS BEEN SUBMITTED TO THE MPCA.

6. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED IN A MANNER AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT IN STREETS COULD BE WASHED INTO STORM SEWERS BY THE NEXT RAIN AND/OR POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS).

7. ALL INFILTRATION AREAS MUST BE INSPECTED TO ENSURE THAT NO SEDIMENT FROM ONGOING CONSTRUCTION ACTIVITIES IS REACHING THE INFILTRATION AREA AND THESE AREAS ARE PROTECTED FROM COMPACTION DUE TO CONSTRUCTION EQUIPMENT DRIVING ACROSS THE INFILTRATION AREA.

1 MACHINE SLICED SILT FENCE

N.T.S.



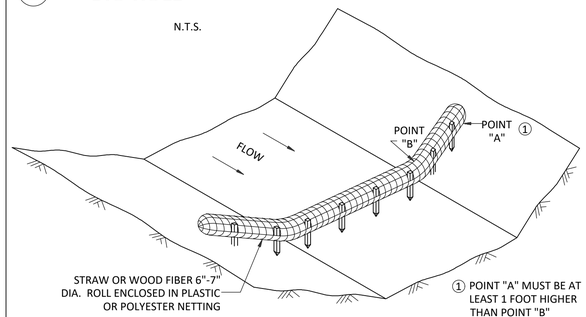
POSTS: STANDARD METAL T POSTS WITH A WELDED PLATE.

FILTER FABRIC:
1. AMOCO 1198
2. BELTECH 810
3. MIRAFI 130X
4. LING GTF 190
5. SI 915 SC

NOTES:
1. COMPACT THE SOIL IMMEDIATELY NEXT TO THE GEOTEXTILE BY OPERATING THE WHEELS OF TRACTOR OR SKID STEER ON EACH SIDE OF THE GEOTEXTILE A MINIMUM OF 2 TIMES.
2. MONOFILAMENT TO BE FASTENED SECURELY TO POSTS WITH PLASTIC ZIP TIES SPACED EVERY 24". A MINIMUM OF 3 TIES PER POST.
3. WHEN TWO SECTIONS OF MONOFILAMENT ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

2 BIO ROLL

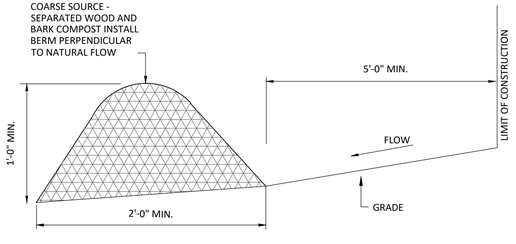
N.T.S.



(1) POINT "A" MUST BE AT LEAST 1 FOOT HIGHER THAN POINT "B"

3 EROSION CONTROL BERM

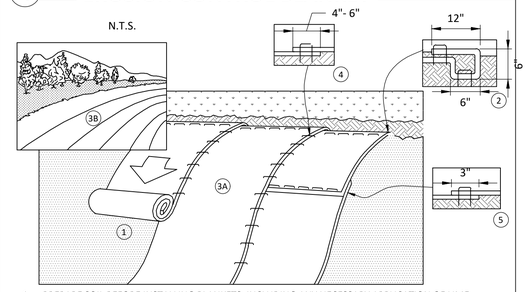
(MAY BE USED AS AN ALTERNATE TO SILT FENCE OR PLACED UPGRADIENT OF SILT FENCE



NOTES:
1. THE EROSION CONTROL MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS.
2. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>4") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS).
3. IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING.
4. THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS).

4 EROSION CONTROL BLANKET

N.T.S.



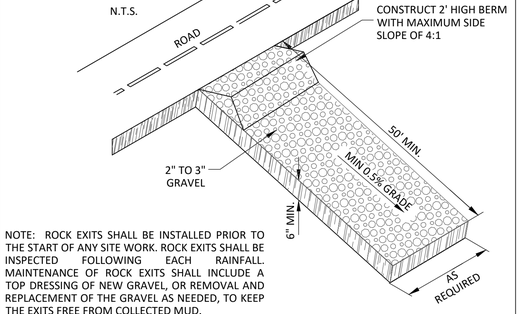
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS PER MANUFACTURES RECOMMENDATION.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 4"-6" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3"OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12"APART ACROSS ENTIRE BLANKET WIDTH.
6. PLACE STAPLES/STAKES PER MANUFACTURE RECOMMENDATION FOR THE APPROPRIATE SLOPE BEING APPLIED.

NOTES:

1. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
2. FOLLOW EROSION CONTROL TECHNOLOGY COUNCIL SPECIFICATION FOR PRODUCT SELECTION

5 ROCK CONSTRUCTION ENTRANCE

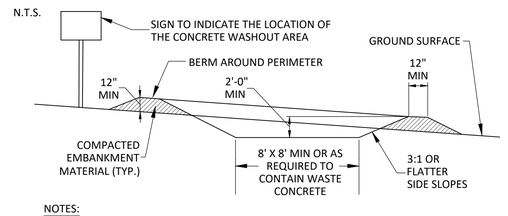
N.T.S.



NOTE: ROCK EXITS SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE WORK. ROCK EXITS SHALL BE INSPECTED FOLLOWING EACH RAINFALL. MAINTENANCE OF ROCK EXITS SHALL INCLUDE A TOP DRESSING OF NEW GRAVEL, OR REMOVAL AND REPLACEMENT OF THE GRAVEL AS NEEDED, TO KEEP THE EXITS FREE FROM COLLECTED MUD.

6 CONCRETE WASHOUT AREA

N.T.S.



NOTES:

1. CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
2. CONCRETE WASHOUT AREA SHALL BE LINED WITH MINIMUM 10 MIL THICK PLASTIC LINER.
3. VEHICLE TRACKING CONTROL IS REQUIRED IF ACCESS TO CONCRETE WASHOUT AREA IS OFF PAVEMENT.
4. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
5. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
6. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN ACCEPTED WASTE SITE.
7. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER ACCEPTED BY THE CITY.

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Landowner
CLAUDE F DAIGLE JR.

GORHAM, ME

Project
ME GORHAM DAIGLE CSG LLC

Location
N43.7267°, W70.4428°

Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Maine.

PRELIMINARY
NOT FOR CONSTRUCTION

SCOTT GEDDES, P.E.
Registration No. 16864 Date: MONTH/DAY/YEAR

If applicable, contact us for a wet signed copy of this plan which is available upon request at Novel Energy Solutions - St. Paul, MN office.

Summary

Designed: DAP Drawn: DAP
Approved: SEG Project: 22 458. 08
Phase: PERMITTING Initial Issue: 2/16/23

Revisions

No.	Date	By	Chk	Description
1	XX/XX	AAA	AAA	DESCRIPTION
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Sheet Title
EROSION CONTROL NOTES & DETAILS

Sheet No. Revision
C5.02 IFP

Project No. GRHM

1 GRAVEL ACCESS ROAD

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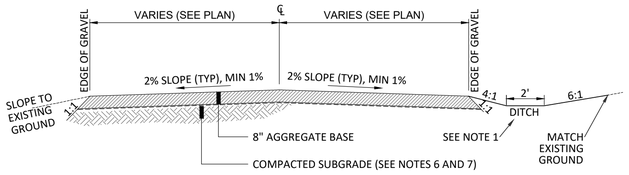
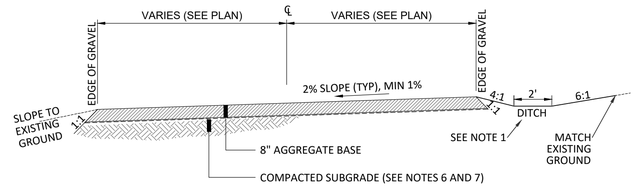


ROAD WITH CROWN



ROAD WITH SUPERELEVATION

NOTES:

1. THE CONTRACTOR SHALL COORDINATE WITH THE DEVELOPER, PRIOR TO CONSTRUCTION, TO DETERMINE IF THE ROAD WILL NEED TO BE CONSTRUCTED PER THIS DETAIL.
2. CONSTRUCT DITCH AS SHOWN ABOVE ONLY WHERE INDICATED BY CONTOURS ON THE GRADING PLAN.
3. IN THE ABSENCE OF A ROADSIDE DITCH, SLOPE FROM EDGE OF GRAVEL TO EXISTING GROUND @3:1.
4. 2% CROSS SLOPE IS TYPICAL, BUT CAN BE ADJUSTED DOWN TO MATCH EXISTING GROUND SLOPE IN ORDER TO PROMOTE CONTINUED SHEET DRAINAGE ACROSS ROAD. CROSS SLOPE SHALL NOT BE LESS THAN 1%.
5. ROAD GRADES ARE TYPICALLY INTENDED TO MATCH ADJACENT GRADE ALLOWING DRAINAGE TO SHEET ON AND OFF OF ROADS EVENLY. CARE SHOULD BE TAKEN TO FIELD ADJUST ROAD GRADES OR DITCH LOCATIONS AS NECESSARY TO PREVENT RUNOFF FROM CONCENTRATING ALONG ROAD EDGES CAUSING EROSION.
6. UNSTABLE AREAS IDENTIFIED DURING PROOF ROLL SHOULD BE EXCAVATED A MINIMUM OF 12 INCHES AND E-STABILIZED. PLACE GRANULAR BACKFILL IN MAXIMUM 12-INCH THICK LOOSE LIFTS. COMPACT TO A MINIMUM OF 95% OF STANDARD MAXIMUM DENSITY.
7. IF SITE CONDITIONS WARRANT USE OF A GEOTEXTILE FABRIC, CONTRACTOR SHALL USE TENSAR BX1100 OR EQUAL, PER GEOTECH REPORT.

2 WOVEN WIRE FENCE DETAIL

N.T.S.

NOTE:

1. SEE SUPPLIER DRAWINGS FOR ADDITIONAL DETAIL.
2. WOVEN WIRE FABRIC SHALL BE GALVANIZED FIXED KNOT FENCE FABRIC WITH 3"X 6" OPENINGS AT BOTTOM.
3. ALL METALLIC PARTS SHALL BE GALVANIZED.
4. TOP WIRE SHALL REACH MIN 8' ABOVE GRADE.
5. MAXIMUM SPACING BETWEEN END POSTS SHALL BE 1,320' WITHOUT ADDITIONAL INLINE BRACES OR PER MANUFACTURER RECOMMENDATION.
6. MANUFACTURER DRAWINGS SHALL SUPERSEDE DETAIL IF CONFLICTS ARE PRESENT. ANY DEVIATIONS SHALL BE SUBMITTED TO THE OWNER FOR REVIEW.

3 SWING GATE

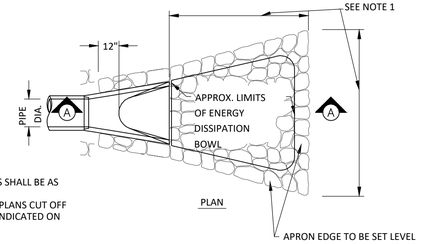
N.T.S.

NOTE:

1. SEE NOTES IN WOVEN WIRE FENCE DETAIL, THIS SHEET.

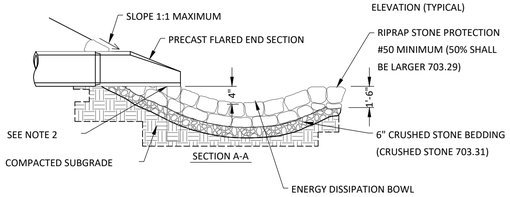
4 FLARED END SECTION/RIP-RAP APRON

N.T.S.



NOTES:

1. ALL RIP RAP DIMENSIONS SHALL BE AS NOTED ON
2. GRAVEL AND DRAINAGE PLANS CUT OFF WALL TO BE POURED IF INDICATED ON THE PLANS



5 GRASS-LINED SWALE

N.T.S.

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Sheet Title
CONSTRUCTION DETAILS

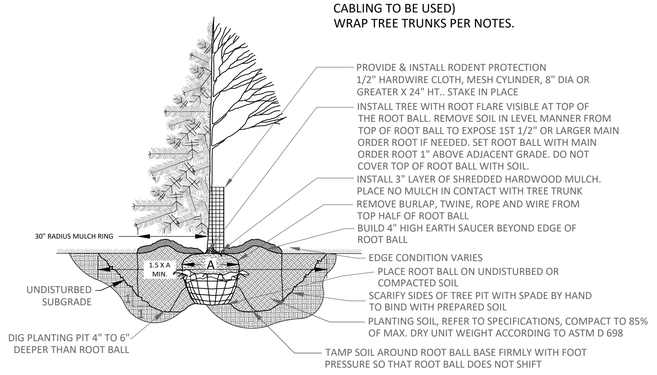
Sheet No. Revision
C9.01 IFP

Project No. GRHM

GENERAL NOTES

1. ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES (BMPS), PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION.
2. THE CONTRACTOR SHALL INSPECT THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS RELATING TO THE NATURE AND SCOPE OF THE WORK.
3. THE CONTRACTOR SHALL VERIFY PLAN LAYOUT AND BRING TO THE ATTENTION OF THE ENGINEER DISCREPANCIES WHICH MAY COMPROMISE THE DESIGN OR INTENT OF THE LAYOUT.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE CODES, REGULATIONS, AND PERMITS GOVERNING THE WORK.
5. THE CONTRACTOR SHALL PROTECT EXISTING ROADS, CURBS/GUTTERS, TRAILS, TREES, LAWNS AND SITE ELEMENTS DURING CONSTRUCTION. DAMAGE TO SAME SHALL BE REPAIRED AND/OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
6. LOCATE AND VERIFY ALL UTILITIES, INCLUDING IRRIGATION LINES, WITH THE OWNER FOR PROPRIETARY UTILITIES AND DIG SAFE 48 HOURS BEFORE DIGGING. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ANY DAMAGES TO SAME. NOTIFY THE ENGINEER OF ANY CONFLICTS TO FACILITATE PLANT RELOCATION.
7. **THE LANDSCAPE CONTRACTOR SHALL COORDINATE THE PHASES OF CONSTRUCTION AND PLANTING INSTALLATION WITH OTHER CONTRACTORS WORKING ON SITE.**
8. THE CONTRACTOR SHALL REVIEW THE SITE FOR DEFICIENCIES IN SITE CONDITIONS WHICH MIGHT NEGATIVELY AFFECT PLANT ESTABLISHMENT, SURVIVAL OR WARRANTY. UNDESIRABLE SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO BEGINNING OF WORK.
9. THE PLAN TAKES PRECEDENCE OVER THE LANDSCAPE LEGEND IF DISCREPANCIES EXIST. QUANTITIES SHOWN IN THE PLANTING SCHEDULE ARE FOR THE CONTRACTOR'S CONVENIENCE. CONTRACTOR TO VERIFY QUANTITIES SHOWN ON THE PLAN.
10. THE SPECIFICATIONS TAKE PRECEDENCE OVER THE PLANTING NOTES AND GENERAL NOTES.
11. EXISTING TREES AND SHRUBS TO REMAIN SHALL BE PROTECTED TO THE DRIP LINE FROM ALL CONSTRUCTION TRAFFIC, STORAGE OF MATERIALS ETC. WITH 4' HT. ORANGE PLASTIC SAFETY FENCING ADEQUATELY SUPPORTED BY FENCE POSTS 6' O.C. MAXIMUM SPACING.
12. LONG-TERM STORAGE OF MATERIALS OR SUPPLIES ON-SITE WILL NOT BE ALLOWED.
13. CONTRACTOR SHALL REQUEST IN WRITING, A FINAL ACCEPTANCE INSPECTION.

NOTE:
CONTRACTOR SHALL MAINTAIN TREES IN A PLUMB POSITION THROUGHOUT THE WARRANTY PERIOD. IF STAKING IS REQUIRED BY SITE CONDITIONS, CONTRACTOR TO USE 2 OR 3 STAKE METHOD WITH 1" WEBBING AROUND TRUNK OF TREE (NO WIRE OR CABLING TO BE USED)
WRAP TREE TRUNKS PER NOTES.



