

# **Proposed Work Plan for Peregrine Falcon Surveys at the Proposed Groton Wind Project near Groton, New Hampshire**

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**Proposed Work Plan for Peregrine Falcon Surveys  
Groton Wind Project, Groton, New Hampshire**

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## **1.0 Introduction**

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Stantec Consulting Services, Inc. (Stantec) has conducted a variety of field surveys in support of the proposed Groton Wind Project on two ridgelines near Groton, NH, and is currently conducting migratory raptor surveys within the project area during the spring and fall 2009 migration periods. The New Hampshire Fish and Game Department (NHF&G) and New Hampshire Audubon (Audubon) have identified active peregrine falcon (*Falco peregrinus*) nests on Rattlesnake Mountain, approximately 2.5 miles north of the project area, and on Bear Mountain, approximately 5.5 miles south of the project area. The Rattlesnake Mountain nest site has been active during most years since 1995 and territorial peregrine falcons have been observed at Bear Mountain since 2006.

At a meeting with Groton Wind, NHF&G, and Audubon recently expressed concerns about potential impacts to peregrine falcons associated with the project and requested that additional surveys be conducted within the project area and at two known nest sites in the vicinity. While satellite telemetry surveys were initially recommended to document the movements of peregrine falcons in and near the project area, suitable telemetry equipment and required permits cannot be obtained in a timely manner for 2009 surveys. Therefore, ground-based surveys using four observers suggested as an alternative survey method.

Groton Wind has coordinated with biologists from Audubon and Stantec to develop the following work scope, which outlines proposed survey objectives, methods, and overall approach to conducting these surveys, which supplement initial peregrine falcon surveys conducted in 2006. This collaborative approach is designed to supplement initial peregrine falcon surveys conducted by Stantec in 2006.

## **2.0 Peregrine Falcon Surveys**

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### **2.1 OBJECTIVES**

The ultimate goal of peregrine falcon surveys would be to provide information to help assess the level of risk that peregrine falcons may be exposed to by the proposed project. Because this cannot be directly measured or predicted, surveys would focus on the following objectives: 1) document behavior (flight height, flight path in relation to proposed turbines, flight directions) of adult and fledgling peregrines in the project area and use of the project area (foraging, roosting, etc.); 2) estimate the amount of time per survey day adult and fledgling peregrine falcons spend within the project area; 3) characterize the amount of time per survey day that adult and peregrine falcons spend at or near their nest sites versus foraging elsewhere; and 4) characterize the approximate incoming and outgoing flight directions for adult and fledgling falcons for each nest site.

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## **2.2 METHODS**

Stantec and New Hampshire Audubon propose to conduct 20 survey days between June and September. Based on input from New Hampshire Audubon regarding the timing of nesting at Rattlesnake and Bear Mountains, it has been determined that the schedule shall be as follows:

One survey visit during the week of June 21, 2009 (2 days);  
Weekly survey visits from July 6, 2009 through August 28, 2009 (16 days total);  
One survey visit during the week of September 6, 2009 (2 days).

Each survey would be conducted by four observers, with one observer located at each nest site and two observers within or near the project area. One of the project-site observers will be located on the summit of Crosby Mountain, which has a good view of the ridgeline of Tenney Mountain, the majority of Fletcher Mountain, and the air space to the south of both ridgelines. The second project-site observer will be located at an existing meteorological tower clearing roughly centered on the ridgeline of Tenney Mountain, where they will have a good view of the air space above Tenney Mountain, the ridgeline just south of Rumney, and a distant view of Rattlesnake Mountain. Nest-site observers will be positioned to have good views of each nest and the surrounding cliff face, and if possible, portions of the ridgelines in the project area as well.

Surveys will take place for at least 8 hours per day and will be scheduled to occur during two consecutive days to enable evening and early morning as well as midday observations. Surveyors will be equipped with synchronized watches, and binoculars and/or spotting scopes, and will communicate via cellular phones to coordinate observations. Although initial fieldwork suggests that cellular phone coverage is adequate along the project area ridgelines, the researchers will rely on detailed field notes regarding timing of observation to coordinate field observations at the end of each survey day.

Observers at the nest sites will record the time any peregrine falcons are observed leaving or arriving at the nest site and the direction traveled towards/from, and will observe the bird for as long as possible during flight towards or away from the nest site. Nest site observers will notify observers within the project area when any falcons are away from the nests, as well as when all birds are present at or near the nest site. This will help observers in the project area determine the originating nest site for falcons observed in the project area. Observers within the project area will also record the time any peregrine falcons are first observed, and will visually follow falcons for as long as possible, recording the time when falcons are no longer visible. Although surveys will focus on peregrine falcons, all surveyors will also document other raptor and bird species observed during surveys.

### **3.0 Reporting**

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Stantec will coordinate data analysis and notes from field surveys and will prepare a brief report summarizing the results of 2009 peregrine falcon surveys, which will be circulated to Audubon and Groton Wind for review prior to finalization. The report will include maps documenting flight paths of peregrine falcons observed during surveys and descriptions of flight paths observed during surveys. To the extent possible, the report will present data so as to fulfill the survey objectives identified in this work scope. When possible, data will be analyzed separately for adult and fledgling falcons, as well as for the incubation/chick rearing versus fledgling phases. The peregrine falcon survey report will be included as part of a report summarizing results of spring and fall 2009 raptor migration surveys.

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