

FEDERAL ENERGY REGULATORY COMMISSION

Washington, DC 20426

December 12, 2017

OFFICE OF ENERGY PROJECTS

Project No. 3211-009 – New York
Hinckley (Gregory B. Jarvis) Hydroelectric Project
Power Authority of the State of New York

**Subject: Scoping Document 2 for the Hinckley (Gregory B. Jarvis) Project,
P-3211-009**

To the Party Addressed:

The Federal Energy Regulatory Commission (Commission) is currently reviewing the Pre-Application Document submitted by the Power Authority of the State of New York (New York Power Authority or NYPA) for relicensing the Hinckley (Gregory B. Jarvis) Hydroelectric Project (FERC No. 3211) (Jarvis Project). The project is located on West Canada Creek, a tributary of the Mohawk River, at the Hinckley reservoir dam, approximately 0.5 mile upstream of the Hamlet of Hinckley in the counties of Oneida and Herkimer, New York.

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended, Commission staff intends to prepare an environmental assessment (EA), which will be used by the Commission to determine whether, and under what conditions, to issue a new license for the project. To support and assist our environmental review, we are beginning the public scoping process to ensure that all pertinent issues are identified and analyzed, and that the EA is thorough and balanced.

Our preliminary review of the scope of environmental issues associated with the proposed relicensing of the Jarvis Project was described in Scoping Document 1 (SD1), issued August 29, 2017. We requested comments on SD1, conducted an environmental site review, and held scoping meetings on September 26 and 27, 2017, to hear the views of all interested agencies and entities on the scope of issues that should be addressed in the EA. Based on the meetings and the submission of written comments, we have updated SD1 to reflect our current view of issues and alternatives to be considered in the EA. ***Key changes from SD1 to SD2 are identified in bold and italicized type.***

SD2 is being distributed to the Commission's official mailing list (see section 9.0 of the attached SD2). If you wish to be added to, or removed from, the Commission's official mailing list, please send your request by email to ferconlinesupport@ferc.gov or by mail to: Secretary, Federal Energy Regulatory Commission, 888 First Street, N.E.,

Project No. 3211-009

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Room 1A, Washington, DC 20426. All written or emailed requests must specify your wish to be removed from or added to the mailing list and must clearly identify the following on the first page: **Jarvis Project No. 3211-009**.

You may also register online at <http://www.ferc.gov/docs-filing/esubscription.asp> to be notified via email of new filings and issuances related to this or other pending projects. For assistance, please contact FERC Online Support at ferconlinesupport@ferc.gov.

SD2 is issued for informational use by all interested parties; no response is required. If you have any questions about SD2, the scoping process, or how Commission staff will develop the EA for this project, please contact Emily Carter at (202) 502-6512 or emily.carter@ferc.gov. Additional information about the Commission's licensing process and the Jarvis Project may be obtained from our website (www.ferc.gov) or NYPA's licensing website, <http://www.jarvis.nypa.gov/SitePages/Home.aspx>.

Enclosure: Scoping Document 2

SCOPING DOCUMENT 2
HINCKLEY (GREGORY B. JARVIS) PROJECT

NEW YORK

PROJECT NO. 3211-009

Federal Energy Regulatory Commission
Office of Energy Projects
Division of Hydropower Licensing
Washington, DC

December 2017

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SCOPING DOCUMENT 1

Jarvis Project, No. 3211-009

1.0 INTRODUCTION

The Federal Energy Regulatory Commission (Commission or FERC), under the authority of the Federal Power Act (FPA),¹ may issue licenses for terms ranging from 30 to 50 years for the construction, operation, and maintenance of non-federal hydroelectric projects. On June 30, 2017, the Power Authority of the State of New York (New York Power Authority, or NYPA) filed a Pre-Application Document (PAD) and Notice of Intent to seek a new license for the Hinckley (Gregory B. Jarvis) Hydroelectric Project, FERC Project No. 3211 (Jarvis Project or project).²

The Jarvis Project is located on West Canada Creek, a tributary of the Mohawk River, at the Hinckley reservoir dam, approximately 0.5 mile upstream of the Hamlet of Hinckley in the counties of Oneida and Herkimer, New York. The average annual generation of the Jarvis Project from 2006 to 2015 was 29,837 megawatt-hours (MWh).

