

ENVIRONMENTAL ASSESSMENT

APPLICATION FOR AMENDMENT OF EXEMPTION

TANNERY ISLAND PROJECT

FERC NO. PROJECT NO. 4908-011

NEW YORK

Federal Energy Regulatory Commission
Office of Hydropower Licensing
Division of Licensing and Compliance
888 First Street N.E.
Washington, D.C. 20426

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ENVIRONMENTAL ASSESSMENT

FEDERAL ENERGY REGULATORY COMMISSION OFFICE OF HYDROPOWER LICENSING DIVISION OF LICENSING AND COMPLIANCE

Project Name: Tannery Island Project

FERC No. 4908-011

A. APPLICATION

1. Application Type: Amendment of Exemption
2. Date filed with the Commission: November 28, 1995
Supplemental Information filed: January 4 and June 28, 1996
and January 6, 1997
3. Exemptee: Tannery Island Power Company
4. Water Body: Black River
5. Nearest Town: Wilna
6. County: Jefferson State: New York

B. PURPOSE AND NEED FOR ACTION

On November 28, 1995, Tannery Island Power Company (Exemptee) filed an application with the Federal Energy Regulatory Commission (FERC or Commission) to amend the exemption for the Tannery Island Project (FERC Project No. 4908). Supplemental information was filed on January 4 and June 23, 1996, and January 6, 1997.

The exemptee operates the project in a run-of-river mode as required under its exemption. Further, the New York State Department of Environmental Conservation (NYDEC) requires the exemptee to release minimum flows over the project's Big Spicer and Little Spicer dams to protect aquatic resources downstream of the project. Because the dams have irregular crest elevations, the exemptee must release 500 cubic feet per second (cfs) of flow over the dams to provide adequate water to the downstream reaches of the river.

The exemptee proposes to install, seasonal, 1-foot high, flashboards on the Big and Little Spicer dams. The proposed flashboards would have openings to release minimum flows over the dams to specific downstream areas. The proposed flashboards would provide a more uniform distribution of flow to the downstream reaches of the river with a lower minimum flow release. This controlled minimum flow distribution would satisfy NYDEC minimum flow requirements and provide better protection of aquatic resources downstream of the dams.

C. PROPOSED PROJECT AND ALTERNATIVES

1. Proposed Action

The project includes three dams: Big Spicer dam, Little Spicer dam, and Tannery Island Dam A; and a reservoir with a surface area of 8.5 acres and a storage capacity of 68 acre-feet. In accordance with the exemption terms and conditions, the exemptee operates the project in a run-of-river mode and, when adequate flows exist, provides excess flow over the project spillway. 1/

The crest elevations of Big and Little Spicer dams are irregular and range from a high of 719.7 NGVD at Little Spicer dam to a low of 717.6 NGVD at Big Spicer dam. The normal surface elevation of the reservoir is generally controlled by Tannery Island Dam A which has a crest elevation of 719.0 NGVD. These conditions make it difficult to control the amount and location of water discharged over the dams to the downstream reaches of the river. As a result, the exemptee must discharge a minimum flow of 500 cfs over Big and Little Spicer dams to provide adequate water to the downstream reaches of the river and meet NYDEC minimum flow requirements.

The exemptee proposes to install seasonal, 1-foot high wooden flashboards on Big Spicer and Little Spicer dams. In general, the proposed flashboards are to be in place each year from April 15 through December 17. The flashboards will be installed on April 15 or as soon as river discharge conditions permit and will be removed on December 17 or earlier, if icing conditions dictate. The exemptee plans to install and remove the flashboards by hand and use, where possible, existing pin holes in the dam crests to secure the wooden flashboards. New pins and pin holes will be used where needed. The installation and removal process is expected to last a very short time.

