



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

3817 Luker Road  
Cortland, NY 13045

July 24, 2014

Mr. Mark Slade, Licensing Manager  
New York Power Authority  
123 Main Street  
White Plains, NY 10601

**RE: Blenheim-Gilboa Pumped Storage Project (FERC #2685)  
Review of Pre-Application Document and Scoping Document and Identification of  
Issues and Associated Study Requests**

Dear Mr. Slade:

The U.S. Fish and Wildlife Service (Service) has reviewed the April 10, 2014, Pre-Application Document (PAD) and the June 4, 2014, Scoping Document 1 (SD1) for the Blenheim-Gilboa Pumped Storage Project (Project) located on Schoharie Creek in Schoharie County, New York. We attended the public meetings held on July 7 and 9, and the site visit held on July 8.

### **Comments on Pre-Application Document**

The PAD is generally well-organized and provides an adequate assessment of existing information on fish and wildlife resources. The 2012 studies conducted by the New York Power Authority (NYPA) relating to water quality, land use, terrestrial habitat, and timber rattlesnakes (*Crotalus horridus*) provided additional useful information to help fill in some of the data gaps.

### **Comments on Scoping Document 1**

The SD1 generally captures all of the issues related to fish and wildlife resources. The primary impacts that the Service believes must be evaluated include fish entrainment mortality (Issue 4.2.2, Bullet 2), impacts from water level fluctuations in both the Upper and Lower Reservoirs (Issue 4.2.3, Bullets 1 and 2), the adequacy of minimum flows downstream from the Project (Issue 4.2.2, Bullet 3), water quality impacts (Issue 4.2.2, Bullet 1), impacts to bald eagles (*Haliaeetus leucocephalus*) (Issue 4.2.3, Bullet 3), and impacts to federally-listed or proposed threatened and endangered species (Issue 4.2.4, Bullet 1).

### **Study Requests**

The Service requests that the applicant conduct the following studies.

#### **I. Fish Entrainment/Protection Study**

Fish near the intakes, in both the Upper and Lower Reservoirs, are subjected to potential mortality from entrainment. The wide spacing of the trashracks (in excess of 5"), probably

ensures that impingement is negligible. However, should narrower-spaced trashracks or some other mechanism be chosen to reduce fish entrainment, the potential for impingement to occur would need to be addressed.

New licenses issued for conventional hydroelectric projects throughout New York and other areas of the Northeast have incorporated 1"-clear spaced trashracks or similar levels of protection to physically exclude most adult fish from the turbine intakes. However, pumped storage facilities have 2-way flow through the pump/turbines, which may render some forms of fish protection infeasible. The applicants should explore alternatives to keep all fish species out of the turbines while protecting them from impingement.

The NYPA has proposed a Fish Entrainment and Turbine Passage Survival Study (Section 5.2.1 of the PAD). The Service supports this study. Similar studies were recently conducted for competing applications for the Kinzua Pumped Storage Project (FERC #2280 and #13889). At the Kinzua Project, the Service recommended that all entrained fish be considered dead (i.e., lost to the fishery) due to the fact that the Upper Reservoir was an asphalt-lined bowl (equivalent to a flooded city parking lot) with no habitat for fish. Unlike Kinzua, the Blenheim-Gilboa Project actually has habitat in the Upper Reservoir, including the controlled-level ponds constructed by the NYPA during the existing license period. The NYPA should recognize that some fish may be re-entrained in the Upper Reservoir after surviving pumping from the Lower Reservoir. It is likely that mortality of these fish is much higher than merely doubling the entrainment mortality from once-through passage studies due to cumulative effects. The Service is not aware of any studies that have looked into this phenomenon.

The NYPA should also expand this study to incorporate potential means of reducing fish entrainment and determine the applicability of each protection alternative to the Project. This portion of the study should include a literature search of available protection designs for the species of concern, as well as information on the relative effectiveness of each design. Existing facilities at other dams should be investigated. Careful attention should be paid to attraction flows, guidance mechanisms, and velocities. The fish must be diverted away from the turbines with screening small enough to physically exclude most fish found in Schoharie Creek and the two reservoirs.

In addition to literature review and on-site investigations of existing facilities, the applicant should collect site-specific data from Schoharie Creek and the two reservoirs to aid in the design of protection facilities. This information should include flows, velocities, water depths, and substrates.

#### 1. *Goals and Objectives*

The goals and objectives of this study are to provide a qualitative analysis of potential fish entrainment mortality and to determine the feasibility of utilizing fish protection at this site to reduce that mortality. The information obtained will allow the Service's fishway engineers to evaluate the potential effectiveness of various options.