1 C9.02 TREE PLANTING DETAIL

N.T.S. P-01

PLANTING NOTES

1. NO PLANTS SHALL BE INSTALLED UNTIL FINAL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
2. A GRANULAR PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANT BEDS AT THE MANUFACTURERS RECOMMENDED RATE PRIOR TO PLANT INSTALLATION.
3. ALL PLANTING STOCK SHALL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK," ANSI-Z60, LATEST EDITION, OF THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIALS.
4. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE AND BE CONTAINER GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE LANDSCAPE LEGEND.
5. PLANT MATERIALS TO BE INSTALLED PER PLANTING DETAILS.
6. ALL TREES MUST BE STRAIGHT TRUNKED AND FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
7. THE ENGINEER RESERVES THE RIGHT TO REJECT ANY PLANTS WHICH ARE DEEMED UNSATISFACTORY BEFORE, DURING, OR AFTER INSTALLATION.
8. NO SUBSTITUTIONS OF PLANT MATERIAL SHALL BE ACCEPTED UNLESS APPROVED IN WRITING BY THE ENGINEER.
9. ALL PLANT MATERIAL QUANTITIES, SHAPES OF BEDS AND LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN AND ADJUSTED TO CONFORM TO THE EXACT CONDITIONS OF THE SITE. THE ENGINEER SHALL APPROVE THE STAKING LOCATION OF ALL PLANT MATERIALS PRIOR TO INSTALLATION.
10. ALL PLANTING AREAS MUST BE COMPLETELY MULCHED AS SPECIFIED.
11. MULCH: SHREDDED HARDWOOD MULCH, CLEAN AND FREE OF NOXIOUS WEEDS OR OTHER DELETERIOUS MATERIAL, IN ALL MASS PLANTING BEDS AND FOR TREES, UNLESS INDICATED AS ROCK MULCH ON DRAWINGS. SUBMIT SAMPLE TO ENGINEER PRIOR TO DELIVERY ON-SITE FOR APPROVAL. DELIVER MULCH ON DAY OF INSTALLATION. USE 3" FOR SHRUB BEDS, TREE RINGS, AND 3" FOR PERENNIAL/GROUND COVER BEDS, UNLESS OTHERWISE DIRECTED.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MULCHES AND PLANTING SOIL QUANTITIES TO COMPLETE THE WORK SHOWN ON THE PLAN.
13. USE ANTI-DESICCANT (WILTPRUF OR APPROVED EQUAL) ON DECIDUOUS PLANTS MOVED IN LEAF AND FOR EVERGREENS MOVED ANYTIME. APPLY AS PER MANUFACTURER'S INSTRUCTION. ALL EVERGREENS SHALL BE SPRAYED IN THE LATE FALL FOR WINTER PROTECTION DURING WARRANTY PERIOD.
14. WRAP ALL SMOOTH-BARKED DECIDUOUS TREES PLANTED IN THE FALL PRIOR TO DECEMBER 1 AND REMOVE WRAPPING AFTER MAY 1. TREE WRAPPING MATERIAL SHALL BE WHITE TWO-WALLED PLASTIC SHEETING APPLIED FROM TRUNK FLARE TO THE FIRST BRANCH.
15. ALL DECIDUOUS, PINE, AND LARCH PLANTINGS SHALL RECEIVE RODENT PROTECTION.
16. PLANTING SOIL FOR TREES, SHRUBS AND GROUND COVERS: FERTILE FRIABLE LOAM CONTAINING A LIBERAL AMOUNT (4% MIN.) OF HUMUS AND CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. MIXTURE SHALL BE FREE FROM HARDPACK SUBSOIL, STONES, CHEMICALS, NOXIOUS WEEDS, ETC. SOIL MIXTURE SHALL HAVE A PH BETWEEN 6.1 AND 7.5 AND 10-0-10 FERTILIZER AT THE RATE OF 3 POUNDS PER CUBIC YARD. IN PLANTING BEDS INCORPORATE THIS MIXTURE THROUGHOUT THE ENTIRE BED IN A 6" LAYER AND ROTO-TILLING IT INTO THE TOP 12" OF SOIL AT A 1:1 RATIO.ANY PLANT STOCK NOT PLANTED ON DAY OF DELIVERY SHALL BE HEELED IN AND WATERED UNTIL INSTALLATION. PLANTS NOT MAINTAINED IN THIS MANNER WILL BE REJECTED.
17. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THAT EACH EXCAVATED TREE AND SHRUB PIT WILL PERCOLATE PRIOR TO INSTALLING PLANTING MEDIUM AND PLANTS. THE CONTRACTOR SHALL FILL THE BOTTOM OF SELECTED HOLES WITH SIX INCHES OF WATER AND CONFIRM THAT THIS WATER WILL PERCOLATE WITHIN A 24-HOUR PERIOD. IF THE SOIL AT A GIVEN AREA DOES NOT DRAIN PROPERLY, A PVC DRAIN OR GRAVEL SUMP SHALL BE INSTALLED OR THE PLANTING SHALL BE RELOCATED IF DIRECTED BY THE ENGINEER.
18. ALL PLANTS SHALL BE GUARANTEED FOR TWO COMPLETE GROWING SEASONS (APRIL 1 - NOVEMBER 1), UNLESS OTHERWISE SPECIFIED. THE GUARANTEE SHALL COVER THE FULL COST OF REPLACEMENT INCLUDING LABOR AND PLANTS.
19. CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 3 DAYS PRIOR TO PLANNED DELIVERY. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 24 HOURS IN ADVANCE OF BEGINNING PLANT INSTALLATION.
20. SEASONS/TIME OF PLANTING AND SEEDING: NOTE: THE CONTRACTOR MAY ELECT TO PLANT IN OFF-SEASONS ENTIRELY AT HIS/HER RISK.
    - 20.1. DECIDUOUS /B&B: 4/1 - 6/1; 9/21 - 11/1
    - 20.2. EVERGREEN B&B: 4/1 - 5/1; 9/21 - 11/1
    - 20.3. NATIVE MIX SEEDING: 4/15 - 7/20; 9/20-10/20
21. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER EACH PORTION OF THE WORK IS IN PLACE. PLANT MATERIAL SHALL BE PROTECTED AND MAINTAINED UNTIL THE INSTALLATION OF THE PLANTS IS COMPLETE, INSPECTION HAS BEEN MADE, AND PLANTINGS ARE ACCEPTED EXCLUSIVE OF THE GUARANTEE. MAINTENANCE SHALL INCLUDE WATERING, CULTIVATING, MULCHING, REMOVAL OF DEAD MATERIALS, RE-SETTING PLANTS TO PROPER GRADE AND KEEPING PLANTS IN A PLUMB POSITION. AFTER ACCEPTANCE, THE OWNER SHALL ASSUME MAINTENANCE RESPONSIBILITIES. HOWEVER, THE CONTRACTOR SHALL CONTINUE TO BE RESPONSIBLE FOR KEEPING THE TREES PLUMB THROUGHOUT THE GUARANTEE PERIOD.

TREE GENERAL SPECIFICATIONS

1. ALL TREES SHALL HAVE SYMMETRICAL OR BALANCED BRANCHING ON ALL SIDES OF THE TREE.
2. TREES SHALL NOT BE TIPPED PRUNED.
3. TREES SHALL BE FREE OF PHYSICAL DAMAGE FROM SHIPPING AND HANDLING. DAMAGED TREES SHALL BE REJECTED.
4. SUMMER DUG TREES SHALL HAVE ROOTBALL SIZE INCREASED BY 20%

SEED AND MULCH SPECIFICATIONS

SEEDING

TYPE	LOCATION	NAME/SPECIES	SUPPLIER	SEEDING RATE
A/B	BETWEEN AND UNDER SOLAR PANELS	REBEL TALL FESCUE, CHEWINGS FESCUE OR HARD FESCUE		5#/1,000 SF
		ERNMX-129: CONSERVATION SHADE MIX	ERNSTSEED.COM	
C	OUTSIDE OF ARRAY	ERNMX-179: BUTTERFLY & HUMMINGBIRD GARDEN MIX	ERNSTSEED.COM	10#/ACRE
1. BETWEEN DECEMBER 1ST AND APRIL 1ST, EACH TYPE OF SEED SHALL HAVE AN ADDITIONAL 1#/1,000 SF OF WINTER RYEGRASS OR GRAIN RYE GRASS SEED.				
2. IT SHALL BE THE SUB-CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE PROJECT LIMIT OF WORK IS STABILIZED (IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS/REQUIREMENTS/PERMIT APPROVALS) DURING THE LENGTH OF THE PROJECT.				
3. ALL DISTURBED AREAS SHALL BE RESTORED WITH 4" MINIMUM TOPSOIL & SEED PER SEEDING SPECIFICATIONS LISTED IN THS TABLE.				

MULCH

CONDITION	TIMING	MULCH TYPE[2]	APPLICATION RATES[1]
TEMPORARY			
INACTIVE AREAS	IF NO ACTIVITY IN EXPOSED AREAS FOR 7 DAYS, OR PRIOR TO A STORM EVENT	STRAW MULCH OR WOOD FIBER MULCH OR EROSION CONTROL MIX	2 TONS/ACRE 1 TON/ACRE 2" THICK OVER AREA
ALL DISTURBED AREAS OF THE CONSTRUCTION WORKSPACE	APPLY MULCH TO ALL EXPOSED AREAS IF NO ACTIVITY OCCURS WITHIN 30 DAYS. APPLY MULCH AND TEMPORARY SEEDING SOONER WHEN IT CAN BE ANTICIPATED THAT ACTIVITY IS NOT GOING TO OCCUR WITHIN 30 DAYS	STRAW MULCH OR WOOD FIBER MULCH	2 TONS/ACRE 1 TON/ACRE[3]
ALL WORK AREAS EXPOSED ARE TO BE MULCHED DAILY EACH TIME SOIL IS DISTURBED[5]	NOVEMBER 1 - APRIL 15	STRAW MULCH OR WOOD FIBER MULCH	4 TONS/ACRE 2 TONS/ACRE
PERMANENT			
ON ALL EXPOSED AREAS AFTER SEEDING TO STABILIZE THE SOIL SURFACE	PERMANENT GRASS AND/OR LEGUME SEEDING COVERED BY STRAW MULCH ON ALL AREAS THAT HAVE BEEN RESTORED TO FINAL GRADE. THIS DOES NOT APPLY TO AREAS STABILIZED BY OTHER MEANS SUCH AS JUTE MATTING OR PERMANENT EROSION CONTROL MIX	CRIMPED STRAW MULCH OR PAPER MULCH OR WOOD FIBER MULCH	2 TONS/ACRE 1500 LC./ACRE[4] 1 TON/ACRE

NOTES:
1. IN ALL CASES, SUFFICIENT MULCH SHALL BE APPLIED SUCH THAT NO SOIL IS VISIBLE THROUGH THE MULCH.
2. DOUBLE RATE OF WOOD FIBER MULCH WHEN USED IN OR ADJACENT TO CRITICAL AREAS. INCREASE MULCH RATE BY HALF UNDER SOLAR ARRAY DRIP EDGE.
3. STRAW, HAY, OR HYDROMULCH (WOOD FIBER OR PAPER MULCH AS APPROPRIATE) SHALL PROVIDE MINIMUM 90 PERCENT GROUND COVERAGE.
4. PAPER MULCH IS ACCEPTABLE FOR USE DURING THE GROWING SEASON ON SLOPES >30 PERCENT AND IN AREAS WHERE VEGETATION HAS NOT ESTABLISHED WELL, ADDITIONAL HAY MULCH WILL BE ADDED AS A WINTERIZING MEASURE.
5. MULCH MAY NOT BE SPREAD ON TOP OF SNOW.

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ME GORHAM DAIGLE CSG LLC

Location
N43.7267°, W70.4428°

Certification

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed professional ENGINEER under the laws of the state of Maine.

PRELIMINARY NOT FOR CONSTRUCTION

SCOTT GEDDES, P.E.
Registration No. 16864 Date: MONTH/DAY/YEAR

If applicable, contact us for a wet signed copy of this plan which is available upon request at Novel Energy Solutions - St. Paul, MN office.

Summary

Designed: DAP Drawn: DAP
Approved: SEG Project: 22 458. 08
Phase: PERMITTING Initial Issue: 2/16/23

Revisions

No.	Date	By	Chk	Description
1	XX/XX	AAA	AAA	DESCRIPTION
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Sheet Title
LANDSCAPING

Sheet No. Revision
C9.02 IFP

Project No. GRHM

Feb 17, 2023 - 11:47am - GRHM-CIVBASE.dwg

United States Department of Agriculture

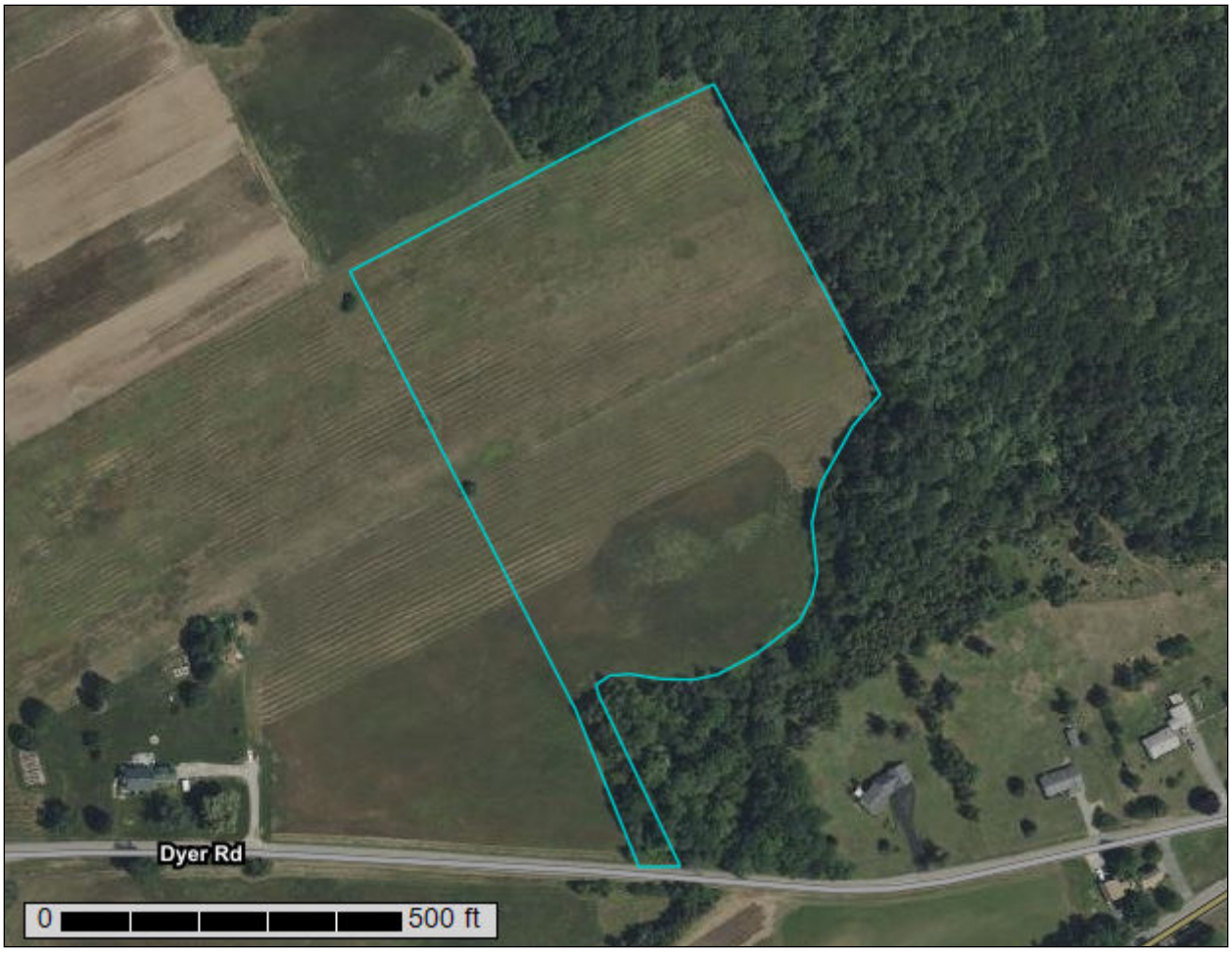
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine

ME Gorham Daigle CSG



March 20, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,040 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 19, Aug 30, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 22, 2021—Oct 7, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BgC2	Nicholville very fine sandy loam, 8 to 15 percent slopes	1.1	11.5%
DeB	Deerfield loamy fine sand, 3 to 8 percent slopes	0.4	4.5%
EmB	Elmwood fine sandy loam, 0 to 8 percent slopes	0.7	7.3%
MkB	Merrimac fine sandy loam, 3 to 8 percent slopes	4.3	43.4%
PbC	Paxton fine sandy loam, 8 to 15 percent slopes	2.9	29.8%
Sz	Swanton fine sandy loam	0.3	3.4%
Totals for Area of Interest		**9.9**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County and Part of Oxford County, Maine

BgC2—Nicholville very fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2yjg6
Elevation: 20 to 2,300 feet
Mean annual precipitation: 34 to 50 inches
Mean annual air temperature: 37 to 45 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Nicholville and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nicholville

Setting

Landform: Lakebeds (relict), eskers
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-silty glaciomarine deposits

Typical profile

Ap - 0 to 7 inches: very fine sandy loam
Bs - 7 to 19 inches: very fine sandy loam
BC - 19 to 30 inches: very fine sandy loam
C - 30 to 65 inches: loamy very fine sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.14 to 1.42 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods)
Hydric soil rating: No

DeB—Deerfield loamy fine sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2xfg9
Elevation: 0 to 1,190 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Deerfield and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Deerfield

Setting

Landform: Kame terraces, outwash plains, outwash terraces, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy outwash derived from granite, gneiss, and/or quartzite

Typical profile

Ap - 0 to 9 inches: loamy fine sand
Bw - 9 to 25 inches: loamy fine sand
BC - 25 to 33 inches: fine sand
Cg - 33 to 60 inches: sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: About 15 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Sodium adsorption ratio, maximum: 11.0
Available water supply, 0 to 60 inches: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A
Ecological site: F144AY027MA - Moist Sandy Outwash
Hydric soil rating: No

EmB—Elmwood fine sandy loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: blh8
Elevation: 10 to 900 feet
Mean annual precipitation: 38 to 55 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 130 to 195 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Elmwood and similar soils: 88 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Elmwood

Setting

Landform: Stream terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 25 inches: sandy loam
H3 - 25 to 65 inches: silty clay loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Ecological site: F144BY402ME - Clay Hills
Hydric soil rating: No

MkB—Merrimac fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyqs
Elevation: 0 to 1,290 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Merrimac and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Kames, eskers, moraines, outwash terraces, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A

Ecological site: F145XY008MA - Dry Outwash
Hydric soil rating: No

PbC—Paxton fine sandy loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: bljg
Elevation: 0 to 1,020 feet
Mean annual precipitation: 48 to 50 inches
Mean annual air temperature: 45 to 46 degrees F
Frost-free period: 145 to 155 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Paxton and similar soils: 86 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Drumlinoid ridges
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Nose slope, crest
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from mica schist

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 20 inches: fine sandy loam
H3 - 20 to 65 inches: fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 18 to 40 inches to densic material
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 30 to 42 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F144BY501ME - Loamy Slope (Northern Hardwoods)
Hydric soil rating: No

Sz—Swanton fine sandy loam

Map Unit Setting

National map unit symbol: blk4
Elevation: 10 to 900 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 39 to 46 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Swanton and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Swanton

Setting

Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy glaciolacustrine deposits

Typical profile

H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 32 inches: fine sandy loam
H3 - 32 to 65 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

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United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