A detailed description of the project is provided in section 3.0. The location of the project is shown on figure 1. The Jarvis Project does not occupy federal lands.

The National Environmental Policy Act (NEPA) of 1969,³ the Commission's regulations, and other applicable laws require that we independently evaluate the environmental effects of relicensing the Jarvis Project as proposed, and also consider reasonable alternatives to the licensee's proposed action. At this time, we intend to prepare an environmental assessment (EA) that describes and evaluates the probable effects, including an assessment of the site-specific and cumulative effects, if any, of the proposed action and alternatives. The EA preparation will be supported by a scoping process to ensure identification and analysis of all pertinent issues. Although our current intent is to prepare an EA, there is a possibility that an environmental impact statement (EIS) will be required. The scoping process will satisfy the NEPA scoping requirements, irrespective of whether the Commission issues an EA or an EIS.

¹ 16 U.S.C. § 791(a)-825(r) (2012).

² The current license for the Jarvis Project was issued on August 12, 1982, and expires on July 31, 2022.

³ National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4370(f) (2012).

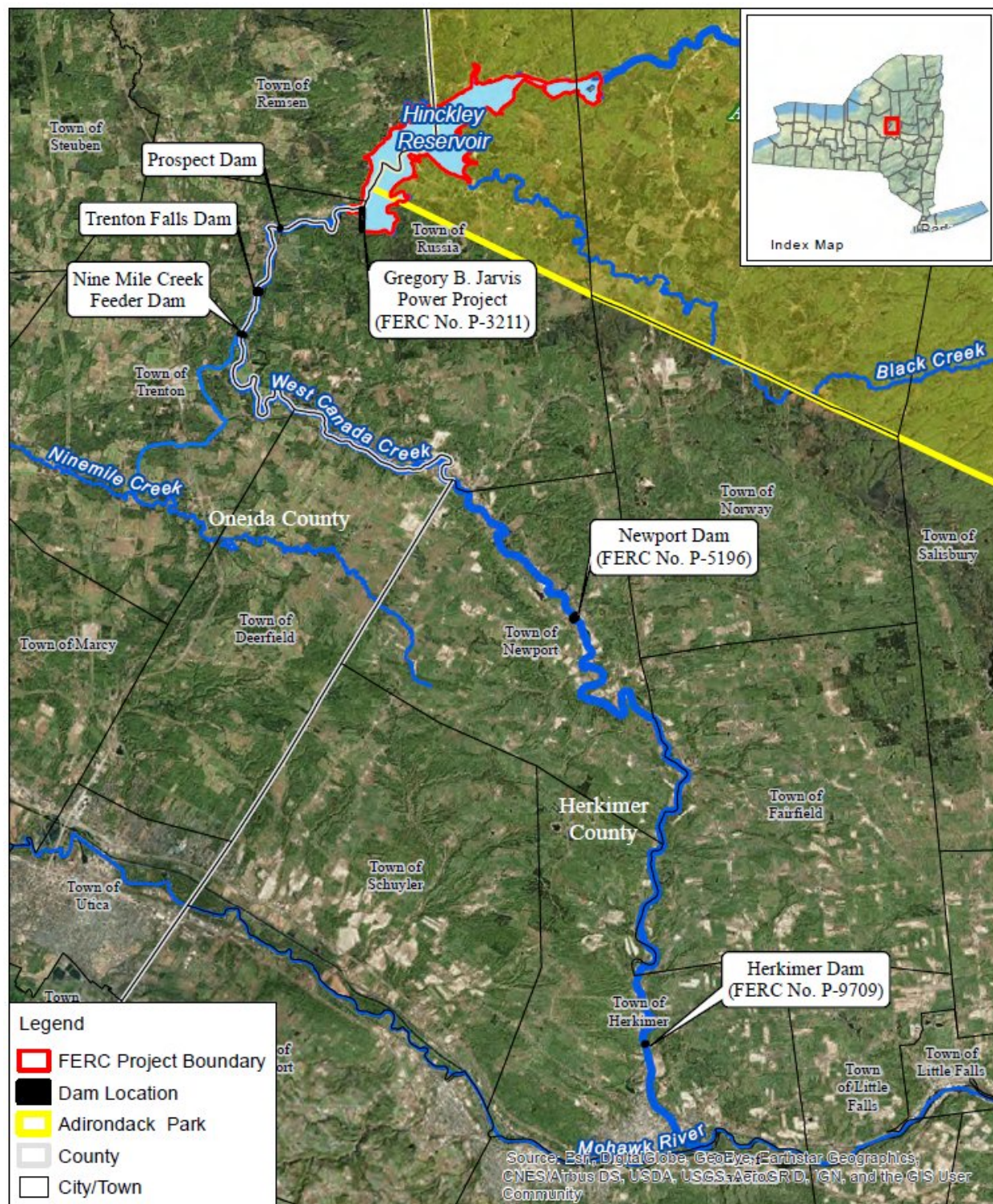


Figure 1. Location of the project. (Source: NYPA).

2.0 SCOPING

This Scoping Document 1 (SD1) is intended to advise all participants as to the proposed scope of the EA and to seek additional information pertinent to this analysis. This document contains: (1) a description of the scoping process and schedule for the development of the EA; (2) a description of the proposed action and alternatives; (3) a preliminary identification of environmental issues and proposed studies; (4) a request for comments and information; (5) a proposed EA outline; and (6) a preliminary list of comprehensive plans that are applicable to the project.

2.1 PURPOSES OF SCOPING

