

# **Conceptual Wetland Mitigation Measures**

Ball Hill Wind Project

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To assist with discussion and planning of the Ball Hill Wind Project (the Project), included within this document are basic components and concepts for a potential mitigation plan. As the Project component layout is finalized and field survey is completed, Ball Hill will develop a full Wetland and Stream Restoration and Mitigation Plan, which would be submitted to the United States Army Corps of Engineers (USACE) and the New York State Department of Environmental Conservation (NYSDEC) prior to construction as part of the Joint Permit Application.

## **1.0 Mitigation Approach**

Based on prior consultation with the USACE and NYSDEC during previous iterations of the Ball Hill Wind Project, the USACE and NYSDEC may require the following, or similar, approach:

- Wetland mitigation for Project-related impacts would be accomplished by wetland creation at nearby mitigation sites and by tree planting within appropriate existing emergent wetland areas; and
- Wetland creation would offset acreage lost due to permanent fill impacts, while planting trees would offset conversion of forested wetland to non-forested wetland and the associated loss of wetland function.

### **Additional Topics for Consideration:**

1. Additional potential mitigation options include wetland improvement projects (e.g., invasive species control), and wetland preservation through conservation easements. Areas of the watershed may qualify for use of a Ducks Unlimited mitigation bank for wetlands that do not fall under NYSDEC jurisdiction. These options typically require a higher permanent-impact acreage to mitigation-site size ratio but are generally more successful and beneficial for the environment.
2. Potentially suitable wetland mitigation sites can be identified using remote sensing techniques. Upon selection, mitigation sites would require thorough field survey and evaluation to determine suitability and enable proper site design.
3. As part of development of the mitigation plan, monitoring requirements and performance standards would be developed for the mitigation sites.
4. Tree planting would typically occur at the site of forested wetland impact. However, in this case that would not be suitable for many of the Project components, where vegetation will be maintained in a herbaceous/shrub-scrub state. As a result, tree planting would be proposed at or near existing emergent wetland areas at a given ratio of disturbance acreage to planting acreage.

### **Goals and Objectives**

The proposed mitigation project's goals and objectives will be derived from the functions and services of the on-site wetlands that would be lost or impaired due to the Project. Mitigation would offset the loss or degradation of wetland functions and services and compensate for the lost on-site wetland acreage.

The proposed mitigation project will be intended to compensate for lost functions and services of impacted wetlands while providing greater benefit at a landscape-level. The primary functions of the permanently filled wetlands include flood flow alteration; groundwater recharge/discharge; nutrient, sediment, toxicant or pathogen retention; and wildlife habitat. The primary function of the forested component to be permanently converted is wildlife habitat. The conversion of forested wetland to scrub/shrub or emergent cover types would result in change in the wildlife habitat value or usage within impacted areas. The overall goals and objectives for the proposed mitigation project will be to create wetland conditions with functions matching

those of the wetlands that would be permanently filled; enhance existing emergent wetlands by planting trees; and preserve said areas via the establishment of easements other conservation mechanisms.

Types of impacts on wetlands from the Project may include the placement of permanent fill in wetlands of emergent cover type, and of size and vegetative diversity ranging from low to high. The permanent impacts from the placement of fill would result in a loss of wetland area. Forest conversion of wetlands may be due to clearing within turbine staging areas, along access roads, along collection lines, and along the transmission line. The wetlands impacted by permanent forest conversion would be of moderate to large size with low to high vegetative diversity. The primary function affected is wildlife habitat. This conversion would result in a long-term shift in wildlife habitat functions. The final mitigation plan to be developed during the course of the Joint Permit Application process would address the site-specific cumulative loss of function provided by the impacted wetlands, as well as any identified public value. Consistent with USACE and NYSDEC guidance, the goal of the mitigation plan will be to create, enhance, and preserve existing wetland functions, services, and ecological integrity at specific mitigation areas to adequately offset the loss of function and service within jurisdictional wetlands resulting from Project implementation.

Examples of conceptual design components that may be implemented to offset permanent fill and conversion impacts in these wetlands include:

- Creating new wetland area with similar functions and services to those lost due to permanent impact;
- Tree planting within and in the vicinity of existing emergent wetlands to compensate for function(s) lost by the conversion of forested wetland to non-forested wetland; and
- Preserving existing wetlands and buffer areas within the mitigation areas via the establishment of conservation easements.

Ball Hill does not plan to acquire the land required to implement any mitigation project. Easement agreements would be sought with landowners for any mitigation sites. Ball Hill would discuss the development of on-site mitigation and permanent conservation easements with landowners within the Project Area. Ball Hill would plan to consolidate mitigation to maximize functions and services of each mitigation area, pending approval and consultation with the agencies. By maximizing the contiguous area of each mitigation site, Ball Hill believes that the overall value of the mitigation increases in relation to the surrounding landscape. Additionally, since impacts on wetlands would be located within two distinct watersheds, it is expected that one mitigation area would be located in each watershed. Based on the initial field surveys and review of mapped NYSDEC wetlands within the Project Area, several potential mitigation sites could be considered. During the course of the Joint Permit Application review process, Ball Hill will continue coordinating with local landowners regarding suitable parcels on which to implement mitigation and placement of conservation easements.

## Mitigation Plan Table of Contents

A wetland mitigation plan may have the following table of contents, with additional subsections as appropriate:

### 1 Introduction

#### 1.1 Description of the Proposed Action

This section will present the project facilities, similar to the introduction of the SDEIS (Section 1).

#### 1.2 Summary of Existing Conditions and Impacts

This section will present the anticipated wetland impacts, similar to Section 2.4 of the SDEIS. It will present both federal and state jurisdictional impacts.

### 2 Mitigation Goals and Objectives

This section will introduce the proposed mitigation methods and explain how they will mitigate for wetland impacts. It will introduce the restoration measures proposed as well as the use of wetland mitigation sites.

### 3 Restoration Plan

This section will detail all measures to minimize stream and wetland disturbance during construction and facilitate the recovery of all temporarily impacted areas. Potential subsections include:

- General Stream/Wetland Construction Procedures and Policies
- Stream and Wetland Restoration Procedures
- Post-Construction Monitoring

### 4 Wetland Mitigation Implementation Plan

The Implementation Plan focuses on the details of the selection, construction, and monitoring of the wetland mitigation sites. Potential subsections for each mitigation site include:

- Hydrology
- Soils
- Wetlands
- Enhancement/Preservation Plan
- Wetland Functional Compensation
- Threatened and Endangered Species Coordination
- Section 106 Coordination
- Potential Development Threat
- Grading Plan
- Control of Invasive and Noxious Species
- Construction Compliance
- Preservation and Long-Term Stewardship