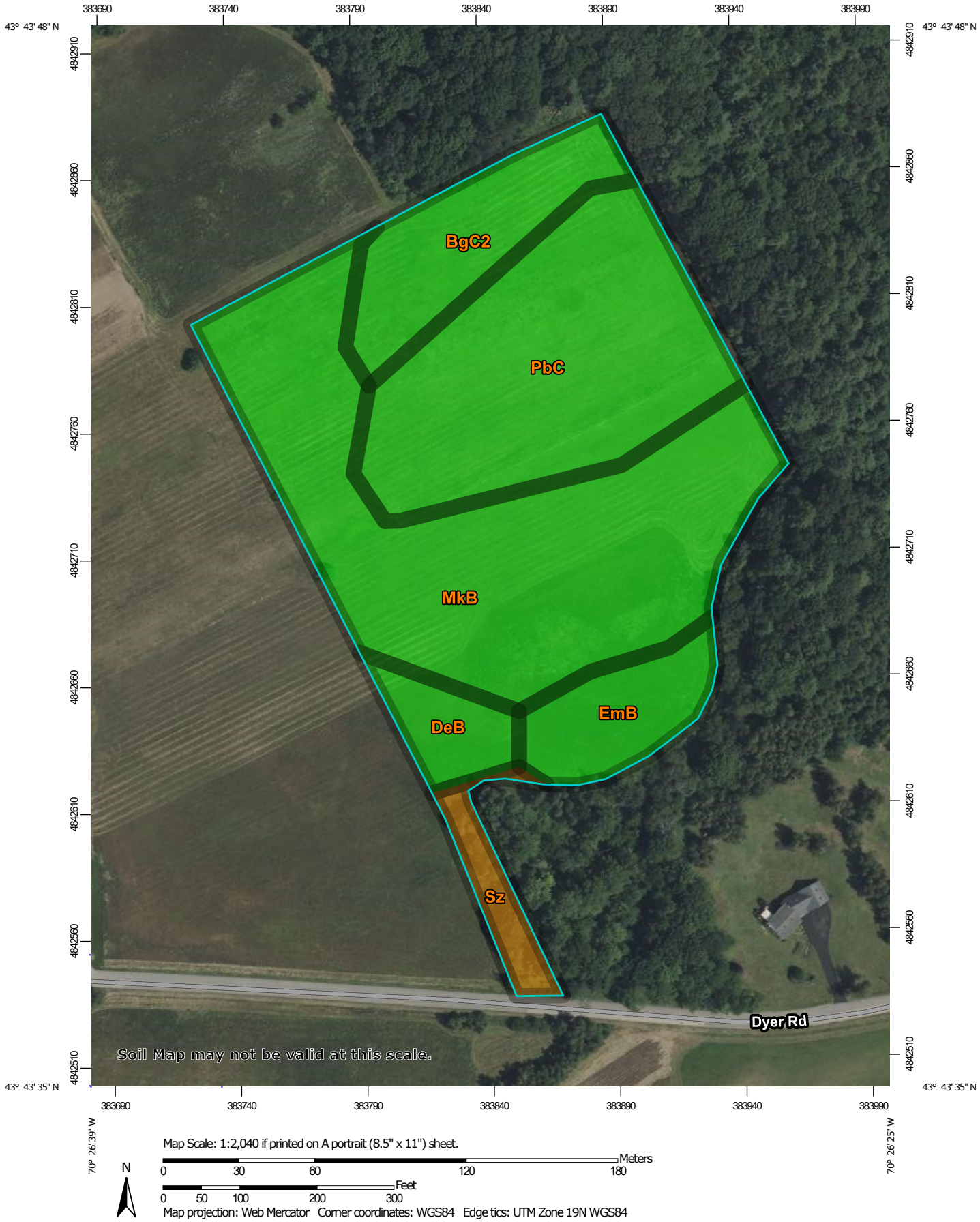
United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Hydric Rating by Map Unit—Cumberland County and Part of Oxford County, Maine
(ME Gorham Daigle CSG)



Map Scale: 1:2,040 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 19, Aug 30, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 22, 2021—Oct 7, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BgC2	Nicholville very fine sandy loam, 8 to 15 percent slopes	0	1.1	11.5%
DeB	Deerfield loamy fine sand, 3 to 8 percent slopes	0	0.4	4.5%
EmB	Elmwood fine sandy loam, 0 to 8 percent slopes	0	0.7	7.3%
MkB	Merrimac fine sandy loam, 3 to 8 percent slopes	0	4.3	43.4%
PbC	Paxton fine sandy loam, 8 to 15 percent slopes	0	2.9	29.8%
Sz	Swanton fine sandy loam	85	0.3	3.4%
Totals for Area of Interest			**9.9**	**100.0%**

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

REFERENCE MARK	ELEVATION IN FT. (NGVD)[1]	DESCRIPTION OF LOCATION
*RM 5	99.85	U.S. Geological Survey disk about 1.45 miles southeast along the Maine Central Railroad from the station at South Windham, about 0.35 mile northwest of mile post P9, in the top of northwest end of northeast stone head wall of a 3 foot stone culvert, 15.5 feet northeast of northeast rail, 0.7 foot southeast of northwest end of headwall and about 6 feet below level of track.
RM 6	105.72	Chiseled X on northeast abutment of Mallison Street bridge over Presumpscot River.
*RM 7	122.04	Chiseled X on northwest abutment of U.S. Route 202 (State Route 4) bridge over Presumpscot River.
*RM 8	141.10	Top of railroad spike in southwest side of 36 inch pine tree, 40 feet northeast of Maine Central Railroad, 100 feet southeast of stone culvert, approximately 0.3 mile northwest along railroad from U.S. Route 202 (State Route 4).
RM 9	139.41	Top of railroad spike set in east side of 23 inch pine tree located 65 feet southwest of CMP Co. Pole 29, which is 35 feet west of the west end of the Newhall Dam.
RM 10	159.00	Chiseled circle in left end of right downstream abutment of Maine Central Railroad bridge over the Presumpscot River, upstream of Newhall Bridge.

[1] National Geodetic Vertical Datum of 1929
* Located Outside Corporate Limits

KEY TO MAP

500-Year Flood Boundary
100-Year Flood Boundary
Zone Designations*
100-Year Flood Boundary
500-Year Flood Boundary

ZONE B
ZONE A1 / ZONE A5
ZONE B

Base Flood Elevation Line With Elevation In Feet** — 513
Base Flood Elevation in Feet Where Uniform Within Zone** — (EL 987)
Elevation Reference Mark — RM7 ×
River Mile — • M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

INITIAL IDENTIFICATION:
NOVEMBER 15, 1974
FLOOD HAZARD BOUNDARY MAP REVISIONS:
MARCH 26, 1976

FLOOD INSURANCE RATE MAP EFFECTIVE:
OCTOBER 15, 1981
FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE
800 0 800 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

TOWN OF
GORHAM, MAINE
CUMBERLAND COUNTY

PANEL 20 OF 30
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
230047 0020 B
EFFECTIVE DATE:
OCTOBER 15, 1981

federal emergency management agency
federal insurance administration

U.S. Fish and Wildlife Service
National Wetlands Inventory

ME Gorham Daigle CSG

March 20, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
Phone: (207) 469-7300 Fax: (207) 902-1588

In Reply Refer To:
Project Code: 2023-0057783
Project Name: ME Gorham Daigle CSG

March 20, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

PROJECT SUMMARY

Project Code: 2023-0057783
Project Name: ME Gorham Daigle CSG
Project Type: Power Gen - Solar
Project Description: .700 MW CSG
apprx 10 acres
est construction 2023/2024

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.72840345,-70.44210815637436,14z

Counties: Cumberland County, Maine

ENDANGERED SPECIES ACT SPECIES

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

INSECTS

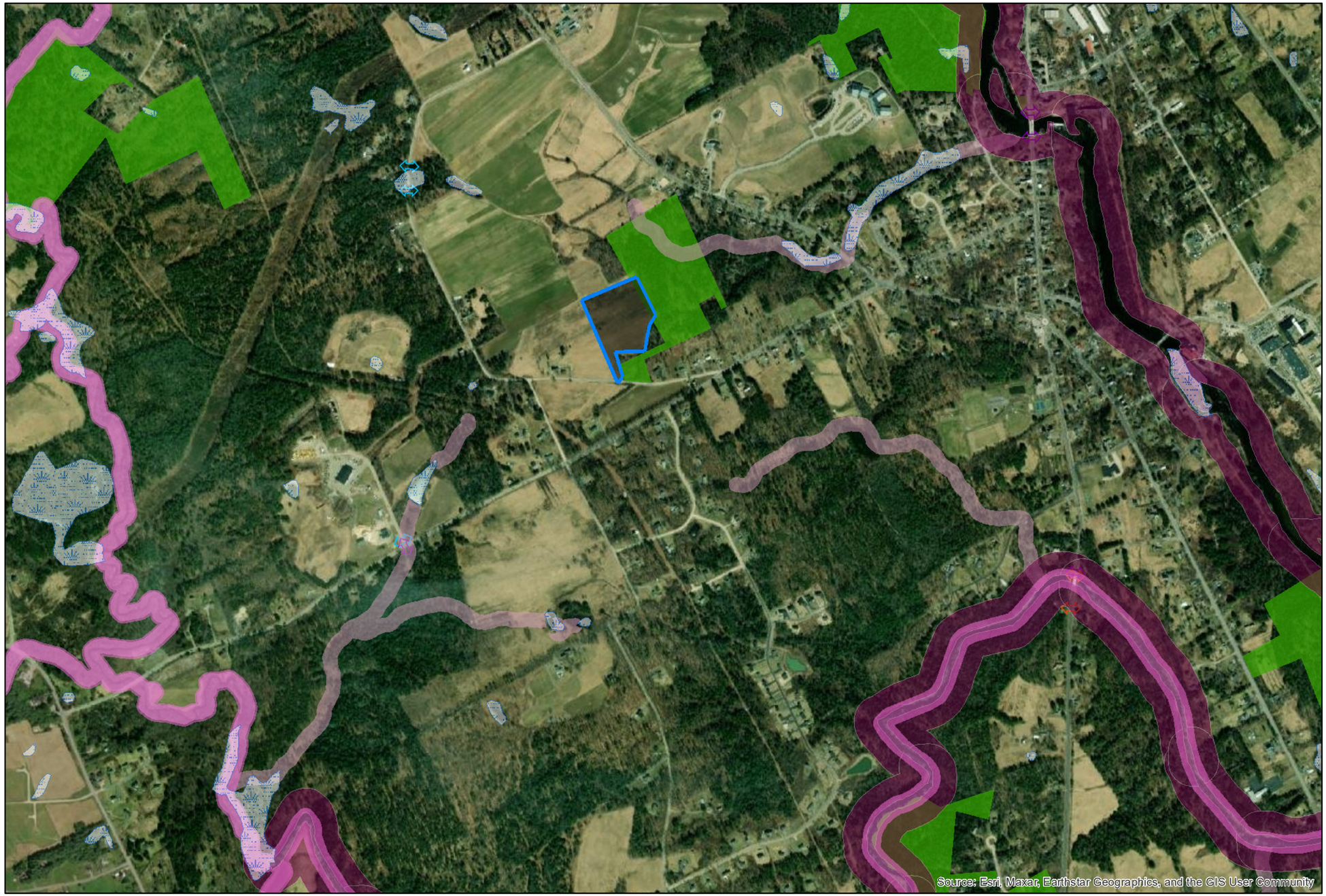
NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPAC USER CONTACT INFORMATION

Agency:	Novel Energy Solutions
Name:	Benjamin Hansen
Address:	2303 Wycliff St
Address Line 2:	Suite 300
City:	St. Paul
State:	MN
Zip:	55114
Email	ben.hansen@novelenergy.biz
Phone:	6124995325



BEGINNING WITH HABITAT

Legend

- City/Township
- 1
- 2
- Watershed Divide (HUC 12)
- Watershed Divide (HUC 10)
- Watershed Divide (HUC 8)
- Watershed Divide (HUC 6)
- Wetlands
- Great Ponds
- Stream_Buffers_75ft
- Shellfish Beds
- Public Water Supply Wells
- Source Protection
- Aquifers
- ETSC Animal Habitat Buffers
- Rare Plants and Natural Communities
- Natural Communities
- Wild Brook Trout Habitat
- Atlantic Salmon Rearing Habitat
- Atlantic Salmon Spawning Habitat
- Roseate Tern, Piping Plover or Least Tern Nesting Areas
- Deer Wintering
- Inland Wading Bird and Waterfowl Habitat
- Wildlife Wetlands
- Seabird Nesting Island
- Shorebird Habitat
- Tidal Wading Bird and Waterfowl Habitat
- Significant Vernal Pools
- Municipal
- Water Dist., etc.
- Private
- State
- Conserved Lands Easements
- Focus
- Less than 2000 Vehicles/Day
- More than 2000 Vehicles/Day
- Less than 2000 Vehicles/Day
- More than 2000 Vehicles/Day
- Undeveloped Habitat Blocks
- Highway Bridge Connectors
- Maine Conserved Lands
- Federal

State of Maine

The Nature Conservancy
Protecting nature. Preserving life.™

Maine Audubon

Maine Coast Heritage Trust
A Statewide Land Conservation Organization

SWOAM
Small Woodland Owners Association of Maine

MaineDOT

Maine Endangered and Nongame Wildlife Fund

0 0.225 0.45 0.9 1.35 mi

N W E S

Supported in part by Maine Outdoor Heritage Fund lottery ticket sales

Map Prepared by Maine Department of Inland Fisheries & Wildlife
March 2023

Supported in part by Loon Conservation Plate funds

2303 Wycliff Street, Suite 300
St. Paul, MN 55114
O: 612.345.7188
NovelEnergy.Biz

March 7, 2023

John Perry, Environmental Review Coordinator
Maine Department of Inland Fisheries and Wildlife
284 State Street, Augusta, ME 04333
Email Address: John.Perry@maine.gov

RE: Maine Department of Inland Fisheries of Wildlife Review
ME Gorham Daigle CSG
Cumberland County, Gorham, Maine

Dear Mr. Perry,

ME Gorham Daigle CSG LLC is seeking review of the ME Gorham Daigle CSG project (Proposed Project) slated for 2023. ME Gorham Daigle CSG proposes to install a .700 MW solar array facility at 43.726750, -70.442861 off of Dyer Rd in Gorham. The Proposed Project will be situated on approximately 10 acres (Proposed Project Area) of a larger parent parcel identified as parcel number 69-0001-0001. In order to augment the planning process for the proposed development, we are interested in obtaining information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and inland fisheries habitat concerns within and around our project area. A project sketch and topo map showing the Proposed Project has been included to assist in your determination.

Please send your comments to the below email address. If you have any questions concerning this proposal, please contact Robin Brigham at robin.brigham@novelenergy.biz and copy environmental@novelenergy.biz.

The following reference materials have been included for your information:

- Location Maps (including USGS Topographical Map)
- Proposed Project KMZ file (attached to email)

Regards,

Novel Energy Solutions LLC

Robin Brigham
Manager of Environmental Compliance

2303 Wycliff Street, Suite 300
St. Paul, MN 55114
O: 612.345.7188
NovelEnergy.Biz

March 7, 2023

Lisa St. Hilaire, Information Manager
Maine Natural Areas Program
177 State House Station, Augusta, ME 04333
Email Address: Lisa.St.Hilaire@maine.gov

RE: Maine Natural Areas Program Review Letter
ME Gorham Daigle CSG
Cumberland County, Gorham, Maine

Dear Ms. St. Hilaire,

ME Gorham Daigle CSG LLC is seeking review of the ME Gorham Daigle CSG project (Proposed Project) slated for 2023. ME Gorham Daigle CSG proposes to install a .700 MW solar array facility at 43.726750, -70.442861 off of Dyer Rd in Gorham. The Proposed Project will be situated on approximately 10 acres (Proposed Project Area) of a larger parent parcel identified as parcel number 69-0001-0001. In order to augment the planning process for the proposed development, we are interested in obtaining information regarding any rare or exemplary botanical features in our project area. A project sketch and topo map showing the Proposed Project has been included to assist in your determination. If you have any questions or require further information, please do not hesitate to contact me.

Please send your comments to the below email address. If you have any questions concerning this proposal, please contact Robin Brigham at robin.brigham@novelenergy.biz and copy environmental@novelenergy.biz.

The following reference materials have been included for your information:

- Location Maps (including USGS Topographical Map)
- Proposed Project KMZ file (attached to email)

Regards,

Novel Energy Solutions LLC

Robin Brigham
Manager of Environmental Compliance

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

March 8, 2023

Robin Brigham
Novel Energy Solutions
2303 Wycliff Street, Suite 300
St. Paul, MN 55114

Via email: robin.brigham@novelenergy.biz

Re: Rare and exemplary botanical features in proximity to: ME Gorham Daigle CSG Solar Array, Dyer Road, Gorham, Maine

Dear Ms. Brigham:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received March 7, 2023 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Gorham, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM
BLOSSOM LANE, DEERING BUILDING

DEPARTMENT OF Agriculture Conservation & Forestry

PHONE: (207) 287-8044
WWW.MAINE.GOV/DACF/MNAP

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

The Maine Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for two hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Lisa St. Hilaire

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program
207-287-8044 | lisa.st.hilaire@maine.gov

Rare and Exemplary Botanical Features within 4 miles of
Project: ME Gorham Daigle CSG Solar Array, Dyer Road, Gorham, ME

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Broad Beech Fern						
	SC	S2	G5	1872-08	15	Hardwood to mixed forest (forest, upland)
Columbian Watermeal						
	SC	S2	G5	2016-09-12	11	Open water (non-forested, wetland)
Ebony Spleenwort						
	SC	S2	G5	1910-06-06	10	Rocky summits and outcrops (non-forested,
Fall Fimbry						
	SC	S2S3	G5	2020-09-17	33	Open wetland, not coastal nor rivershore (non-forested,
Fern-leaved False Foxglove						
	SC	S3	G5	2020	2	Dry barrens (partly forested, upland),Hardwood to mixed
	SC	S3	G5	2011-10-03	38	Dry barrens (partly forested, upland),Hardwood to mixed
Hollow Joe-pye Weed						
	SC	S2	G5?	2011-10-22	22	Open wetland, not coastal nor rivershore (non-forested,
Missouri Rockcress						
	T	S1	G5	1905-06-11	5	Rocky summits and outcrops (non-forested,
Pitch Pine Woodland						
		S3	G2	2005-12-08	28	
Scarlet Oak						
	E	S1	G5	1916-08	2	Hardwood to mixed forest (forest, upland)
Vasey's Pondweed						
	SC	S2	G4	1901-08-04	7	Open water (non-forested, wetland)

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Conservation Status Ranks

State and Global Ranks: This ranking system facilitates a quick assessment of a species' or habitat type's rarity and is the primary tool used to develop conservation, protection, and restoration priorities for individual species and natural habitat types. Each species or habitat is assigned both a state (S) and global (G) rank on a scale of critically imperiled (1) to secure (5). Factors such as range extent, the number of occurrences, intensity of threats, etc., contribute to the assignment of state and global ranks. The definitions for state and global ranks are comparable but applied at different geographic scales; something that is state imperiled may be globally secure.