Scoping is the process used to identify issues, concerns, and opportunities for enhancement or mitigation associated with a proposed action. In general, scoping should be conducted during the early planning stages of a project. The purposes of the scoping process are as follows:

- invite participation of federal, state, and local resource agencies, Indian tribes, non-governmental organizations (NGOs), and the public to identify significant environmental and socioeconomic issues related to the proposed project;
- determine the resource issues, depth of analysis, and significance of issues to be addressed in the EA;
- identify how the project would or would not contribute to cumulative effects in the project area;
- identify reasonable alternatives to the proposed action that should be evaluated in the EA;
- solicit, from participants, available information on the resources at issue, including existing information and study needs; and
- determine the resource areas and potential issues that do not require detailed analysis during review of the project.

2.2 COMMENTS, SCOPING MEETINGS, AND ENVIRONMENTAL SITE REVIEW

We issued SD1 on August 29, 2017, to enable resource agencies, Indian tribes, non-governmental organizations (NGOs), and the public to more effectively participate

in and contribute to the scoping process. In SD1, we requested clarification of the preliminary issues concerning the Jarvis Project and identification of any new issues that need to be addressed in the project EA. We revised SD1 following the scoping meetings, environmental site review, and review of written comments filed during the scoping comment period, which ended October 30, 2017. This SD2 presents our current view of issues and alternatives to be considered in the EA. To facilitate review, key changes from SD1 to SD2 are identified in bold and italicized type.

We conducted scoping meetings in Utica, New York, on September 26, 2017 (evening), and September 27, 2017 (morning), and held an environmental site review of the project on September 26, 2017, to identify potential issues associated with the project. The scoping meetings and site review were noticed in local newspapers and the Federal Register. A court reporter recorded oral comments made during both scoping meetings.