In order to meet NYDEC minimum flow requirements, the flashboards will have openings to provide minimum flow releases over the dams to specific downstream areas and dispense water to cover the entire downstream width. The flashboards on Big Spicer dam will have five openings of varying widths to provide a total minimum flow of 88 cfs. The flashboards on Little Spicer dam will have three openings of varying widths to provide a total minimum flow of 18 cfs. When the flashboards are in place the exemptee will operate the project in accordance with the

1/ Article 2 requires the exemptee to comply with terms and conditions specified by Federal and state fish and wildlife agencies to prevent loss of, or damage to, fish and wildlife resources. By letter dated April 9, 1982, the U.S. Fish and Wildlife Service specified terms and conditions for the project. The project contains no terms and conditions regarding minimum flow releases.

exemption terms and conditions and maintain an impoundment elevation of 718.6 feet m.s.l. or higher to release a total minimum flow of 106 cfs over the dams.

After removal of the flashboards, the exemptee will continue to operate the project as required under the project exemption, including the required run-of-river operation. In addition, the exemptee plans to continue to provide minimum flow releases to satisfy NYDEC requirements. Specifically, the exemptee will maintain the project impoundment at not less than 717.96 feet m.s.l. to provide the required minimum flow of 106 cfs. 2/ The exemptee plans to install a staff gage on the abutment of a bridge in the impoundment to monitor compliance with the required minimum flow releases.

In order to ensure compliance with NYDEC minimum flow requirements and satisfy U.S. Fish and Wildlife Service (USFWS) concerns, the exemptee and the USFWS have agreed on measures to maintain required minimum flows during periods when the flashboards are removed. 3/

In general, these measures include: (1) maintaining a reservoir elevation of not less than 717.96 feet m.s.l.; (2) collecting additional elevational readings to validate and verify dam crest elevations and the accuracy of pond level sensor readings; (3) preparing a report for submission to the USFWS on the findings of item 2 and the flows to be maintained with and without the flashboards based on calculations and gage readings; and (4) installing a well-marked staff gage to monitor reservoir elevations.

2. Action Alternative

No alternative actions have been identified.

3. No-action Alternative

Under the no-action alternative, the Commission would deny the amendment application. The exemptee would not install the proposed seasonal, 1-foot high flashboards on Big and Little Spicer dams and would continue to provide the 500 cfs minimum flow over the dams as required by the NYDEC.

2/ By letter dated October 22, 1996 from the exemptee to the U.S. Fish and Wildlife Service, contained in its January 6, 1997 filing, the exemptee confirms that the NYDEC's minimum flow requirement for periods when the flashboards are removed is 106 cfs.

3/ By letter dated January 6, 1997, the exemptee indicates that it agrees with measures contained in the USFWS's December 18, 1996 letter regarding the maintenance of minimum flows during non-flashboard periods.

D. CONSULTATION AND COMMENTS

Agency Comments

The exemptee consulted with the NYDEC and the USFWS on its proposed amendment application. By letter dated November 14, 1995, the NYDEC states it does not object to the proposed amendment. By letter dated December 18, 1996, the USFWS indicates that it does not object to the proposed amendment and suggests certain measures be followed regarding the release and measurement of minimum flows during periods when the flashboards are removed. By letter dated January 6, 1997, the exemptee states it agrees with the USFWS's December 18, 1996 letter.

By letter dated January 22, 1997, the Commission requested concurrence from the New York State Historic Preservation Officer (SHPO) of its determination pursuant to section 106 of the National Historic Preservation Act. By letter dated February 11, 1997, the SHPO concurred with the Commission's "no effect" determination.

Public Notice

On August 8, 1996, the Commission published a public notice of the exemptee's amendment application. The comment period ended September 6, 1996. The Commission did not receive any comments, protests, or motions to intervene in response to the notice.

E. AFFECTED ENVIRONMENT

The Tannery Island Project is located on the Black River in the Village of Carthage, Township of Wilna, in Jefferson County, New York. The project is located 75 miles northeast of Syracuse and 15 miles east of Watertown. The project is situated at the center of a series of dams, weirs, and industrial operations on the Black River and, more specifically, in an established industrial area of the Village of Carthage. Several industrial operations, primarily paper companies, surround the site. The mean annual flow of the Black River at Carthage is 3850 cfs. The project site has a drainage area of 1804 square miles.