The information supporting these ranks is developed and maintained by the Maine Natural Areas Program (state ranks) and NatureServe (global ranks).

Rank	Definition
S1 **G1**	**Critically Imperiled** – At very high risk of extinction or elimination due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
S2 **G2**	**Imperiled** – At high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
S3 **G3**	**Vulnerable** – At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
S4 **G4**	**Apparently Secure** – At fairly low risk of extinction or elimination due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
S5 **G5**	**Secure** – At very low risk of extinction or elimination due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
SX **GX**	**Presumed Extinct** – Not located despite intensive searches and virtually no likelihood of rediscovery.
SH **GH**	**Possibly Extinct** – Known from only historical occurrences but still some hope of rediscovery.
S#S# **G#G#**	**Range Rank** – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem.
SU **GU**	**Unrankable** – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
GNR **SNR**	**Unranked** – Global or subnational conservation status not yet assessed.
SNA **GNA**	**Not Applicable** – A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities (e.g., non-native species or ecosystems.
Qualifier	**Definition**
S#? **G#?**	**Inexact Numeric Rank** – Denotes inexact numeric rank.
Q	**Questionable taxonomy that may reduce conservation priority** – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable. The "Q" modifier is only used at a global level.
T#	**Infraspecific Taxon (trinomial)** – The status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank.

State Status: Endangered and Threatened are legal status designations authorized by statute. Please refer to MRSA Title 12, §544 and §544-B.

Status	Definition
E	**Endangered** – Any native plant species in danger of extinction throughout all or a significant portion of its range within the State or Federally listed as Endangered.
T	**Threatened** – Any native plant species likely to become endangered within the foreseeable future throughout all or a significant portion of its range in the State or Federally listed as Threatened.
SC	**Special Concern** – A native plant species that is rare in the State, but not rare enough to be considered Threatened or Endangered.
PE	**Potentially Extirpated** – A native plant species that has not been documented in the State in over 20 years, or loss of the last known occurrence.

Element Occurrence (EO) Ranks: Quality assessments that designate viability of a population or integrity of habitat. These ranks are based on size, condition, and landscape context. Range ranks (e.g., AB, BC) and uncertainty ranks (e.g., B?) are allowed. The Maine Natural Areas Program tracks all occurrences of rare plants and natural communities/ecosystems (S1-S3) as well as exemplary common natural community types (S4-S5 with EO ranks A/B).

Rank	Definition
A	**Excellent** – Excellent estimated viability/ecological integrity.
B	**Good** – Good estimated viability/ecological integrity.
C	**Fair** – Fair estimated viability/ecological integrity.
D	**Poor** – Poor estimated viability/ecological integrity.
E	**Extant** – Verified extant, but viability/ecological integrity not assessed.
H	**Historical** – Lack of field information within past 20 years verifying continued existence of the occurrence, but not enough to document extirpation.
X	**Extirpated** – Documented loss of population/destruction of habitat.
U	**Unrankable** – Occurrence unable to be ranked due to lack of sufficient information (e.g., possible mistaken identification).
NR	**Not Ranked** – An occurrence rank has not been assigned.

Visit the Maine Natural Areas Program website for more information
http://www.maine.gov/dacf/mnap

maine DEPARTMENT OF Agriculture Conservation & Forestry
NATURAL AREAS

ME Gorham Daigle CSG LLC
Transect Report

February 28, 2023

Prepared for

Novel Energy Solutions

County(ies)/State(s)

Cumberland County/Maine

Prepared by

transect

Real-Time Environmental Due Diligence

LETTER FROM THE FIELD

Hi, I'm Robin!

I am pleased to provide this Transect Report for the ME Gorham Daigle CSG LLC project in Cumberland County, Maine.

The U.S. abounds with sensitive plant, animal, water, land, geologic, cultural, and other sensitive natural resources that are legally protected through federal laws, like the Endangered Species Act and Clean Water Act, and through state and local laws. These laws are designed to protect these sensitive resources from the negative effects of land development. All public and private entities are subject to these laws, and intentional or incidental violations may result in civil or criminal penalties.

The purpose of a Transect Report is to inform the potential for natural and cultural resources to occur within the defined area of interest (AOI), to explain the regulations and permits relevant to those resources, and to provide site-specific insight on recommendations, next steps, and timelines to move forward with the proposed project. The information and recommendations provided by Transect should not be relied upon as the final determination of onsite conditions or permitting requirements. Timelines may vary pending project complexity.

Let's talk about concern levels. Data on a map or in a table is helpful, but what does it mean for your project success? Transect Reports use high, medium, and low concern ratings to help you better understand key roadblocks to successful development on the site.

A quick note: The content of this Transect Report PDF has been prepared in accordance with your selected reporting requirements. As such, this report may not represent the full breadth of information available for this AOI in the Transect platform. A list of additional information available for this AOI is provided on the final page of this report, and the additional information is viewable at www.app.transect.com. Was this PDF provided to you? Contact the sender to request online access.

If you have any questions or comments about the contents of this Transect Report, please do not hesitate to reach out to us at support@transect.com.

Cheers!

Robin Laine

CEO and Co-founder of Transect

Table of Contents

Executive Summary

Summary & Context Question Answers

Project Center: 43.72832, -70.44225
Area: 9.9 Ac.
Project Type: Renewable Energy Generation
Project Subtype: Solar
Construction Type: New Construction
Federal Funds: NO
Plan to impact any rivers, streams, or wetlands: I don't know

Expert Review

An expert review **has been completed** for this report.

Concern Levels

Federally Protected Species

2 Active Regulations | 1 Permit | 2 Recommendations

Next Steps

Protected species may occur within the project if appropriate habitat is present. Species listed as May Occur have a lower potential to occur based on information available and are therefore not a Species of Concern, but may still require consultation with respective agencies depending on other permitting efforts for the project. A habitat assessment and/or presence/absence survey may be warranted; contact a qualified biologist to assist in this evaluation and discuss project-specific avoidance and minimization strategies at your discretion or at the direction of the regulatory authority. In general, we recommend you avoid impacts to species and their habitat to the greatest extent practicable to avoid permitting delays and mitigation. Species listed as Not Likely to Occur have been excluded as a concern due to lack of appropriate habitat or geography. A field survey to confirm this result can be performed by a consultant at your discretion.

Snapshot

- 0 **Species of Concern**
- 3 **Species May Occur**
  - Tricolored bat (Perimyotis subflavus)
  - Monarch butterfly (Danaus plexippus)
  - Northern Long-Eared Bat (Myotis septentrionalis)
- 5 **Species are Not Likely to Occur**

Recommendations

Species	Recommendation(s)

Species	Recommendation(s)
Monarch butterfly	• This species was recently designated by USFWS as a candidate species across the entire U.S. Candidate species are not statutorily protected under the Endangered Species Act, and therefore effects to the butterfly from this project are not unlawful (although consideration of this species may be required if the project is on federal lands or subject to NEPA environmental review). However, effects to the butterfly could become unlawful in the future should the USFWS decide to list it as endangered or threatened, a process which could take up to 4 years or more.
Northern Long-Eared Bat	• Specific cave or maternity roost data for NLEB is not publicly available. Contact the local USFWS field office or Natural Heritage Inventory to determine if there are caves or maternity colonies near your project. Per the USFWS 4d rule, a project only impacts NLEB when the project is in a White Nose Syndrome (WNS) Area AND: ◦ Occurs within a hibernaculum (occupied cave), or ◦ Results in tree removal within 0.25 miles of a hibernaculum, or ◦ Cuts or destroys a known, occupied maternity roost tree or other trees within a 150-foot radius from the maternity roost tree during the pup season from June 1 through July 31. If the project does not involve any of these activities or is outside of a WNS area, then no further action is required. However, on March 22, 2022, the USFWS proposed to reclassify NLEB as endangered under the ESA. For projects that are proposed for the near future, careful consideration of this species is warranted in the event that the reclassification to endangered is finalized and more of its habitat falls under ESA protection (4d rules are not applicable to endangered species).

State Protected Species

1 Active Regulation | 1 Permit | 0 Recommendation

Next Steps

The AOI is within the range(s) of state listed species that may occur if suitable habitat is present. See Permit Matrix to understand how these species are regulated in the state. There is no information available regarding elemental occurrences, critical habitat or primary locations on or near the project; therefore these are not Species of Concern, but species that May Occur. A habitat assessment and/or presence-absence survey may be warranted depending on state regulations. A qualified biologist can perform surveys and discuss project-specific avoidance and minimization strategies at your discretion or at the direction of the regulatory authority. Species listed as Not Likely to Occur have been excluded as a concern due to lack of appropriate habitat or geography. A field survey to confirm this result can be performed by a consultant at your discretion.

Snapshot

- 0 **Species of Concern**
- 1 **Species May Occur**
    - Little brown bat (Myotis lucifugus)
- 12 **Species are Not Likely to Occur**

Waters

6 Active Regulations | 3 Permits | 0 Recommendation

Next Steps

Based on review of the NHD, NWI, and/or aerial imagery, it does not appear that there are any streams or wetlands subject to federal or state permitting within your project and no further action is warranted. A field survey by a wetlands biologist to confirm this result may be conducted at your discretion.

Snapshot

Wetlands
- 0 Wetlands

Waterbodies
- 0 Waterbodies

Floodplains
- 0 Flood Hazard Areas

Protected Areas

Next Steps

There are no public lands within your project. No action warranted.

Snapshot

- 0 **Federally Owned or Managed**
- 0 **Tribal Area(s)**
- 0 **State Owned or Managed**
- 1 **Other**

Environmental Compliance

Next Steps

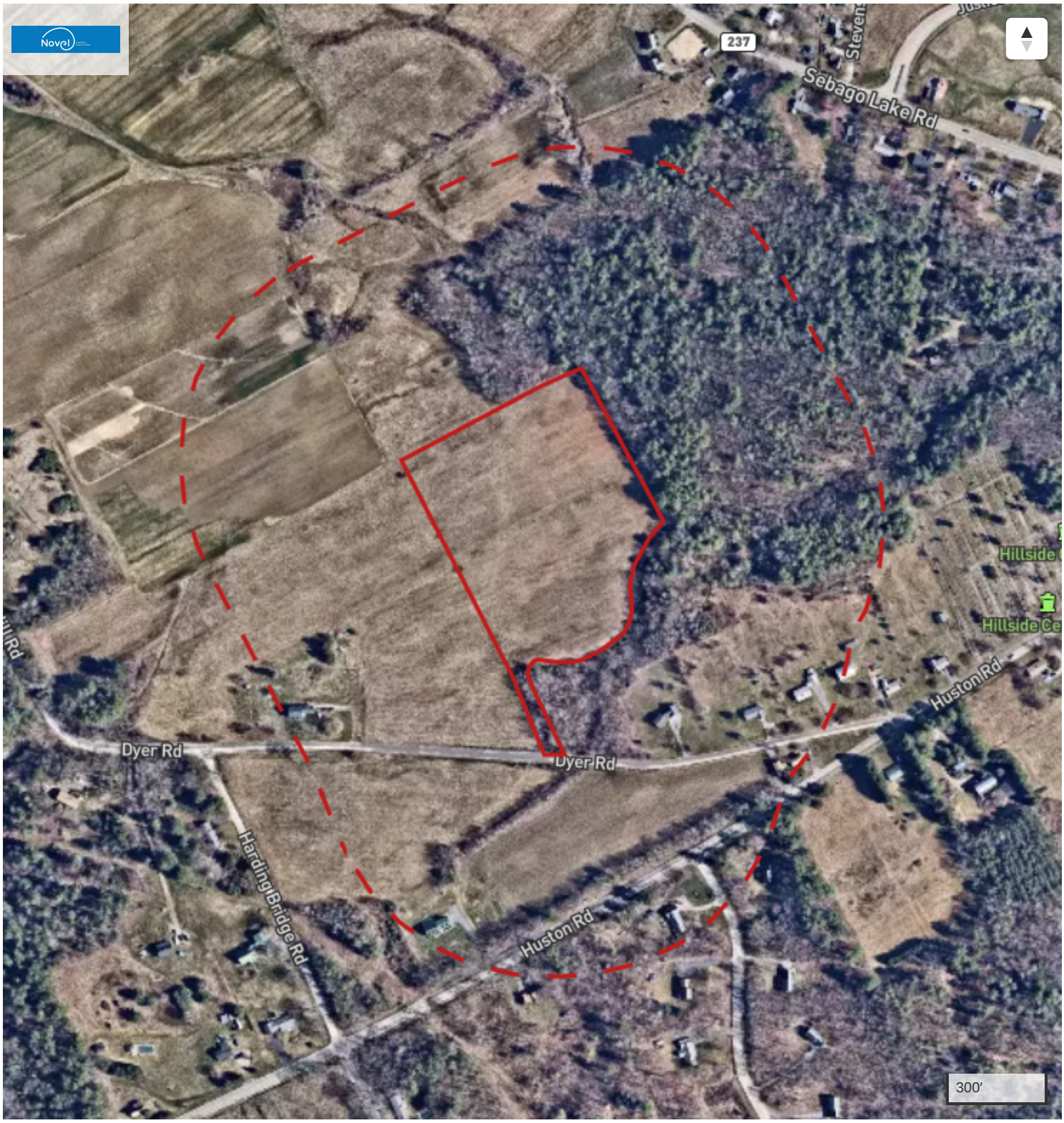
Transect has not identified any registered facilities or contaminated sites within or adjacent to the AOI. This preliminary assessment does not replace a Phase 1 Environmental Site Assessment.

Snapshot

- 0 environmental compliance catalog features within AOI or buffer
- 0 federal registered facilities within your AOI or buffer have a formal action, penalty, violation, and/or RCRA id.

Additional Notes

On November 29, 2022, the U.S. Fish and Wildlife Service published a final rule to reclassify the northern long-eared bat as endangered under the Endangered Species Act, effective March 31, 2023. Review the Regulatory Commentary section of the NLEB species profile for additional information and recommendations regarding this reclassification.



Site Location Map

Novel Energy Solutions

ME Gorham Daigle CSG LLC

9.9 acres

Maine

Cumberland County

43.728320, -70.442250

transect

Legend

Buffer AOI

Permit Matrix

USFWS Consultation/Permitting

Trigger	Timeline	Assc. Regulator	Assc. Regulation
Impacts to federally-protected species	1-6+ months for Section 7 consultation; 18-24+ mo for 10(a) Permit	U.S. Fish and Wildlife Service	Endangered Species Act

Recommendations

If the species concern level is moderate or high, a habitat assessment or presence/absence survey for the federally-listed species of concern by a qualified biologist is typically recommended and USFWS may be required for effects to protected species. If the species concern level is low, we generally do not recommend additional actions as warranted, though a habitat assessment may be conducted at your discretion.

Running a USFWS Information for Planning and Consultation (IPaC) report can assist you in further analyzing your project for species effects and with USFWS consultation. In some simple cases, an IPaC report may satisfy consultation requirements. In other cases where effects to species will occur, additional consultation will be required.

Construction General Permit for Stormwater (ME)

Trigger	Timeline	Assc. Regulator	Assc. Regulation
Land disturbance equal to or > than 1 acre	Submit NOI 14 days prior to construction	Maine Department of Environmental Protection	CWA 402 Maine

Recommendations

This general permit authorizes the direct discharge (point source discharge) of stormwater associated with construction activity to waters of the state other than groundwater, provided that the discharge meets the requirements of this general permit and applicable provisions of Maine's waste discharge and water classification statutes and rules. This general permit also authorizes the direct discharge of stormwater from support activities. A stormwater consultant can assist with the preparation of the permit paperwork and ensure compliance during construction.

Site Location of Development Permit (Site Law)

Trigger	Timeline	Assc. Regulator	Assc. Regulation
Projects that occupy	180 days	Maine Department of	Site Location of

20+ acres of land, large structures and subdivisions, and oil terminal facilities.	normally/some backlogging	Environmental Protection	Development Act

Recommendations

The Site Law applies in organized areas for purposes of all types of development, and in unorganized areas for purposes of oil terminal facilities. A permit is issued if the project meets applicable standards addressing areas such as stormwater management, groundwater protection, infrastructure, wildlife and fisheries, noise, and unusual natural areas. A pre-application meeting, public informational meeting, and pre-submission meeting are all required.

Local Floodplain Permit: No Digital Data Area

Trigger	Timeline	Assc. Regulator	Assc. Regulation
NFHL No Digital Data Area	Variable	Federal Emergency Management Agency	National Flood Insurance Program (No Digital Data Area)

Recommendations

A data gap has been identified. See recommendations.

Your project is within or intersects an area not covered by the digital National Flood Hazard Layer. Check the Waters Catalog > Data section for Preliminary/Pending data or Waters > Data > FIRM Panels section to see if there are scanned versions available. There may also be other FEMA Flood Hazard Products and Services which provide coverage for those areas. If excavation or above ground facilities are expected in a flood zone, a permit may be required.

Maine Endangered Species Act Environmental Review

Trigger	Timeline	Assc. Regulator	Assc. Regulation
State or Federal Permits	Variable	Maine Department of Inland Fisheries and Wildlife	Maine Endangered Species Act

Recommendations

Your project may be within Endangered, Threatened, Special Concern, Essential or Significant Wildlife Habitat. Ideally, projects should be designed to avoid any negative impacts to priority wildlife resources. Where such avoidance is not possible, the MDIFW Environmental Review Program can issue an Incidental Take Permit, help applicants modify their proposed projects to minimize impacts, or deny the state permit where avoidance, minimization, and mitigation are not possible.

