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GOVERNOR

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION



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Guidance for Evaluating Wetland Conversion Impacts

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Purpose

Following the enactment of new laws that encourage and support the development of renewable energy, Maine is experiencing a rapid increase in the permitting and development of solar energy projects. The siting and design of these projects influence their environmental impact.

The Natural Resources Protection Act, 38 M.R.S. §§ 480-A through 480-JJ, establishes that development activities may not unreasonably harm freshwater wetlands. The accompanying Department rules, Chapter 310, *Wetlands and Waterbodies Protection*, interpret and further specify the provisions of the Natural Resources Protection Act by requiring the avoidance of wetland impacts, minimization of impacts that cannot be avoided, and compensation for the loss of wetland function.

With the increase in solar development, the Department has seen a considerable increase in wetland alteration – specifically, freshwater wetland conversion.¹ This form of wetland impact occurs when a wetland is converted from one wetland type, such as a forested wetland, to another wetland type, such as scrub/shrub or wet meadow. Prior to the increase in solar development, the most common projects involving freshwater wetland conversion were linear infrastructure projects, such as pipelines and transmission lines, where forested wetlands would be cut, but not filled, and converted to scrub/shrub or wet meadow. With these linear projects the amount of conversion within any one wetland complex tended to be small with the overall impact disbursed along the transmission or pipeline corridor.

Impacts associated with solar development tend to be more concentrated and, depending on site selection and project design, have the potential to impact large wetland areas and a considerable portion of an individual wetland complex. Common types of wetland conversion proposed as part of a solar project include:

- Conversion from forested wetland to scrub/shrub wetland for shade management;
- Conversions of forested wetland to wet meadow wetland for the installation of panels;
and
- Conversion of scrub/shrub wetland to wet meadow wetland for the installation of panels.

The conversion of one wetland type to another wetland type results in a change in wetland functions and values, with some functions and values being diminished or eliminated. Common examples of functions and values that may be altered as a result of wetland conversion include: wildlife habitat, floodflow, nutrient removal/retention/transformation, and production export

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Wetland Impacts – Permit Application Review

The wetland functions that may be lost, degraded, or altered by a proposed project are identified through a functional assessment completed by a permit applicant and reviewed by the Department. Consistent with Chapter 310, the Department will require a functional assessment for all development projects, including solar projects, that involve freshwater wetland alterations of 15,000 square feet or more or 500 square or more of freshwater wetlands of special significance.² These thresholds include the sum of both direct impacts (e.g., fill) and indirect impacts (e.g., shading by solar panels or conversion associated with shade management) to wetlands.

The overall impact of wetland conversion will be site-specific, depending on the type and nature of the wetland impacted and its location in the landscape. While the overall impact will be evaluated on a case-by-case basis as part of the application process, in most instances, the Department will require compensation for the conversion of freshwater wetlands in excess of 15,000 square feet (or any other compensation threshold listed in Chapter 310).³ Because, based on the Department's experience, for the most common wetland conversions listed above approximately half of the functions and values will be retained by the converted wetland, applicants may expect that the Department generally will require the amount of compensation for wetland conversion in excess of the Chapter 310 threshold for compensation to be half (50%) of what is required for direct impacts to, or elimination of, freshwater wetlands.⁴ This will apply equally to all forms of compensation, whether compensation for the loss of wetland function as a result of conversion is provided in the form of in-lieu-fee (ILF) payments or through permittee-managed wetland restoration, enhancement, creation, or preservation projects.

¹ Ch. 310, §2(A) (establishing that freshwater wetland alterations are reviewed under NRPA).

² Ch. 310, § 5(C)(2) (explaining functional assessments); Ch. 310, 5(C)(6) (exempting single, complete projects below these thresholds from the requirement to complete a functional assessment).

³ Ch. 310, § 5(C)(6).

⁴ Ch. 310, § 5(C)(1) (establishing when compensation is required); Ch. 310, § 5(C)(4) & (5) (establishing the types of compensation and compensation amounts (i.e., compensation ratios) for compensation managed by a permittee). 38 M.R.S. § 480(Z) (establishing that an applicant may opt to pay a fee in lieu of compensation). The Department publishes a Fact Sheet that includes in-lieu-fee (ILF) compensation rates that is linked to from the Department's ILF webpage at: https://www.maine.gov/dep/land/nrpa/ILF_and_NRCP/index.html.