The original project facilities were constructed in 1830 to provide power for a pulp mill plant. The hydropower plant later became inoperative. Historically, at various times, one-foot high flashboards have been placed across Big and Little Spicer dams. While such flashboards have been removed, existing pin holes remain along the crest of the dams. On July 11, 1983 the Commission granted the exemptee an exemption from licensing for the project.

The project includes three dams: Big Spicer dam, Little Spicer dam, and Tannery Island Dam A; and a reservoir with a surface area of 8.5 acres and a storage capacity of 68 acre-feet. Further, the project includes an intake forebay at Tannery Island Dam A; and a powerhouse containing five hydropower units with total installed capacity of 1,500 kilowatts (kW). 4/

In accordance with its exemption requirements, the exemptee operates the project in a run-of-river mode. There are no minimum flow requirements in the project exemption.

As part of its permit requirements for the project, the NYDEC requires the exemptee to discharge from the project, a minimum flow to the downstream reaches of the river. The required minimum flow is provided over Big and Little Spicer dams.

The project site has been an active industrial site for many years and the soils in the area have been severely altered. The existing soils are covered or mixed with cinders, gravel, and crushed rock. Further, the soils are shallow and rock outcrops and boulders are very common.

Shoreline vegetative cover is well established at the site. In areas where the shoreline is exposed rock and boulders, predominant plant species include poplar, red maple, American elm, black cherry, white ash, dogwood, willow, and staghorn sumac. In areas where sedimentation occurs black willow and alders are predominant. The inland portion of Tannery Island contains a mixture of white pine, grey birch, poplar, American elm, alder, red maple, and other species. Some wetland species exist above the dam on an 0.4 acre island created by sedimentation. These species include black willow and a variety of emergent grasses.

The project site has no significant aesthetic value. The topography of the surrounding river valley does not offer vistas or major views. The project is only visible from a bridge located one-half mile above the site, from a public housing project, and from the surrounding industrial areas.

4/ By letter dated September 7 1984, the Director, Division of Dam Safety and Inspections found changes made to the project consistent with the exemption order issued by the Commission. These changes include the omission of one of two authorized powerhouses and changes in the type and quantity of turbines installed in the remaining powerhouse. Specifically, the exemptee installed 5 vertical Flygt turbines instead of 4 horizontal Francis turbines, as originally authorized by the exemption order. The changes resulted in a decrease in the installed capacity from an authorized capacity of 3,650-kW to 1,500-kW.

Given the industrial nature of the site, wildlife resources are limited to species common to the area, particularly small mammals and birds. Resident fish species in the area, include smallmouth and largemouth bass, walleye, pike, brown trout, carp, bullhead, suckers, and a wide variety of shiners and other minnows. No federally listed or proposed endangered species or unique habitats exist at the site.

Some possible archaeological resources related to historic developments in the area may exist in the vicinity of the project. By letter dated February 11, 1997, the SHPO states the proposed action would have no effect on cultural resources eligible for inclusion in the National Register of Historic Places.

The Black River is used extensively for boating and canoeing, however, recreational use at the project site is minimal given the industrial nature of the area. No formal recreation facilities exist at the site.

F. ENVIRONMENTAL IMPACTS

1. Proposed Action

The installation of seasonal flashboards would involve no ground-disturbing activities. The flashboards would be installed and removed by hand. The exemptee will use existing pin holes in the crests of the dams to install the flashboards. New pins and new pin holes may be installed, as needed, to secure the flashboards. The staff estimates the installation and removal process for the flashboards will last a very short time (less than one day) and may require a minor, temporary drop in reservoir elevation to prevent flows over the dams during the work.

Given the minor work involved and its short duration, the installation and removal of the flashboards are not expected to result in any adverse affects on environmental resources. The temporary interruption of flows over the dams that may occur during the work is of such a short duration it is not expected to significantly dewater areas in the river downstream of the project. As such, the proposed work should not adversely affect aquatic resources downstream of the project.