Spill Prevention, Control and Countermeasure (SPCC) Plan

Trigger	Timeline	Assc. Regulator	Assc. Regulation
Oil storage volume	Must have it in place prior to construction	U.S. Environmental Protection Agency	The Oil Pollution Prevention Regulation (40 CFR Part 112)

Recommendations

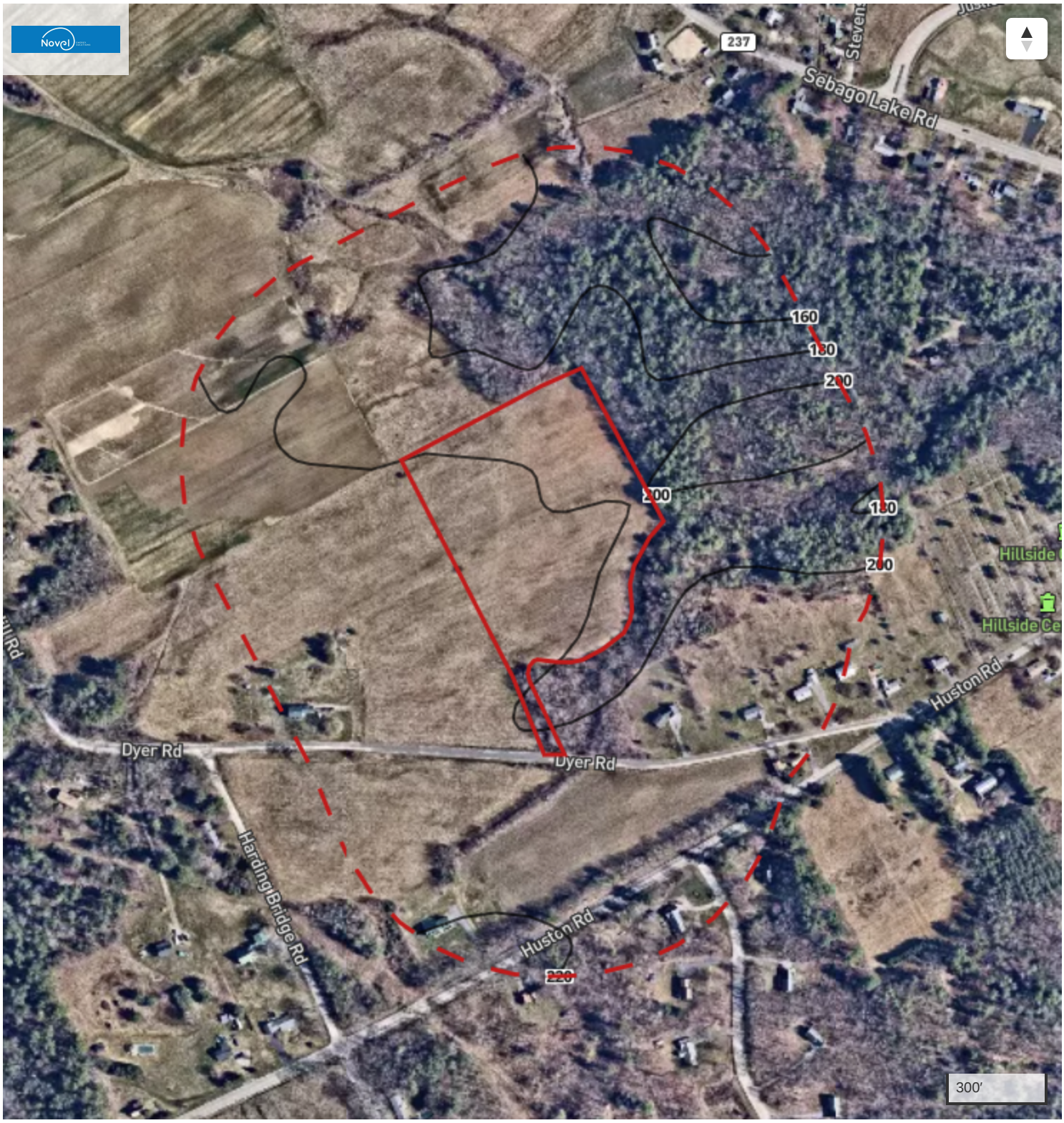
Aboveground tanks, transformers, and other oil-storing containers above certain volume thresholds may be subject to planned oil preparedness and prevention measures (in the form of an SPCC plan).

Regulation-related Recommendations

Regulation	Recommendation(s)
Farmland Protection Policy Act of 1981 (FPPA)	The project has areas of prime or protected farmland. Some counties or municipalities may have avoidance or minimization requirements for solar projects on these soil types.
Migratory Bird Treaty Act (MBTA)	There is no permit process available for projects that may impact migratory birds or their nests. However, the USFWS recommends implementing conservation measures to help reduce impacts on migratory birds or their habitat (see link). It is recommended to implement survey, avoidance, and monitoring. Implementation of avoidance and minimization measures will minimize the chance of project impacts on birds and their nests.

Contours

Minimum	200 ft.
Maximum	200 ft.



Elevation Contours Map

Novel Energy Solutions

ME Gorham Daigle CSG LLC

9.9 acres

Maine

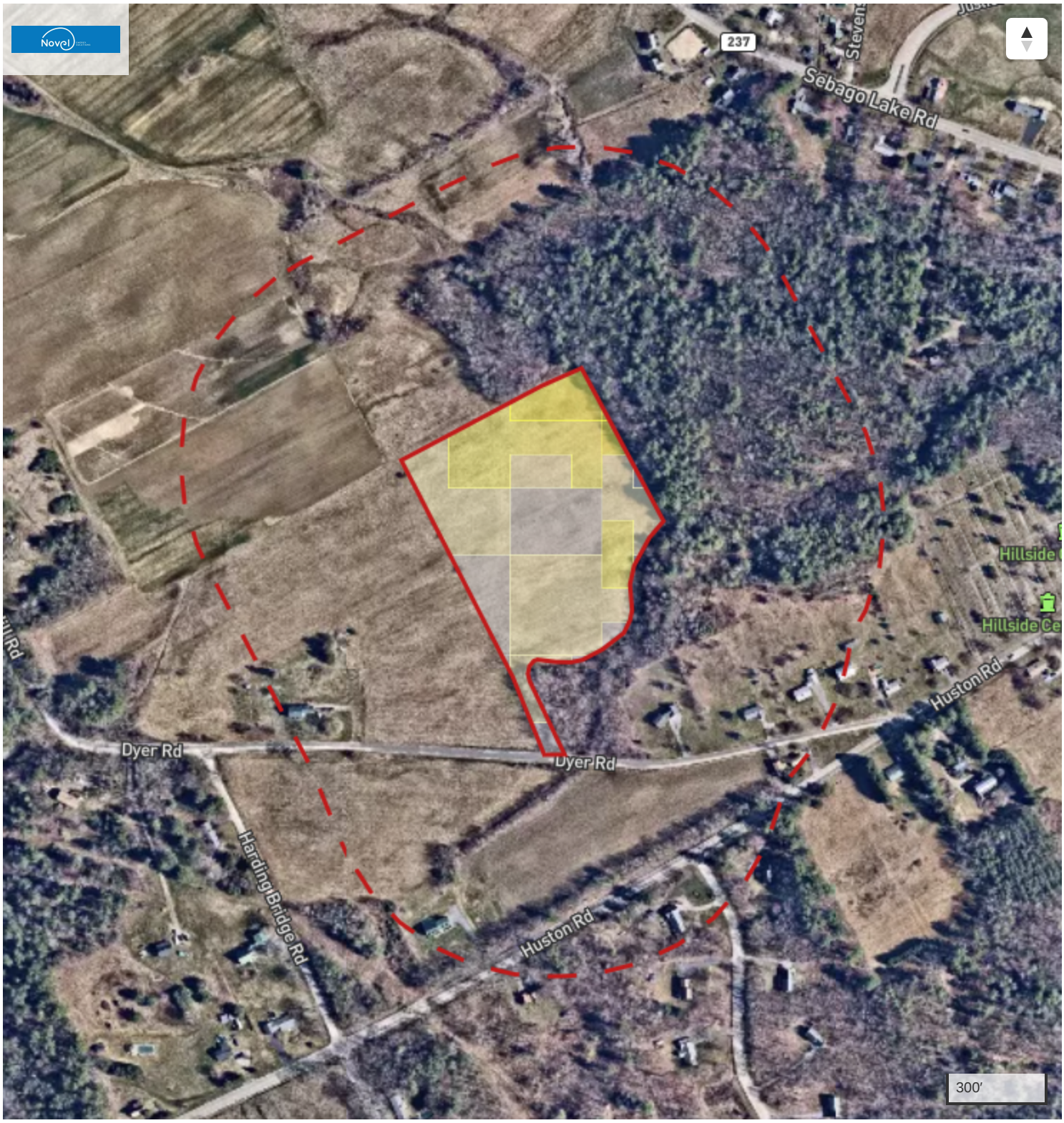
Cumberland County

43.728320, -70.442250

transect

Legend

Elevation Contours Buffer AOI



Slope Map

Novel Energy Solutions

ME Gorham Daigle CSG LLC

9.9 acres

Maine

Cumberland County

43.728320, -70.442250

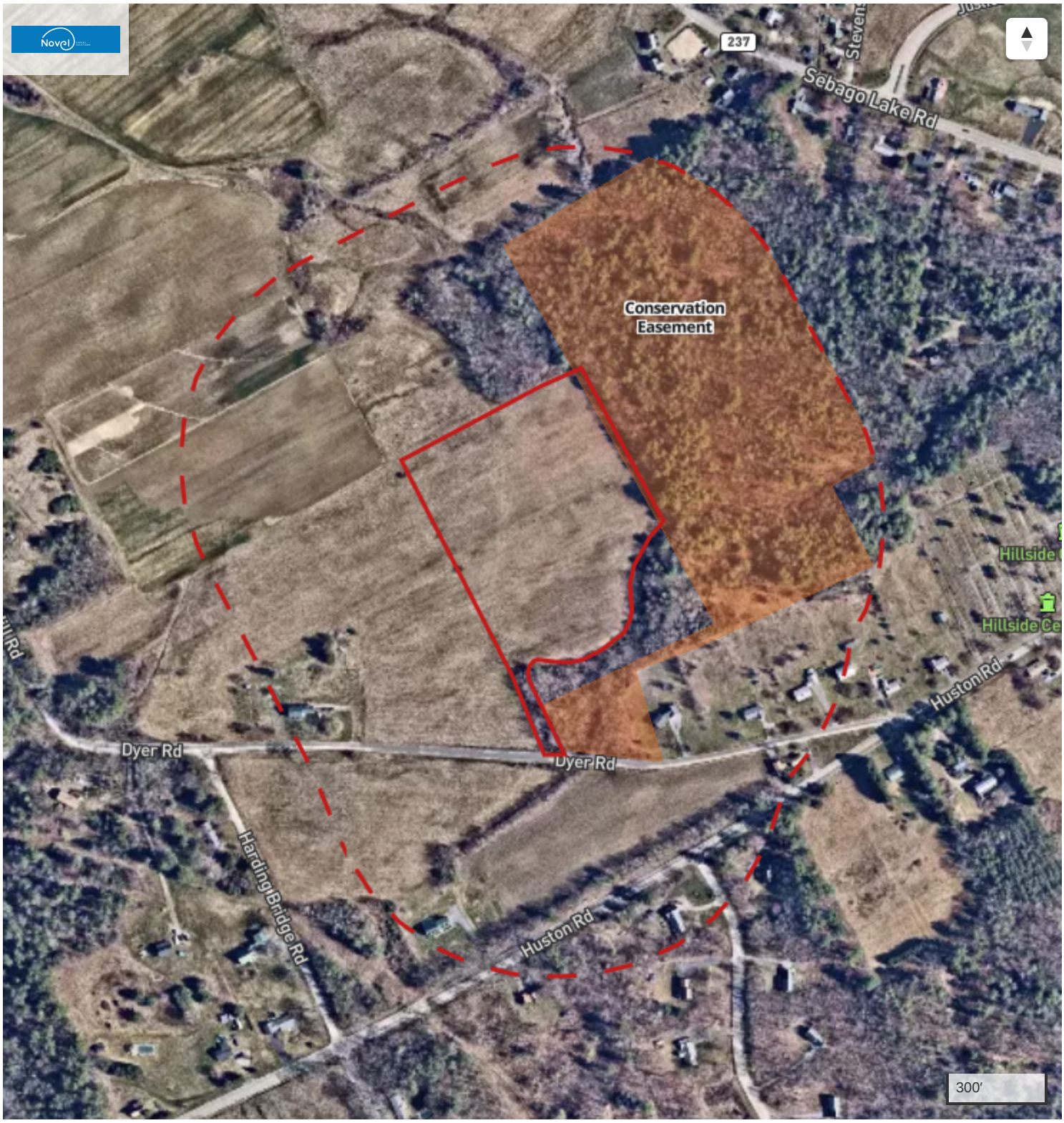
transect

Legend

Buffer AOI 0-2% 2-4% 4-6% 6-8% 8-10%

Protected Areas

Owner Name	Local Name	Local Manager	Category	Public Access
Private	McLaughlin	Presumpscot Regional Land Trust	Easement	



Protected Areas Map

Novel Energy Solutions

ME Gorham Daigle CSG LLC

9.9 acres

Maine

Cumberland County

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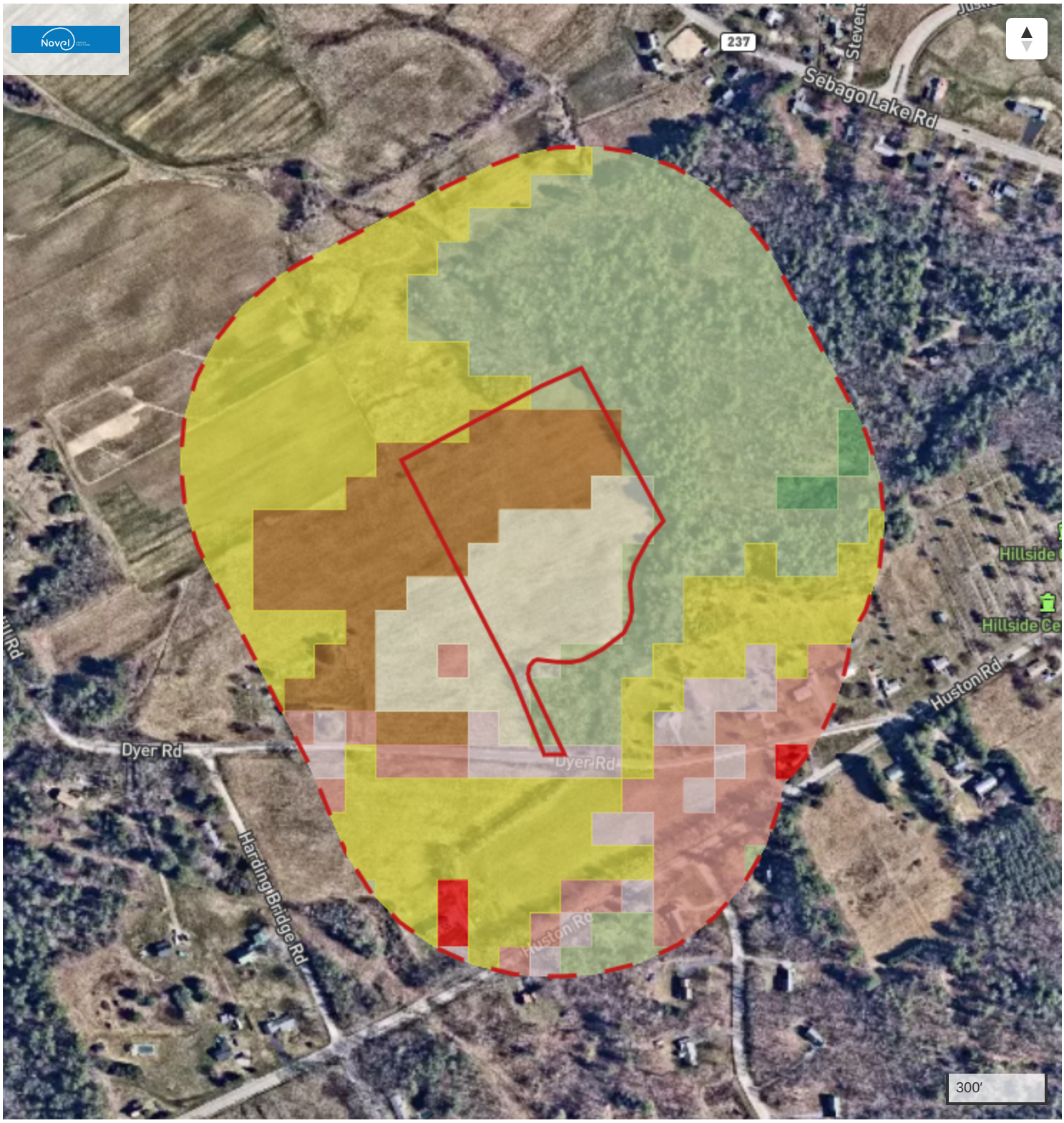
transect

Legend

Buffer AOI Non-Governmental Organization

Land Cover

Name	Area within AOI - acres
Grassland/Herbaceous	4.723
Cultivated Crops	4.059
Mixed Forest	0.958
Pasture/Hay	0.116
Developed, Open Space	0.04



