

## **Weaver Wind Project**

MDEP Site Location of Development/NRPA Combined Application

### **SECTION 19: FLOODING**

## **19.0 FLOODING**

### **19.1 POTENTIAL FLOODING IMPACT**

The Site Location of Development Law standard related to flooding states that the activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure (38 M.R.S.A. §484).

The project is comprised of 22 wind turbines constructed on hills located to the south of Route 9, including Een Ridge, Little Bull Hill, and other unnamed hills. The power from each turbine will be collected in approximately 24.5 miles of 34.5-kV collector lines. Lines will connect separate project components and will transmit power to an interconnection facility adjacent to the Bull Hill substation in T16MD, where it will tie into the existing electrical grid. The majority of collector lines will be underground, though above-ground lines will also be installed. The majority of underground collector lines will be buried alongside project roads.

Approximately four miles of existing access roads will be upgraded to provide construction and maintenance access to the project areas and to connect turbine locations. Additionally, roughly six miles of new roads will be constructed to further connect turbine locations.

Construction of the collector line segments will not alter the hydrology of the project area. The new pole structures will occupy minimal surface area, thus there will not be an unreasonable effect on runoff infiltration relationships. The project will be designed, constructed, and maintained to satisfy the following: flooding extent will not increase; frequency of flooding of downstream waterbodies will not increase; and 100-year flood elevations will not be adversely impacted. Forest clearing will occur along some overhead collector line segments, resulting in the conversion to scrub-shrub or early successional cover. Over time, an increase in shrub density and low-growing vegetation will result in a higher concentration of root mass associated with the vegetative cover. Therefore, there will be no long-term or significant change in hydrology.

Based on a review of Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM), no project components will be constructed within any mapped 100-year floodplains. Thus, the proposed project will not cause or increase flooding or cause a flood hazard to any existing structure.

### **19.2 FEDERAL EMERGENCY MANAGEMENT AGENCY MAPPING**

FEMA identifies flood hazards, assesses flood risks, and partners with states and communities to provide accurate flood hazard and risk data. This is accomplished through the Flood Hazard Mapping Program, which is an important component of the National Flood Insurance Program. FEMA maintains and updates data through FIRMs and risk assessments. FIRMs include statistical information such as data for river

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flow, storm tides, hydrologic/hydraulic analyses, and rainfall and topographic surveys. FEMA uses the best available technical data to create the flood hazard maps that outline flood risk areas.

Data provided by FEMA classifies T16 MD, T22 MD, and Osborn as “No Special Flood Hazard Area – All Zone C”<sup>1</sup>. Zone C designations are for areas of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level<sup>2</sup>.

## **19.3 LAND USE PLANNING COMMISSION FLOOD PRONE AREAS**

Land Use Guidance Maps created by the Land Use Planning Commission were reviewed for T16 MD, T22 MD, and Osborn<sup>3</sup>. There are no Flood Prone Area Protection Subdistricts (P-FP) within the project area (See also Section 31.0).

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<sup>1</sup> Federal Emergency Management Agency. Community Status Book Report, Maine. Available at: <http://www.fema.gov/cis/ME.pdf> (Accessed August 15, 2018).

<sup>2</sup> Federal Emergency Management Agency. National Flood Insurance Program (NFIP) Floodplain Management Requirements: A Study Guide and Desk Reference for Local Officials, Appendix D. Available at: [https://www.fema.gov/pdf/floodplain/nfip\\_sg\\_appendix\\_d.pdf](https://www.fema.gov/pdf/floodplain/nfip_sg_appendix_d.pdf) (Accessed August 15, 2018).

<sup>3</sup> LUPC Digital Maps and Data. [http://www.maine.gov/dacf/lupc/plans\\_maps\\_data/digital\\_maps\\_data.html](http://www.maine.gov/dacf/lupc/plans_maps_data/digital_maps_data.html) (Accessed August 15, 2018).