



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

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December 31, 2013

Mr. Thomas Griffin  
President, Crown Hydro LLC  
5885 139<sup>th</sup> Street West  
Apple Valley, MN 55124-6465

re: Amendment for Licensing  
Crown Mill Hydro Project  
FERC Project No. P-11175  
Mississippi River  
Hennepin County, Minnesota

Dear Mr. Griffin,

On November 13, 2013, you submitted a letter (through your consultant, Wenck Associates, Inc.) indicating your intent to file an application for amendment of license for the Crown Mill Hydroelectric Project (FERC Project No. P-11175) and announced an agency/public meeting for November 26, 2013. As part of your amendment, and as described at the public meeting, you propose to modify the project boundary, the project location, and project appurtenances. Our comments follow.

Regulations created pursuant to the Federal Power Act (FPA), as amended, require consultation with the U.S. Fish and Wildlife Service (FWS) and other resource agencies (18 C.F.R. § 4.38(a) and 18 C.F.R. § 5.1(d)). This response is provided in accordance with provisions of the National Environmental Policy Act (NEPA) of 1969 (83 Stat. 852; 42 U.S.C. 4321 et seq.), the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.), the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d), the Migratory Bird Treaty Act (MBTA) (40 Stat. 755, as amended; 16 U.S.C. 703 et seq.), and the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

### **PROJECT DESCRIPTION**

The Federal Energy Regulatory Commission (FERC) order issuing the project license, dated March 19, 1999, stated that the project would consist of: (1) a reconstructed upper canal and intake tunnel, (2) a powerhouse room containing two hydropower units with a total capacity of 3.4 MW, and (3) a reconstructed tailrace canal and an existing tailrace tunnel. Under your proposed amendment, you plan to reconfigure your project and relocate it within the property boundary of a U.S. Army Corps of Engineers (USACE) lock and dam. The USACE raised some concerns with this new alignment in their letter to you dated March 15, 2012. In a letter dated

April 15, 2013, the FERC stated that your latest proposal to develop the project would involve lands and environmental resources not previously analyzed when the license was issued in 1999 and that the license amendment process may not be the appropriate vehicle for you to analyze and implement your proposal.

## **GENERAL COMMENTS**

We concur with comments provided by the USACE, the FERC, and the National Park Service (NPS) and recommend that you fully analyze any potential impacts from the construction and operation of your proposed amendment, including any concerns raised by the public, other stakeholders and the FWS. Public involvement is critical and we recommend involvement of all stakeholders, including the FWS, early in the process. Please consider that the Environmental Assessment (EA) conducted as part of the 1999 license may be inadequate given the scope of the proposed changes and how the environment may have changed over the past 14 years.

## **RECOMMENDATIONS PURSUANT TO SECTION 10(j) OF THE FPA**

### Project Operations

**A.** We recommend that any proposed development be operated in run-of-river mode with no hydroelectric (hydro) peaking.

**B.** We are concerned with the current operational scenario, as is detailed in Article 404 of the project license. Allowing St. Anthony Falls to become dewatered as a result of project operation may have significant ecological and aesthetic consequences and should be fully analyzed as part of a your license amendment.

**Basis:** Hydro peaking produces fluctuating water levels in the project tail water and reservoir, which adversely affect fish and other aquatic life. Under run-of-river operation, the reservoir, tail water, and downstream areas undergo changes occurring under natural hydrological conditions which fish and other aquatic life have adapted. Reducing water level fluctuations minimizes adverse impacts to wetland, shallow water, and shoreline habitats important to fish and wildlife resources. Operational dewatering of St. Anthony Falls would produce downstream effects similar to hydro peaking and could have significant impacts on sensitive mussel populations, aquatic invertebrates and fish habitat.

### Fish Protection

**A.** Any proposed powerhouse should include trash racks above the intake to minimize fish entrainment and turbine mortality. We recommend installing trash racks with a maximum of one inch clear horizontal spacing between the bars to minimize juvenile fish entrainment.

**B.** It is recommended to maintain average normal inflow velocities immediately upstream of the trash rack of the powerhouse to be no greater than two feet per second to protect fish from impingement and entrapment.

**Basis:** Numerous entrainment and turbine mortality studies conducted over the past 20 years in the Midwest have shown fish are entrained at hydro projects and that a portion of the fish entrained (up to 20+ percent) are killed by the turbines (FERC 1995).

FERC (Federal Energy Regulatory Commission). 1995. Preliminary assessment of fish entrainment at hydropower projects; a report on studies and protective measures. Federal Energy Regulatory Commission, Office of Hydropower Licensing. Washington D.C.

## **RECOMMENDATIONS PURSUANT TO SECTION 10(a) OF THE FPA**

### Consultation

**A.** It is recommended that you consult with the FWS on matters affecting fish and wildlife resources as part of the amendment/license process and throughout the term of any subsequent or amended license.

**Basis:** Issues frequently come up throughout the term of a license or during an amendment/relicensing process that involves fish and wildlife resources in the vicinity of the project.

### **SUGGESTED STUDIES**

#### 1. Updated Fish and Mussel Data

**Basis:** Updated fisheries and mussel studies are recommended to assess affects from the new project design. This should include collecting fisheries and mussel in the area impacted by the newly proposed powerhouse outlet to the river.

#### 2. Aquatic Impacts from Operational Dewatering of St. Anthony Falls

**Basis:** A study is recommended to analyze any potential aquatic impacts from operational dewatering of St. Anthony Falls. This study should involve collecting fisheries and mussel data in combination with hydro modeling, including dissolved oxygen, to determine how dewatering St. Anthony Falls may impact the aquatic habitat.

We appreciate having the opportunity to provide comments. If you have any further questions, please contact Mr. Nick Utrup of my staff at 612-725-3548 ext. 2204.

Sincerely,



Peter Fasbender  
Field Supervisor

cc: Ms. Kimberly Bose, Federal Energy Regulatory Commission, Washington D.C.  
Ms. Charlotte Cohn, Minnesota Department of Natural Resources, St. Paul, MN  
Mr. John Anfinson, National Park Service, St. Paul, MN  
Mr. Nick Chevance, National Park Service, Omaha, NE  
Ms. Nanette Bischoff, U.S. Army Corps of Engineers, St. Paul, MN