Land Cover Map

Novel Energy Solutions

ME Gorham Daigle CSG LLC

9.9 acres

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Cumberland County

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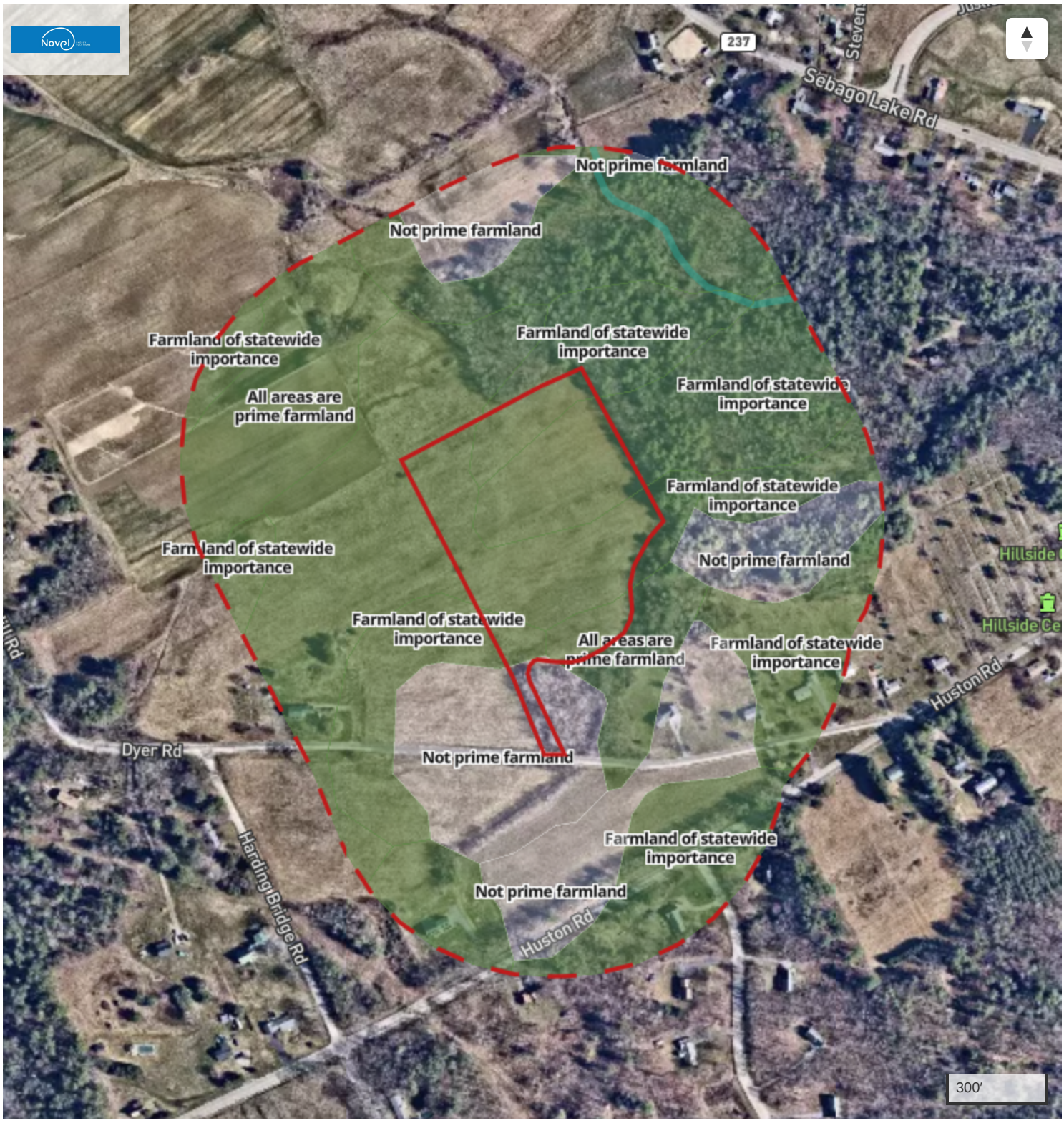
Legend

Buffer
AOI
Cultivated Crops
Deciduous Forest
Developed, Low Intensity
Developed, Medium Intensity
Developed, Open Space
Grassland/Herbaceous
Mixed Forest
Pasture/Hay



Farmland Classification Map

Novel Energy Solutions

ME Gorham Daigle CSG LLC

9.9 acres

Maine

Cumberland County

43.728320, -70.442250

transect

Legend

Buffer AOI Stream/River All areas are prime farmland

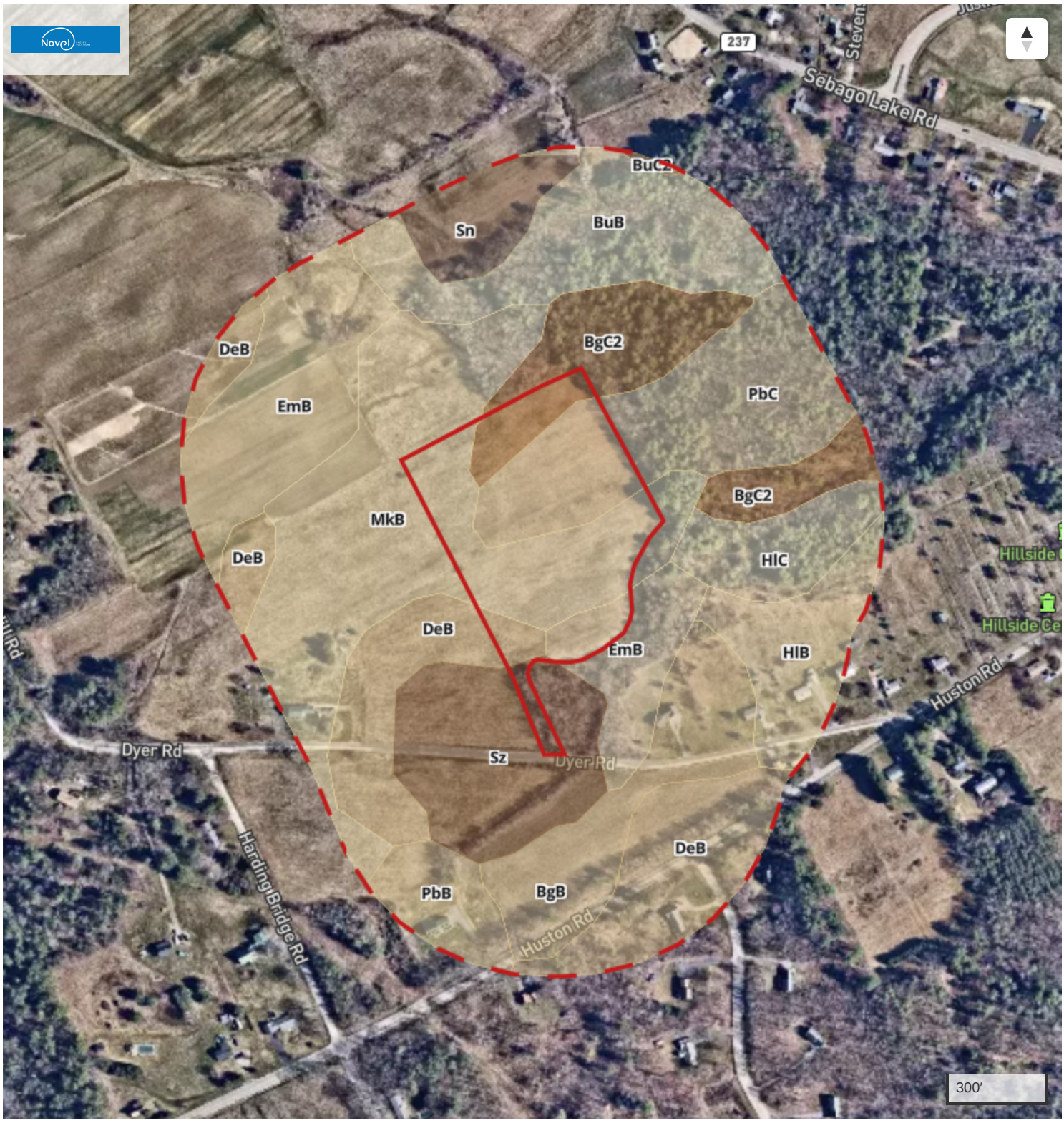
Farmland of statewide importance Not prime farmland

Ecoregions

Level 3 Name	Level 4 Name	Area within AOI - acres
Northeastern Coastal Zone	Gulf of Maine Coastal Lowland	9.896

Soils

Mapunit Name	Cumulative Acreage
Belgrade very fine sandy loam, 8 to 15 percent slopes, eroded	1.16
Belgrade very fine sandy loam, 0 to 8 percent slopes	0
Deerfield loamy sand, 3 to 8 percent slopes	0.44
Swanton fine sandy loam	0.34
Buxton silt loam, 8 to 15 percent slopes	0
Merrimac fine sandy loam, 3 to 8 percent slopes	4.29
Paxton fine sandy loam, 8 to 15 percent slopes	2.95
Hinckley loamy sand, 3 to 8 percent slopes	0
Scantic silt loam, 0 to 3 percent slopes	0
Elmwood fine sandy loam, 0 to 8 percent slopes	0.71
Hinckley loamy sand, 8 to 15 percent slopes	0
Lamoine silt loam, 3 to 8 percent slopes	0
Paxton fine sandy loam, 3 to 8 percent slopes	0



Soils Map

Novel Energy Solutions

ME Gorham Daigle CSG LLC

9.9 acres

Maine

Cumberland County

43.728320, -70.442250

transect

Legend

Buffer AOI BgB BgC2 BuB BuC2 DeB EmB HlB HlC MkB PbB PbC Sn Sz

Waters

- Clean Water Act
  - The Oil Pollution Prevention Regulation (40 CFR Part 112)
  - Section 402: National Pollutant Discharge Elimination System (NPDES)
  - ~~Section 303(d) Impaired Waterways~~
  - ~~Section 408: Civil Works~~
  - ~~Section 401: State / Tribal Water Quality Certification~~
  - ~~Section 404: Permits for Dredged or Fill Material~~
- Mandatory Shoreland Zoning Act
- National Flood Insurance Program (No Digital Data Area)
- ~~National Flood Insurance Program~~
- ~~Rivers and Harbors Appropriation Act of 1899~~
  - ~~Section 10: Section 10 of the Rivers and Harbors Appropriation Act of 1899~~
  - ~~Section 9: Section 9 of the Rivers and Harbors Appropriation Act of 1899~~
- ~~Stormwater Management Law~~
- ~~Wild and Scenic Rivers Act of 1968~~

Wetlands

- 0 Wetlands

Type	Area within AOI - acres
No features within AOI	

Waterways

- 0 Waterbodies

Feature Code Description	Length within AOI - feet
No features within AOI	

Floodplains

- 0 Flood Hazard Areas

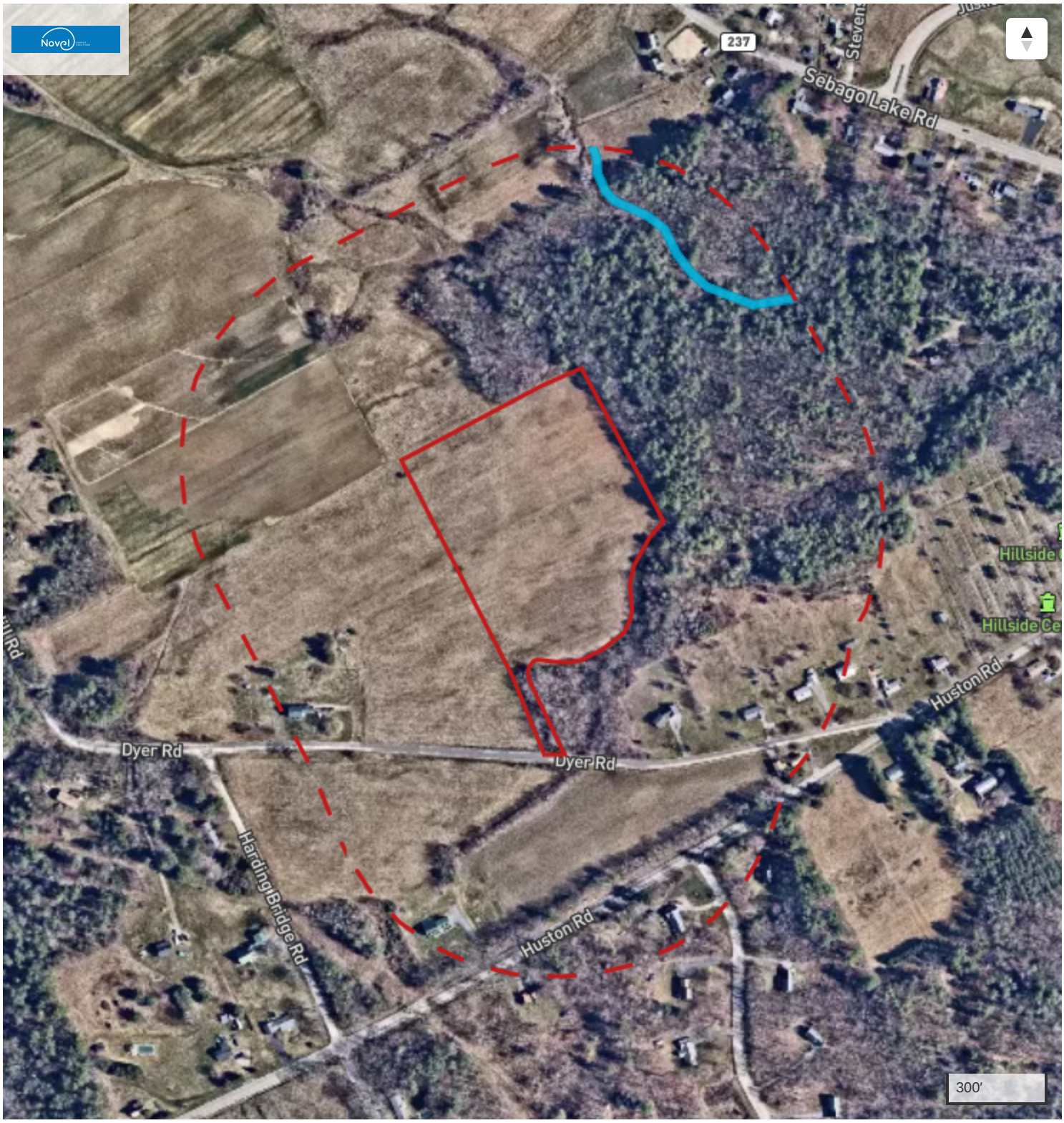
Flood Hazard Zone	Area within AOI - acres
No features within AOI	

FIRM Panels

Panel #	Area within AOI - acres
No features within AOI	

Watersheds

Hydrologic Unit Code (8-digit)	Name	Area - acres	Area within AOI - acres
01060001	Presumpscot	911149.49	9.896



Wetlands and Waterways Map

Novel Energy Solutions

ME Gorham Daigle CSG LLC

9.9 acres

Maine

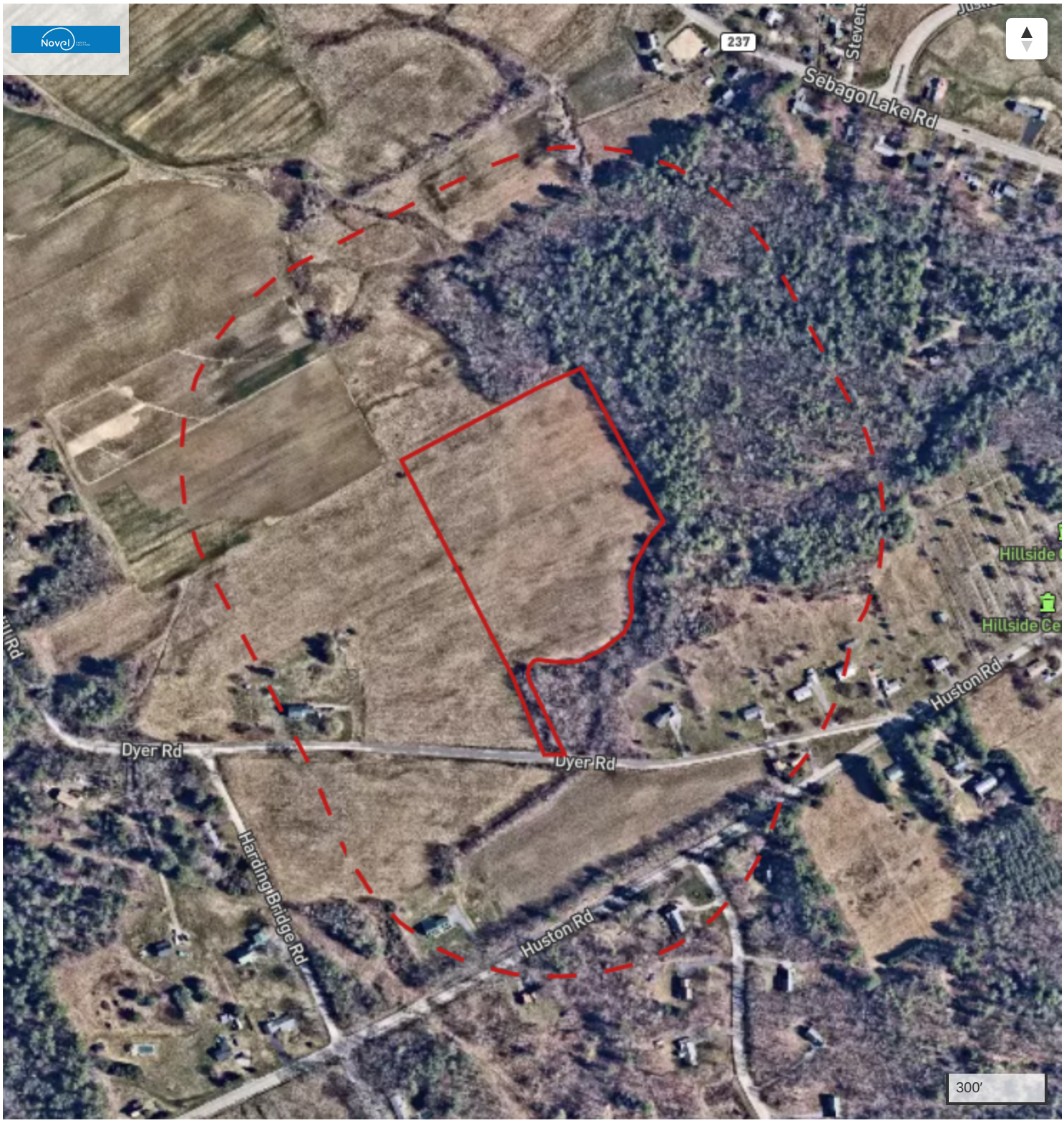
Cumberland County

43.728320, -70.442250

Legend

Buffer AOI Riverine Stream/River

transect



Floodplains Map

Novel Energy Solutions

ME Gorham Daigle CSG LLC

9.9 acres

Maine

Cumberland County

43.728320, -70.442250

transect

Legend

Buffer AOI

Species

- Endangered Species Act
- Maine Endangered Species Act
- Migratory Bird Treaty Act
- ~~Bald and Golden Eagle Protection Act~~
- ~~Eagle Conservation Plan Guidance~~
- ~~Magnuson-Stevens Fishery Conservation and Management Act~~
- ~~USFWS Land-Based Wind Energy Guidelines~~
    - ~~Eagle Conservation Plan Guidance~~