In addition to oral comments received at the scoping meetings, written comments were also received from the following entities:

<u><i>Commenting Entity</i></u>	<u><i>Filing Date</i></u>
<i>Patricia Gunio</i>	<i>September 21, 2017</i>
<i>Robert Carnevale</i>	<i>September 28, 2017</i>
<i>Christina Sprague</i>	<i>September 29, 2017</i>
<i>Justin Horstman</i>	<i>October 3, 2017</i>
<i>Fred Lampert</i>	<i>October 5, 2017</i>
<i>Steven Wheeler</i>	<i>October 9, 2017</i>
<i>Heidi Benson</i>	<i>October 13, 2017</i>
<i>Stephanie Fransman</i>	<i>October 13, 2017</i>
<i>Jim Darcy</i>	<i>October 21, 2017</i>
<i>U.S. Department of the Interior – Fish and Wildlife Service</i>	<i>October 23, 2017</i>
<i>Paul W. Miller – New York State Council of Trout Unlimited</i>	<i>October 23, 2017</i>
<i>David Corr – Mohawk Valley Chapter of Trout Unlimited</i>	<i>October 24, 2017</i>
<i>Carol Weidner</i>	<i>October 25, 2017</i>
<i>Thomas J. Zembrzuski – West Canada Creek Watershed Alliance</i>	<i>October 26, 2017</i>
<i>Michael Galime</i>	<i>October 26, 2017</i>
<i>The Reinhart Family</i>	<i>October 26, 2017</i>
<i>Dave M. Waters</i>	<i>October 27, 2017</i>
<i>New York State Department of Environmental Conservation</i>	<i>October 27, 2017</i>
<i>Robert A. Carnevale, Jr.</i>	<i>October 27, 2017</i>
<i>Blake Bellinger</i>	<i>October 27, 2017</i>
<i>Trout Power, Inc.</i>	<i>October 28, 2017</i>

Mohawk Valley Water Authority (MVWA)
Elizabeth Daws

October 28, 2017
November 3, 2017

All comments received are part of the Commission's official record for the project. Information in the official file is available for inspection and reproduction at the Commission's Public Reference Room, located at 888 First Street, NE, Room 2A, Washington, DC, 20426, or by calling (202) 502-8371. Information also may be accessed through the Commission's eLibrary system using the "Documents & Filing" link on the Commission's website at www.ferc.gov. For assistance, call (202) 502-6652.

2.2.1 Issues Raised During Scoping

The issues raised by participants in the scoping process are summarized below. The summaries do not include every oral or written comment made during the scoping process. We revised SD1 to address only those comments relating directly to the scope of environmental issues. Comments on the PAD and study requests following criteria in Appendix A are not discussed here, but will be considered during study plan development and the ensuing study plan meetings. Further, we do not address comments that are recommendations for license conditions, such as protection, mitigation, and enhancement (PM&E) measures, as these will be addressed in the EA or any license order issued for this project. We will request final terms, conditions, recommendations, and comments when we issue our Ready for Environmental Analysis (REA) notice. Finally, we do not address comments or recommendations that are administrative in nature, such as requests for changes to the mailing list. Those items will be addressed separately.

General Comments

Some commenters refer to potential effects on resources that were already identified in SD1; therefore, no changes to SD1 were required. However, several issues were raised that were not specified in SD1, and we have modified SD2 accordingly. In cases where we did not agree with the requested modification, we explain why in the following sections.

Comment: *Several commenters request that we conduct our environmental analysis for the Jarvis Project simultaneously with the downstream West Canada Creek Hydroelectric Project, P-2701 (West Canada Creek Project), owned by Brookfield Power.*

Response: Brookfield Power must file a Notice of Intent and Pre-Application Document for the West Canada Creek Project by February 28, 2018, putting its relicensing proceeding about eight months behind the Jarvis Project. While neither NYPA nor Brookfield requested adjustments to their relicensing schedules in order to conduct the proceedings simultaneously, the proceedings will generally be occurring at the same time and the results of studies conducted for both projects will be available during our environmental review of each project. Once an application(s) is filed, Commission staff will determine whether it is appropriate to consolidate the analyses for both projects into one NEPA document.