## 2. *Resource Management Goals*

The Schoharie Creek, in the vicinity of the existing Project, is managed as a mixed warmwater-coldwater fishery. Based on the information in the PAD, a variety of game fish species are found in Schoharie Creek and the two reservoirs, and several important fish species are stocked into the reservoirs.

## 3. *Public Interest*

The requestor is a resource agency.

## 4. *Existing Information*

Extensive data from various fishery studies have been provided in the PAD. However, the PAD provides little information regarding fish entrainment mortality or feasible protection alternatives.

## 5. *Nexus to Project Operations and Effects*

The intakes may impinge or entrain fish, resulting in mortality.

## 6. *Methodology Consistent with Accepted Practice*

The recommended study uses standard literature reviews and site-specific data collection techniques common to most hydroelectric licensing activities.

## 7. *Level of Effort, Cost, and Why Alternative Studies Will Not Suffice*

The level of effort would involve moderate literature review, discussions with fishway engineers, and site-specific data collection. The study could be completed in 1 year or less, but may require more time to design effective facilities. The actual cost is unknown and would depend upon the number of alternatives examined. The existing information in the PAD is inadequate to allow a thorough examination of alternatives. However, most of the information needed should be available in the existing literature.

## II. Northern Long-Eared Bat Survey

Northern long-eared bats (NLEB) are known to occur in Schoharie County and there is potential for the species to occur within the Project action area. In October 2013, the Service proposed listing the NLEB as an endangered species. Pursuant to Section 7(a)(4) of the Endangered Species Act (ESA) of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), Federal action agencies are required to confer with the Service if their proposed action is likely to jeopardize the continued existence of the NLEB. Action agencies may voluntarily confer with the Service if the proposed action may affect a proposed species. Species proposed for listing are not afforded protection under the ESA; however, as soon as a listing becomes effective, the

prohibition against jeopardizing its continued existence and “take”<sup>1</sup> applies regardless of an action’s stage of completion. If the Federal Energy Regulatory Commission (FERC) retains any discretionary involvement or control over on-the-ground actions that may affect the species after listing, Section 7 consultation procedures apply. Additional information regarding the NLEB and conference procedures can be found at (<http://www.fws.gov/midwest/endangered/mammals/nlba/index.html>).

To assist with an analysis of potential impacts of the Project, the Service recommends that the applicant conduct bat surveys.<sup>2</sup> This type of information can greatly assist the Service and the FERC with a full analysis of the effects of the continued operation of the Project.

1. *Goals and Objectives*

The goals and objectives of this study are to provide information on the existence of NLEB within the Project impact area to enable the Service and the FERC to determine if existing or proposed Project activities may impact the NLEB.

2. *Resource Management Goals*

The NLEB has been proposed for listing as an endangered species.

3. *Public Interest*

The requestor is a resource agency.

4. *Existing Information*

The NLEB is known to exist in Schoharie County. The PAD provides no information on the existence of NLEB within the Project vicinity; however, habitat suitable for NLEB exists within the Project boundary.

5. *Nexus to Project Operations and Effects*

Actions undertaken by the NYPA may impact NLEB habitat. These actions may include, but are not limited to, ongoing maintenance activities or new activities related to the construction, operation, and maintenance of any required environmental, recreational, cultural, or socioeconomic protection, mitigation, or enhancement measures.

6. *Methodology Consistent with Accepted Practice*

The recommended study uses bat survey techniques utilized throughout the United States and has been standardized by the Service.

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<sup>1</sup> Take is defined in Section 3 of the ESA as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

<sup>2</sup> The Service’s current summer survey guidelines are available at <http://www.fws.gov/midwest/endangered/mammals/nlba/pdf/NLEBinterimGuidance6Jan2014.pdf>.

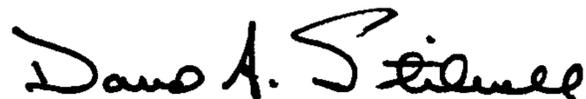
7. *Level of Effort, Cost, and Why Alternative Studies Will Not Suffice*

The level of effort would be moderate. The study could be completed in one season. The actual cost is unknown and would depend upon the aerial extent of the potential impact zone. The existing information in the PAD is inadequate to determine potential impacts.

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We appreciate the opportunity to review the PAD and SD1 and to provide study requests. If you have any questions or desire additional information, please contact Steve Patch at 607-753-9334.

Sincerely,



David A. Stilwell  
Field Supervisor

cc: NYSDEC, Stamford, NY (C. VarMaaren)  
FERC, Washington, DC (K. Bose)