Federal Species Profiles

Species May Occur

- Northern Long-Eared Bat (Myotis septentrionalis)
- Tricolored bat (Perimyotis subflavus)
- Monarch butterfly (Danaus plexippus)

Species Not Likely to Occur

- 5 Species are Not Likely to Occur

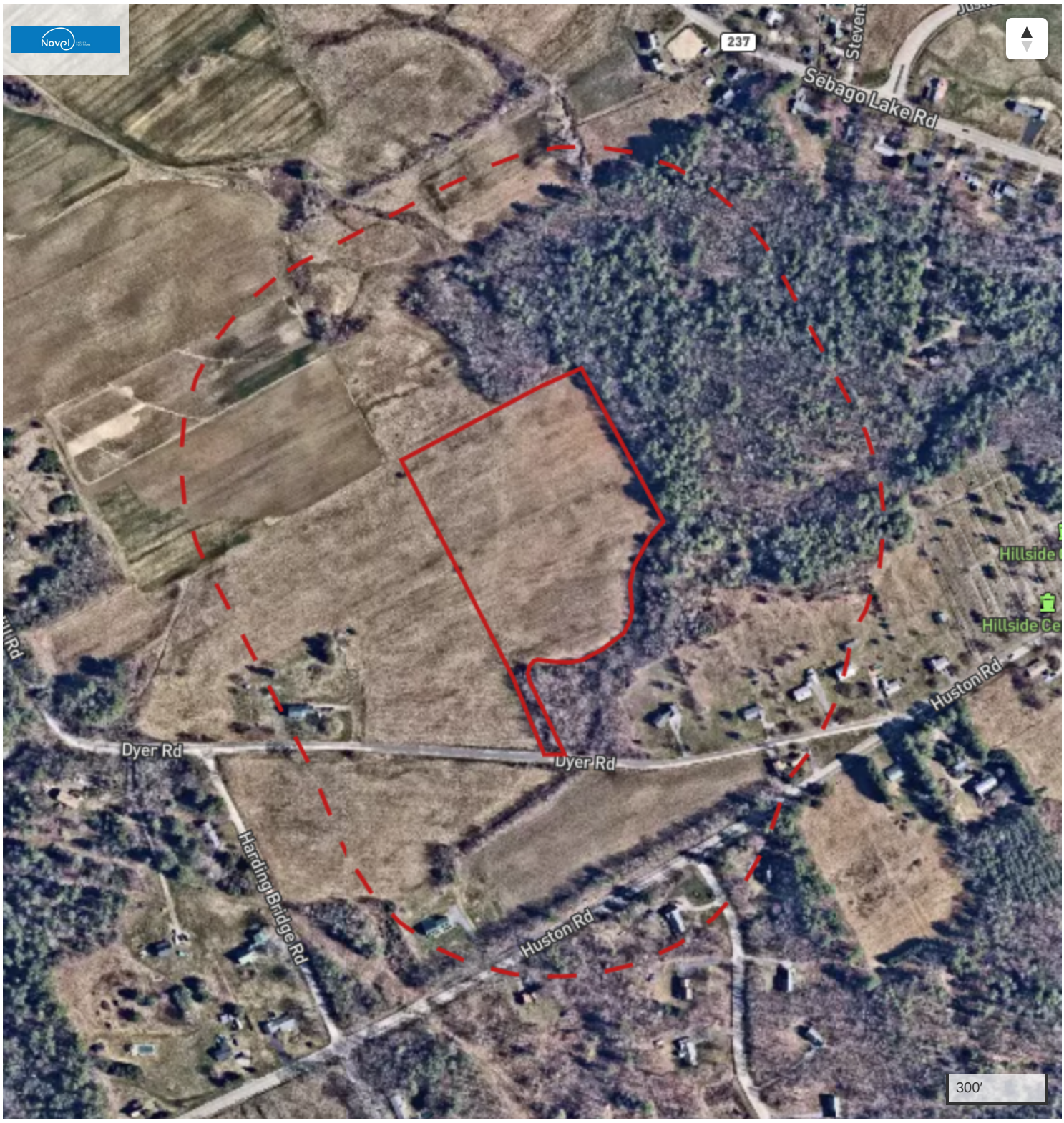
State Species Profiles

Species May Occur

- Little brown bat (Myotis lucifugus)

Species Not Likely to Occur

- 12 Species are Not Likely to Occur



Critical Habitat Map

Novel Energy Solutions

ME Gorham Daigle CSG LLC

9.9 acres

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Cumberland County

43.728320, -70.442250

transect

Legend

Buffer AOI

Other Regulations

- Farmland Protection Policy Act of 1981
- Site Location of Development Act
- ~~CLONE: Disadvantaged Community - Justice 40 Initiative~~
- ~~Cemetery Laws~~
- ~~Coastal Barrier Resources Act~~
- ~~Coastal Zone Management Act~~
  - ~~Maine Coastal Program~~
- ~~Disadvantaged Community - Justice 40 Initiative~~
- ~~EPA Policy for the Administration of Environmental Programs on Indian Reservations (1984 Indian Policy)~~
- ~~FAA Review~~
  - ~~Airport Considerations - Solar~~
  - ~~FAA Obstruction Determination~~
- ~~Federal Power Act (if Other type = hydropower)~~
- ~~Filing Requirements for Certificate of Public Convenience and Necessity~~
- ~~Grassland Reserve Program~~
- ~~Ike Skelton National Defense Authorization Act~~
- ~~National Environmental Policy Act~~
  - ~~Environmental Justice Considerations~~
- ~~National Historic Preservation Act~~
  - ~~National Register of Historic Places~~
  - ~~Section 106: Section 106 of the NHPA~~
- ~~Natural Gas Act~~
- ~~Natural Gas Pipeline Safety Acts~~
- ~~Natural Resources Protection Act~~
- ~~State Antiquities Regulations~~

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APPENDIX I - Agency Correspondence

- **Maine Department of Inland Fisheries and Wildlife**
- **Maine Natural Areas Program**
- **Maine Historic Preservation Commission**

Prepared By:
Novel Energy Solutions LLC
2303 Wycliff Street | Suite 300 | St. Paul, MN 55114 | Phone 612.345.7188 | https://www.novelenergysolutions.com

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March 7, 2023

John Perry, Environmental Review Coordinator
Maine Department of Inland Fisheries and Wildlife
284 State Street, Augusta, ME 04333
Email Address: John.Perry@maine.gov

RE: Maine Department of Inland Fisheries of Wildlife Review
ME Gorham Daigle CSG
Cumberland County, Gorham, Maine

Dear Mr. Perry,

ME Gorham Daigle CSG LLC is seeking review of the ME Gorham Daigle CSG project (Proposed Project) slated for 2023. ME Gorham Daigle CSG proposes to install a .700 MW solar array facility at 43.726750, -70.442861 off of Dyer Rd in Gorham. The Proposed Project will be situated on approximately 10 acres (Proposed Project Area) of a larger parent parcel identified as parcel number 69-0001-0001. In order to augment the planning process for the proposed development, we are interested in obtaining information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and inland fisheries habitat concerns within and around our project area. A project sketch and topo map showing the Proposed Project has been included to assist in your determination.

Please send your comments to the below email address. If you have any questions concerning this proposal, please contact Robin Brigham at robin.brigham@novelenergy.biz and copy environmental@novelenergy.biz.

The following reference materials have been included for your information:

- Location Maps (including USGS Topographical Map)
- Proposed Project KMZ file (attached to email)

Regards,

Novel Energy Solutions LLC

Robin Brigham
Manager of Environmental Compliance

JANET T. MILLS
GOVERNOR

STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
353 WATER STREET
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AUGUSTA ME 04333-0041

JUDITH CAMUSO
COMMISSIONER

March 23, 2023

Robin Brigham
Novel Energy Solutions, LLC
2303 Wycliff Street, Suite 300
St. Paul, MN 55114

RE: Information Request – ME Gorham Daigle CSG Project, Gorham

Dear Robin:

Per your request received on March 08, 2023, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and inland fisheries habitat concerns within the vicinity of the *ME Gorham Daigle CSG* project in Gorham. Note that as project details are lacking, our comments are non-specific and should be considered preliminary.

Our Department has not mapped any Essential Habitats that would be directly affected by your project.

Endangered, Threatened, and Special Concern Species

Bats - Of the eight species of bats that occur in Maine, the three Myotis species are afforded special protection under Maine's Endangered Species Act (MESA, 12 M.R.S §12801 et. seq.): little brown bat (State Endangered), northern long-eared bat (State Endangered), and eastern small-footed bat (State Threatened). The five remaining bat species are designated as Species of Special Concern: big brown bat, red bat, hoary bat, silver-haired bat, and tri-colored bat. While a comprehensive statewide inventory for bats has not been completed, based on historical evidence it is likely that several of these species occur within the project area during migration and/or the breeding season. However, our Agency does not anticipate significant impacts to any of the bat species as a result of this project.

Significant Wildlife Habitat

Significant Vernal Pools - At this time MDIFW Significant Wildlife Habitat (SWH) maps indicate no known presence of SWHs subject to protection under the Natural Resources Protection Act (NRPA) within the project area, which include Waterfowl and Wading Bird Habitats, Seabird Nesting Islands, Shorebird Areas, and Significant Vernal Pools. However, a comprehensive statewide inventory for Significant Vernal Pools has not been completed. Therefore, we recommend that surveys for vernal pools be conducted within the project boundary by qualified wetland scientists prior to final project design to determine whether there are Significant Vernal Pools present in the area. These surveys should extend up to 250 feet beyond the anticipated project footprint because of potential performance standard requirements for off-site Significant Vernal Pools, assuming such pools are located on land owned or controlled by the applicant. Once surveys are completed, survey forms should be submitted to our Agency for review well before the submission of any necessary permits. Our Department will need to review and verify any vernal pool data prior to final determination of significance.

Fisheries Habitat

We generally recommend maintaining 100-foot undisturbed vegetated buffers from the upland edge of all intermittent and perennial streams and any contiguous wetlands. Maintaining and enhancing buffers along these resources is critical to the protection of water temperatures, water quality, natural inputs of coarse woody debris, and various forms of aquatic life necessary to support fish and other aquatic species. Riparian buffers also provide critical habitat and important travel corridors for a variety of wildlife species. Stream crossings should be avoided, but if a stream crossing is necessary, or an existing crossing needs to be modified, it should be designed to provide for full aquatic passage. Small streams, including intermittent streams, can provide crucial rearing habitat, cold water for thermal refugia, and abundant food for juvenile salmonids on a seasonal basis. Undersized crossings may inhibit these functions and become a frequent maintenance problem that causes reoccurring damage to the resource. Generally, MDIFW recommends that all new, modified, and replacement stream crossings be sized to span at least 1.2 times the bankfull width of the stream. In addition, we generally recommend that stream crossings be open bottomed (i.e. natural bottom), although embedded structures which are backfilled with representative streambed material have been shown to be effective in providing habitat connectivity for fish and other aquatic organisms. Construction Best Management Practices should be closely followed to avoid erosion, sedimentation, alteration of stream flow, and other impacts as eroding soils can travel significant distances as well as transport other pollutants resulting in direct impacts to fish, other aquatic life, and their habitats. In addition, we recommend that any necessary instream work occur between July 15 and October 1.

Wildlife Permeable Fencing

MDIFW recommends the use of wildlife-permeable fencing to address the need for site safety and security, while allowing for access and use of the project area by small animals. Options for wildlife-permeable fencing include solid lock game fencing designed with increasing sized openings, installed so that larger openings (7x12 inches) are located at the bottom and smaller openings are at the top. Alternatively, other fencing may be used if elevated to provide at least 7 inches of clearance along the entire perimeter to allow for movement of small wildlife throughout the facility. We recommend inspection and maintenance of fence lines annually to ensure that the prescribed openings remain free of debris and fully functional.

Based on reports of deer becoming trapped inside solar facilities, we recommend that the applicant/owner establish procedures for regular monitoring and the timely release of any trapped wildlife. MDIFW recommends the installation of gates at regular intervals along fenced enclosures to provide nearby exits through which trapped wildlife can be released with minor encouragement, and/or designs that provide for self-release such as one-way gates or, for fences lower than 7 feet in height, earthen ramps on the interior side that allow trapped wildlife to jump out on their own.

Finally, please note that MDIFW's wildlife fencing recommendations continue to evolve with new information and can vary depending upon site- or project-specific considerations (e.g., size and location of project, proximity to protected resource, potential for habitat fragmentation, displacement, and barriers to wildlife movement, etc.)

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation

with the municipality, and other state resource agencies including the Maine Natural Areas Program, Maine Department of Marine Resources, and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

Becca Settele
Wildlife Biologist

2303 Wycliff Street, Suite 300
St. Paul, MN 55114
O: 612.345.7188
NovelEnergy.Biz

March 7, 2023

Lisa St. Hilaire, Information Manager
Maine Natural Areas Program
177 State House Station, Augusta, ME 04333
Email Address: Lisa.St.Hilaire@maine.gov

RE: Maine Natural Areas Program Review Letter
ME Gorham Daigle CSG
Cumberland County, Gorham, Maine

Dear Ms. St. Hilaire,

ME Gorham Daigle CSG LLC is seeking review of the ME Gorham Daigle CSG project (Proposed Project) slated for 2023. ME Gorham Daigle CSG proposes to install a .700 MW solar array facility at 43.726750, -70.442861 off of Dyer Rd in Gorham. The Proposed Project will be situated on approximately 10 acres (Proposed Project Area) of a larger parent parcel identified as parcel number 69-0001-0001. In order to augment the planning process for the proposed development, we are interested in obtaining information regarding any rare or exemplary botanical features in our project area. A project sketch and topo map showing the Proposed Project has been included to assist in your determination. If you have any questions or require further information, please do not hesitate to contact me.

Please send your comments to the below email address. If you have any questions concerning this proposal, please contact Robin Brigham at robin.brigham@novelenergy.biz and copy environmental@novelenergy.biz.

The following reference materials have been included for your information:

- Location Maps (including USGS Topographical Map)
- Proposed Project KMZ file (attached to email)

Regards,

Novel Energy Solutions LLC

Robin Brigham
Manager of Environmental Compliance

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

March 8, 2023

Robin Brigham
Novel Energy Solutions
2303 Wycliff Street, Suite 300
St. Paul, MN 55114

Via email: robin.brigham@novelenergy.biz

Re: Rare and exemplary botanical features in proximity to: ME Gorham Daigle CSG Solar Array, Dyer Road, Gorham, Maine

Dear Ms. Brigham:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received March 7, 2023 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Gorham, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM
BLOSSOM LANE, DEERING BUILDING

DEPARTMENT OF Agriculture Conservation & Forestry

PHONE: (207) 287-8044
WWW.MAINE.GOV/DACF/MNAP

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

The Maine Natural Areas Program has instituted a fee structure of $75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for $150.00 for two hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Lisa St. Hilaire

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program
207-287-8044 | lisa.st.hilaire@maine.gov

Rare and Exemplary Botanical Features within 4 miles of
Project: ME Gorham Daigle CSG Solar Array, Dyer Road, Gorham, ME

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Broad Beech Fern						
	SC	S2	G5	1872-08	15	Hardwood to mixed forest (forest, upland)
Columbian Watermeal						
	SC	S2	G5	2016-09-12	11	Open water (non-forested, wetland)
Ebony Spleenwort						
	SC	S2	G5	1910-06-06	10	Rocky summits and outcrops (non-forested,
Fall Fimbry						
	SC	S2S3	G5	2020-09-17	33	Open wetland, not coastal nor rivershore (non-forested,
Fern-leaved False Foxglove						
	SC	S3	G5	2020	2	Dry barrens (partly forested, upland),Hardwood to mixed
	SC	S3	G5	2011-10-03	38	Dry barrens (partly forested, upland),Hardwood to mixed
Hollow Joe-pye Weed						
	SC	S2	G5?	2011-10-22	22	Open wetland, not coastal nor rivershore (non-forested,
Missouri Rockcress						
	T	S1	G5	1905-06-11	5	Rocky summits and outcrops (non-forested,
Pitch Pine Woodland						
		S3	G2	2005-12-08	28	
Scarlet Oak						
	E	S1	G5	1916-08	2	Hardwood to mixed forest (forest, upland)
Vasey's Pondweed						
	SC	S2	G4	1901-08-04	7	Open water (non-forested, wetland)

Date Exported: 2023-03-07 16:11

Conservation Status Ranks

State and Global Ranks: This ranking system facilitates a quick assessment of a species' or habitat type's rarity and is the primary tool used to develop conservation, protection, and restoration priorities for individual species and natural habitat types. Each species or habitat is assigned both a state (S) and global (G) rank on a scale of critically imperiled (1) to secure (5). Factors such as range extent, the number of occurrences, intensity of threats, etc., contribute to the assignment of state and global ranks. The definitions for state and global ranks are comparable but applied at different geographic scales; something that is state imperiled may be globally secure.

The information supporting these ranks is developed and maintained by the Maine Natural Areas Program (state ranks) and NatureServe (global ranks).

Rank	Definition
S1 **G1**	**Critically Imperiled** – At very high risk of extinction or elimination due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
S2 **G2**	**Imperiled** – At high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
S3 **G3**	**Vulnerable** – At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
S4 **G4**	**Apparently Secure** – At fairly low risk of extinction or elimination due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
S5 **G5**	**Secure** – At very low risk of extinction or elimination due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
SX **GX**	**Presumed Extinct** – Not located despite intensive searches and virtually no likelihood of rediscovery.
SH **GH**	**Possibly Extinct** – Known from only historical occurrences but still some hope of rediscovery.
S#S# **G#G#**	**Range Rank** – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem.
SU **GU**	**Unrankable** – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
GNR **SNR**	**Unranked** – Global or subnational conservation status not yet assessed.
SNA **GNA**	**Not Applicable** – A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities (e.g., non-native species or ecosystems.
Qualifier	**Definition**
S#? **G#?**	**Inexact Numeric Rank** – Denotes inexact numeric rank.
Q	**Questionable taxonomy that may reduce conservation priority** – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable. The "Q" modifier is only used at a global level.
T#	**Infraspecific Taxon (trinomial)** – The status of infraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank.