Project Operation

Comment: Almost every commenter mentions the 2012 Hinckley Reservoir Operating Diagram⁴ and questions how releases dictated by the diagram for the downstream West Canada Creek Project, the MVWA, and the New York State Barge System, effect water levels in Hinckley reservoir.

Response: As part of our environmental review, we will review the 2012 Operating Diagram so that we can analyze any effects of the Jarvis Project operation on Hinckley reservoir fluctuations.

Geologic and Soil Resources

Comment: Robert Carnevale and Paul Miller stated that wells have dried up in the vicinity of the Jarvis Project as a result of water level manipulation within Hinckley reservoir. David Corr inquired about the net effect of operation of the Jarvis Project and development of private wells on the water table and aquifers in the project area.

Response: We added a bullet in section 4.2.1 of this document to indicate that our environmental analysis will evaluate the effects of project operation on groundwater and wells within the project boundary.

⁴ Hinckley reservoir is owned by the New York State Canal Corporation (NYS Canal Corp.) and outflows from the reservoir are governed by legally binding operating agreements between the NYS Canal Corp., MVWA, and Brookfield Power, the most recent of which is referred to as the 2012 Hinckley Reservoir Operating Diagram (figure 3). To generate power, the Jarvis Project takes advantage of water releases in accordance with this 2012 Operating Diagram.

Comment: Numerous commenters indicate concerns about water level fluctuations due to water use under the 2012 Operating Diagram (including operation of the Jarvis Project) on shoreline erosion, siltation that results in a reduction or variation in reservoir depth or capacity, and the creation of sand bars within the reservoir.

Response: Water level fluctuations within Hinckley reservoir likely result from a combination of uses of the reservoir (i.e., operation of downstream hydropower projects, and water supply uses within the Mohawk Valley and the New York State Barge Canal), variability in precipitation, and other factors. Two of the effects of water level fluctuations noted by the commenters (shoreline erosion and siltation) could be caused by a combination of the above activities. Therefore, we modified a bullet in section 4.2.1 of this document to indicate that, in addition to shoreline erosion, our environmental analysis will evaluate the effects of project operation on siltation within Hinckley reservoir.

Aquatic Resources

Comment: Interior and Paul Miller both state that the effects of project operation (namely water level fluctuations) on macroinvertebrates, including freshwater mussels, should be considered as a resource issue.

Response: We added a bullet in section 4.2.2 of this document to indicate that our environmental analysis will evaluate the effects of project operation (including reservoir fluctuations) on macroinvertebrates, including freshwater mussels.

Comment: Paul Miller, David Corr, and Trout Power, Inc. state the adequacy of the existing minimum flow for the Jarvis Project (160 cfs) should be re-evaluated.

Response: We added a bullet in section 4.2.2 of this document to indicate that our environmental analysis will evaluate the adequacy of the existing 160-cfs minimum flow for aquatic resources (including trout) downstream of the project (below the Nine Mile Creek Feeder Dam, see figure 1).

Comment: MVWA states it is concerned about the effect of the Jarvis Project's intakes on the Hinckley reservoir, which serves as the primary source of drinking water for the city of Utica. Specifically, MVWA is concerned about water quality within the reservoir, including: thermal stratification, dissolved oxygen, iron/manganese concentrations, color, total organic carbon, and turbidity. MVWA presents a chart that highlights a water discoloration event (apparently caused by high manganese) that occurred in July and August 2011.

Response: MVWA does not explain how the water discoloration event is possibly tied to project operation; therefore, at this time there appears to be no nexus between this potential effect (water discoloration) and project operation (i.e., how high manganese levels could result from operating the project). As indicated in section 4.2.2, our environmental analysis will evaluate the general effects of project operation on water quality (including dissolved oxygen and water temperature). Consequently, no changes have been made in this document.