While the flashboards are in place the exemptee will operate the project as required under its exemption terms and conditions, including the required run-of-river operation. The exemptee plans to maintain a minimum reservoir elevation of 718.6 feet m.s.l. This minimum elevation will ensure that flow through the openings in the flashboards will release the NYSDEC's required minimum flow of 106 cfs over the dams. The exemptee states the flashboards will not increase the reservoir's normal operating level beyond that currently established by the crest elevation of Tannery Island Dam A (719.0 NGVD).

Given that the exemptee will maintain the required run-of-river operation and will not increase the project's normal reservoir elevations, the operation of the project with the flashboards in place is not expected to adversely affect environmental resources in the project area, including aquatic resources and vegetation in and around the periphery of the reservoir and downstream of the project.

The proposed flashboards will allow the exemptee to provide uniform minimum flow releases to specific areas in the downstream reaches of the river. The released water to these areas would maximize benefits of the NYDEC required minimum flows on aquatic resources downstream of the project.

During periods when the flashboards are off the dams, the exemptee will operate the project as required by its exemption. Such operation will not result in any additional impacts on environmental resources in the project area.

The proposed amendment should have negligible effects on terrestrial resources in the project area. The proposal will have no effect upon cultural resources eligible for inclusion in the National Register of Historic Places. Given the industrial nature of the area, the absence of ground-disturbing activities, and the continuation of required project operations, the proposed amendment should have negligible effects on wildlife, recreation, and aesthetic resources.

2. No-action Alternative

Under the no-action alternative the Commission would deny the proposed amendment and the exemptee would continue to operate the project in accordance with its exemption requirements and the NYDEC's existing minimum flow requirements. The minor environmental impacts associated with the proposed action would not occur. Further, the benefits to aquatic resources associated with the proposed action would not occur.

G. ISSUES AND RECOMMENDATIONS

The exemptee plans to implement certain measures to monitor compliance with NYDEC minimum flow requirements. To monitor compliance during non-flashboard periods, the exemptee plans to validate and verify the crest elevations of Big and Little Spicer dams and the accuracy of existing pond level sensor readings. Further, the exemptee plans to prepare a report of its findings and other information for submission to the USFWS. Finally, the exemptee plans to install a well-marked staff gage to monitor reservoir elevations. The exemptee plans to install the staff gage on the abutment of a bridge in the impoundment of the reservoir.

While the above measures are intended to ensure compliance with NYDEC's minimum flow requirements, such measures would also assist the exemptee and the Commission in achieving compliance with exemption operating requirements, including the required run-of-river operation. For this reason, the staff recommends the exemptee file with the Commission a copy of the planned report to the USFWS and a plan to complete the above measures.

The recommended plan should include the following: (1) a description of the planned location of the staff gage; (2) a schedule for installation of the staff gage; (3) a schedule for providing the Commission a copy of the planned report to the USFWS; (4) provisions and appropriate implementation schedules addressing the following: (a) calibration and recalibration of the staff gage, including who will calibrate the gage; (b) the development of a rating curve or table for the gage; (c) reading and maintaining the gage; (d) reporting of possible run-of-river violations; (e) replacement and recalibration if the gage is damaged; and (f) the establishment of a bench mark for re-installation of the gage; and (5) documentation of consultation with the USFWS and the NYDEC on the recommended plan.

H. CONCLUSION

The installation and removal of the proposed flashboards would result in insignificant environmental impacts. The proposed action would not affect the exemptee's compliance with the terms and conditions for the exemption. The exemptee will maintain project operations in accordance with exemption requirements. The proposed action would allow the exemptee to meet NYDEC minimum flow requirements and better protect aquatic resources downstream of the project.

Based on our independent analysis, approving the proposed action, with our recommended modification, would not constitute a major federal action significantly affecting the quality of the human environment.

I. LIST OF PREPARERS

Federal Energy Regulatory Commission

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