State Status: Endangered and Threatened are legal status designations authorized by statute. Please refer to MRSA Title 12, §544 and §544-B.

Status	Definition
E	**Endangered** – Any native plant species in danger of extinction throughout all or a significant portion of its range within the State or Federally listed as Endangered.
T	**Threatened** – Any native plant species likely to become endangered within the foreseeable future throughout all or a significant portion of its range in the State or Federally listed as Threatened.
SC	**Special Concern** – A native plant species that is rare in the State, but not rare enough to be considered Threatened or Endangered.
PE	**Potentially Extirpated** – A native plant species that has not been documented in the State in over 20 years, or loss of the last known occurrence.

Element Occurrence (EO) Ranks: Quality assessments that designate viability of a population or integrity of habitat. These ranks are based on size, condition, and landscape context. Range ranks (e.g., AB, BC) and uncertainty ranks (e.g., B?) are allowed. The Maine Natural Areas Program tracks all occurrences of rare plants and natural communities/ecosystems (S1-S3) as well as exemplary common natural community types (S4-S5 with EO ranks A/B).

Rank	Definition
A	**Excellent** – Excellent estimated viability/ecological integrity.
B	**Good** – Good estimated viability/ecological integrity.
C	**Fair** – Fair estimated viability/ecological integrity.
D	**Poor** – Poor estimated viability/ecological integrity.
E	**Extant** – Verified extant, but viability/ecological integrity not assessed.
H	**Historical** – Lack of field information within past 20 years verifying continued existence of the occurrence, but not enough to document extirpation.
X	**Extirpated** – Documented loss of population/destruction of habitat.
U	**Unrankable** – Occurrence unable to be ranked due to lack of sufficient information (e.g., possible mistaken identification).
NR	**Not Ranked** – An occurrence rank has not been assigned.

Visit the Maine Natural Areas Program website for more information
http://www.maine.gov/dacf/mnap

maine DEPARTMENT OF Agriculture Conservation & Forestry
NATURAL AREAS

Benjamin Hansen
Environmental Specialist
Novel Energy Solutions LLC
2303 Wycliff Street, STE 300
St. Paul, MN 55114

March 13, 2023

Maine Historic Preservation Commission
65 State House Station
Augusta, ME 04333

Subject: Request for Project Review
ME Gorham Daigle CSG
Gorham, ME

Dear Maine Historic Preservation Commission:

The ME Gorham Daigle CSG Project (Proposed Project) involves the installation of a .700-megawatt (MW) DC ground mounted photovoltaic (PV) solar facility off Dyer Rd, in the Town of Gorham. The Proposed Project will be situated on approximately 10 acres (Proposed Project Area) of a larger, parent parcel identified as parcel number 69-0001-0001 by the Cumberland County tax assessor. No structures exist within the Proposed Project Area. Currently and historically, the Proposed Project Area is a farmland.

This letter serves as a request for the Maine Historic Preservation Commission (MHPC) to review and comment on the Proposed Project's effect on historic resources. The Proposed Project will require the following permits:

- *Maine Department of Environmental Protection: Stormwater Permit by Rule*
- *US Army Corps of Engineers: Maine General Permit Section VI: Self-Verification Form*

The Proposed Project would include the development of a ground mounted solar array facility, supporting utility infrastructure, limited gravel access drives and equipment pad areas, fencing, landscape buffers, and native ground cover establishment. The proposed visual screening (trees) will be located along project entrance and around the edge of the Proposed Project to prevent visual impacts. The estimated duration of construction is approximately 9 months. The primary equipment and machinery that will be on-site includes forklifts for material transportation, pile drivers to install the steel pilings, and small excavators for trenching electrical equipment. When the Proposed Project has reached its operation end, the Proposed Project Area can be returned to its pre-construction state.

The proposed groundcover under the solar array will prioritize pollinator friendly, native species and a controlled maintenance program to promote the habitat. Unlike most forms of development, the project surface area will largely remain pervious. By maintaining a high percentage of permeability with the implementation of native groundcover, the Proposed Project will be able to increase organic matter and the quality of the soils, along with providing a pathway for surface water to infiltrate into the soil in a productive manner. As for technical operations, monitoring of the Proposed Project and Area will be done remotely from a Regional Operational Center. It is anticipated that there will be, on average, 1-2 vehicular trips to the Proposed Project Area per month by a standard utility-truck.

The purpose of the Proposed Project is to provide a source of long-term renewable energy for rural Maine residents. ME Gorham Daigle CSG can provide reliable power to customers in

Cumberland County, at competitive rates. Additionally, Maine residents have expressed interest in procuring clean power from a solar farm; however, rooftop solar is cost prohibitive for most families due to the high upfront cost. The Proposed Project solves this dilemma by providing solar power from a solar farm located within Maine. The Applicant is responding to a regional need for an affordable and reliable supply of electric power at competitive rates to Maine residents.

On March 13, 2023, Novel Energy Solutions (NES) notified the following five federally-recognized tribes about the Proposed Project:

- *Houlton Band of Maliseet Indians*
- *Mi'kmaq Nation*
- *Passamaquoddy Tribe of Indians (Pleasant Point and Indian Township Reservations)*
- *Penobscot Nation*

The following reference materials have been included for your review:

- *7.5 USGS topographic map with the project boundaries delineated*
- *If applicable, photos of any buildings over fifty years of age that are on, adjacent to, or across the street from the Proposed Project area.*
- *Preliminary site plans*

Accordingly, NES is submitting this project review request cover letter and supporting documentation for review by the MHPC.

Please provide your response, within 30 days of your receipt of this project review request.

Sincerely,

Benjamin Hansen
Environmental Specialist
Novel Energy Solutions LLC

CC
Environmental Team (environmental@novelenergy.biz)

Benjamin Hansen
Environmental Specialist
Novel Energy Solutions LLC
2303 Wycliff Street, STE 300
St. Paul, MN 55114

March 13, 2023

Isaac St. John
Tribal Historic Preservation Officer
Houlton Band of Maliseet Indians
88 Bell Road
Littleton, Maine 04730

Subject: Proposed Project Notification
ME Gorham Daigle CSG
Gorham, ME

Dear Isaac:

The ME Gorham Daigle CSG will require federal or state permits and has requested the Maine Historic Preservation Commission to review and comment on the Proposed Project's effect on historic resources. This letter serves to notify the Tribal Historic Preservation Office of the Proposed Project.

The ME Gorham Daigle CSG Project (Proposed Project) involves the installation of a .700-megawatt (MW) DC ground mounted photovoltaic (PV) solar facility off Dyer Rd, in the Town of Gorham. The Proposed Project will be situated on approximately 10 acres (Proposed Project Area) of a larger, parent parcel identified as parcel number 69-0001-0001 by the Cumberland County tax assessor. No structures exist within the Proposed Project Area. Currently and historically, the Proposed Project Area is a farmland.

The Proposed Project would include the development of a ground mounted solar array facility, supporting utility infrastructure, limited gravel access drives and equipment pad areas, fencing, landscape buffers, and native ground cover establishment. The proposed visual screening (trees) will be located along project entrance and around the edge of the Proposed Project to prevent visual impacts. The estimated duration of construction is approximately 9 months. The primary equipment and machinery that will be on-site includes forklifts for material transportation, pile drivers to install the steel pilings, and small excavators for trenching electrical equipment. When the Proposed Project has reached its operation end, the Proposed Project Area can be returned to its pre-construction state.

The proposed groundcover under the solar array will prioritize pollinator friendly, native species and a controlled maintenance program to promote the habitat. Unlike most forms of development, the project surface area will largely remain pervious. By maintaining a high percentage of permeability with the implementation of native groundcover, the Proposed Project will be able to increase organic matter and the quality of the soils, along with providing a pathway for surface water to infiltrate into the soil in a productive manner. As for technical operations, monitoring of the Proposed Project and Area will be done remotely from a Regional

Operational Center. It is anticipated that there will be, on average, 1-2 vehicular trips to the Proposed Project Area per month by a standard utility-truck.

The purpose of the Proposed Project is to provide a source of long-term renewable energy for rural Maine residents. ME Gorham Daigle CSG can provide reliable power to customers in Cumberland County, at competitive rates. Additionally, Maine residents have expressed interest in procuring clean power from a solar farm; however, rooftop solar is cost prohibitive for most families due to the high upfront cost. The Proposed Project solves this dilemma by providing solar power from a solar farm located within Maine. The Applicant is responding to a regional need for an affordable and reliable supply of electric power at competitive rates to Maine residents.

The following reference materials have been included for your review:

- 7.5 USGS topographic map with the project boundaries delineated.
- If applicable, photos of any buildings over fifty years of age that are on, adjacent to, or across the street from the Proposed Project area.
- Preliminary site plans.

We request any comments you may have on the proposed project. Because this review is time-sensitive, please submit your comments within 30 days from the receipt of this letter. If you have any questions concerning this proposal, please contact Benjamin Hansen at ben.hansen@novelenergy.biz.

Sincerely,

Benjamin Hansen
Environmental Specialist
Novel Energy Solutions LLC

CC
Environmental Team (environmental@novelenergy.biz)

Benjamin Hansen
Environmental Specialist
Novel Energy Solutions LLC
2303 Wycliff Street, STE 300
St. Paul, MN 55114

March 13, 2023

Kendyl Reis
Tribal Historic Preservation Officer
Mi'kmaq Nation
7 Northern Road
Presque Isle, Maine 04769

Subject: Proposed Project Notification
ME Gorham Daigle CSG
Gorham, ME

Dear Kendyl:

The ME Gorham Daigle CSG will require federal or state permits and has requested the Maine Historic Preservation Commission to review and comment on the Proposed Project's effect on historic resources. This letter serves to notify the Tribal Historic Preservation Office of the Proposed Project.

The ME Gorham Daigle CSG Project (Proposed Project) involves the installation of a .700-megawatt (MW) DC ground mounted photovoltaic (PV) solar facility off Dyer Rd, in the Town of Gorham. The Proposed Project will be situated on approximately 10 acres (Proposed Project Area) of a larger, parent parcel identified as parcel number 69-0001-0001 by the Cumberland County tax assessor. No structures exist within the Proposed Project Area. Currently and historically, the Proposed Project Area is a farmland.

The Proposed Project would include the development of a ground mounted solar array facility, supporting utility infrastructure, limited gravel access drives and equipment pad areas, fencing, landscape buffers, and native ground cover establishment. The proposed visual screening (trees) will be located along project entrance and around the edge of the Proposed Project to prevent visual impacts. The estimated duration of construction is approximately 9 months. The primary equipment and machinery that will be on-site includes forklifts for material transportation, pile drivers to install the steel pilings, and small excavators for trenching electrical equipment. When the Proposed Project has reached its operation end, the Proposed Project Area can be returned to its pre-construction state.

The proposed groundcover under the solar array will prioritize pollinator friendly, native species and a controlled maintenance program to promote the habitat. Unlike most forms of development, the project surface area will largely remain pervious. By maintaining a high percentage of permeability with the implementation of native groundcover, the Proposed Project will be able to increase organic matter and the quality of the soils, along with providing a pathway for surface water to infiltrate into the soil in a productive manner. As for technical operations, monitoring of the Proposed Project and Area will be done remotely from a Regional

Operational Center. It is anticipated that there will be, on average, 1-2 vehicular trips to the Proposed Project Area per month by a standard utility-truck.

The purpose of the Proposed Project is to provide a source of long-term renewable energy for rural Maine residents. ME Gorham Daigle CSG can provide reliable power to customers in Cumberland County, at competitive rates. Additionally, Maine residents have expressed interest in procuring clean power from a solar farm; however, rooftop solar is cost prohibitive for most families due to the high upfront cost. The Proposed Project solves this dilemma by providing solar power from a solar farm located within Maine. The Applicant is responding to a regional need for an affordable and reliable supply of electric power at competitive rates to Maine residents.

The following reference materials have been included for your review:

- 7.5 USGS topographic map with the project boundaries delineated.
- If applicable, photos of any buildings over fifty years of age that are on, adjacent to, or across the street from the Proposed Project area.
- Preliminary site plans.

We request any comments you may have on the proposed project. Because this review is time-sensitive, please submit your comments within 30 days from the receipt of this letter. If you have any questions concerning this proposal, please contact Benjamin Hansen at ben.hansen@novelenergy.biz.

Sincerely,

Benjamin Hansen
Environmental Specialist
Novel Energy Solutions LLC

CC
Environmental Team (environmental@novelenergy.biz)

Benjamin Hansen
Environmental Specialist
Novel Energy Solutions LLC
2303 Wycliff Street, STE 300
St. Paul, MN 55114

March 13, 2023

Donald Soctomah
Tribal Historic Preservation Officer
Passamaquoddy Tribe
PO Box 102
Princeton, Maine 04668

Subject: Proposed Project Notification
ME Gorham Daigle CSG
Gorham, ME

Dear Donald:

The ME Gorham Daigle CSG will require federal or state permits and has requested the Maine Historic Preservation Commission to review and comment on the Proposed Project's effect on historic resources. This letter serves to notify the Tribal Historic Preservation Office of the Proposed Project.

The ME Gorham Daigle CSG Project (Proposed Project) involves the installation of a .700-megawatt (MW) DC ground mounted photovoltaic (PV) solar facility off Dyer Rd, in the Town of Gorham. The Proposed Project will be situated on approximately 10 acres (Proposed Project Area) of a larger, parent parcel identified as parcel number 69-0001-0001 by the Cumberland County tax assessor. No structures exist within the Proposed Project Area. Currently and historically, the Proposed Project Area is a farmland.

The Proposed Project would include the development of a ground mounted solar array facility, supporting utility infrastructure, limited gravel access drives and equipment pad areas, fencing, landscape buffers, and native ground cover establishment. The proposed visual screening (trees) will be located along project entrance and around the edge of the Proposed Project to prevent visual impacts. The estimated duration of construction is approximately 9 months. The primary equipment and machinery that will be on-site includes forklifts for material transportation, pile drivers to install the steel pilings, and small excavators for trenching electrical equipment. When the Proposed Project has reached its operation end, the Proposed Project Area can be returned to its pre-construction state.

The proposed groundcover under the solar array will prioritize pollinator friendly, native species and a controlled maintenance program to promote the habitat. Unlike most forms of development, the project surface area will largely remain pervious. By maintaining a high percentage of permeability with the implementation of native groundcover, the Proposed Project will be able to increase organic matter and the quality of the soils, along with providing a pathway for surface water to infiltrate into the soil in a productive manner. As for technical operations, monitoring of the Proposed Project and Area will be done remotely from a Regional

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The following reference materials have been included for your review:

- 7.5 USGS topographic map with the project boundaries delineated.
- If applicable, photos of any buildings over fifty years of age that are on, adjacent to, or across the street from the Proposed Project area.
- Preliminary site plans.

We request any comments you may have on the proposed project. Because this review is time-sensitive, please submit your comments within 30 days from the receipt of this letter. If you have any questions concerning this proposal, please contact Benjamin Hansen at ben.hansen@novelenergy.biz.

Sincerely,

Benjamin Hansen
Environmental Specialist
Novel Energy Solutions LLC

CC
Environmental Team (environmental@novelenergy.biz)

Benjamin Hansen
Environmental Specialist
Novel Energy Solutions LLC
2303 Wycliff Street, STE 300
St. Paul, MN 55114

March 13, 2023

Chris Sockalexis
Tribal Historic Preservation Officer
Penobscot Nation
12 Wabanaki Way
Indian Island, ME 04468

Subject: Proposed Project Notification
ME Gorham Daigle CSG
Gorham, ME

Dear Chris:

The ME Gorham Daigle CSG will require federal or state permits and has requested the Maine Historic Preservation Commission to review and comment on the Proposed Project's effect on historic resources. This letter serves to notify the Tribal Historic Preservation Office of the Proposed Project.

The ME Gorham Daigle CSG Project (Proposed Project) involves the installation of a .700-megawatt (MW) DC ground mounted photovoltaic (PV) solar facility off Dyer Rd, in the Town of Gorham. The Proposed Project will be situated on approximately 10 acres (Proposed Project Area) of a larger, parent parcel identified as parcel number 69-0001-0001 by the Cumberland County tax assessor. No structures exist within the Proposed Project Area. Currently and historically, the Proposed Project Area is a farmland.

The Proposed Project would include the development of a ground mounted solar array facility, supporting utility infrastructure, limited gravel access drives and equipment pad areas, fencing, landscape buffers, and native ground cover establishment. The proposed visual screening (trees) will be located along project entrance and around the edge of the Proposed Project to prevent visual impacts. The estimated duration of construction is approximately 9 months. The primary equipment and machinery that will be on-site includes forklifts for material transportation, pile drivers to install the steel pilings, and small excavators for trenching electrical equipment. When the Proposed Project has reached its operation end, the Proposed Project Area can be returned to its pre-construction state.

The proposed groundcover under the solar array will prioritize pollinator friendly, native species and a controlled maintenance program to promote the habitat. Unlike most forms of development, the project surface area will largely remain pervious. By maintaining a high percentage of permeability with the implementation of native groundcover, the Proposed Project will be able to increase organic matter and the quality of the soils, along with providing a pathway for surface water to infiltrate into the soil in a productive manner. As for technical operations, monitoring of the Proposed Project and Area will be done remotely from a Regional

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The following reference materials have been included for your review:

- 7.5 USGS topographic map with the project boundaries delineated.
- If applicable, photos of any buildings over fifty years of age that are on, adjacent to, or across the street from the Proposed Project area.
- Preliminary site plans.

We request any comments you may have on the proposed project. Because this review is time-sensitive, please submit your comments within 30 days from the receipt of this letter. If you have any questions concerning this proposal, please contact Benjamin Hansen at ben.hansen@novelenergy.biz.

Sincerely,

Benjamin Hansen
Environmental Specialist
Novel Energy Solutions LLC

CC
Environmental Team (environmental@novelenergy.biz)