Recreation, Aesthetics, and Land Use

Comment: Numerous commenters highlight the recreational value of Hinckley reservoir and state that low water levels and rapid water level fluctuations effect recreational use. Several commenters point out that during summer recreation months, boat launches may be unavailable due to low water and boats can become stranded due to rapid changes in the water levels. Commenters state that uncertainty related to the water levels detract from the desirability of the reservoir as a tourist destination.

Response: As part of our environmental review, we will be analyzing the effects of the project's operation on water levels in the reservoir and how those water levels effect recreation.

3.0 PROPOSED ACTION AND ALTERNATIVES

In accordance with NEPA, the environmental analysis will consider the following alternatives, at a minimum: (1) the no-action alternative, (2) the applicant's proposed action, and (3) alternatives to the proposed action.

3.1 NO-ACTION ALTERNATIVE

Under the no-action alternative, the Jarvis Project would continue to operate as required by the current project license (i.e., there would be no change to the existing environment). No new environmental protection, mitigation, or enhancement measures would be implemented. We use this alternative to establish baseline environmental conditions for comparison with other alternatives.

3.1.1 Existing Project Facilities

The Jarvis Project is located on West Canada Creek approximately 0.5 mile upstream of the Hamlet of Hinckley in the Towns of Remsen, Russia, Ohio, and Trenton, in the counties of Oneida and Herkimer, New York. In this area, West Canada Creek flows south out of the Adirondack Mountains, through the reservoir, and then approximately 35 miles to its confluence with the Mohawk River. Much of the northern and eastern portions of Hinckley reservoir are within the Adirondack Park.⁵

The Jarvis Project boundary follows the shoreline of Hinckley reservoir at the normal pool elevation of 1,225 feet,⁶ extending upstream to the Harvey Road bridge and downstream approximately 0.3 mile from Hinckley dam to the Hinckley Road bridge. The project boundary encompasses a total of approximately 2,850 acres and has approximately 17 miles of shoreline. The New York State Canal Corporation (NYS Canal Corp.) owns the lands surrounding Hinckley reservoir and NYPA has an easement to these lands as part of a 1983 agreement with New York State Department of Transportation.

⁵ Adirondack Park is a 6 million acre New York State Park and Forest Preserve.

⁶ All elevations are referenced to the Hinckley Datum. Elevations referenced to the Hinckley Datum are 1.04 feet higher than elevations referenced to the National Geodetic Vertical Datum [NGVD29 or mean sea level (msl)], thus, 1,225.0 Hinckley Datum = 1,223.96 NGVD29 or msl.

The existing Jarvis Project consists of Hinckley reservoir, Hinckley dam, two penstocks, the Jarvis powerhouse, a tailrace, a low-level outlet, a switchyard, and appurtenant facilities (figure 2). As viewed when looking downstream, Hinckley dam consists of a north (right) embankment dam, a non-overflow intake structure, a concrete spillway, and a south (left) embankment dam. The Jarvis Project powerhouse is located approximately 200 feet downstream of the intake structure.

Hinckley Reservoir: The 2,850-acre reservoir has an average water depth of 28 feet and a maximum depth of 75 feet from the spillway crest at 1,225 feet. The reservoir has a surface area of 4.46 square miles (mi²), a volume of 98,204 acre-feet, a total drainage area of 372 mi², and a shoreline of 17 miles. Much of the northern and eastern portions of the reservoir are within the Adirondack Park.



Figure 2. Aerial view of the Jarvis Project (Source: NYPA, as modified by staff).

North and South Embankment Dams: The embankment dams have a maximum height of 53 feet and a crest width of 11 feet at 1,242 feet. The north embankment dam is 570 feet long and the south embankment dam is 2,600 feet long.

Spillway: The cyclopean concrete spillway is an ungated ogee-type section with its crest at 1,225 feet. The spillway is 400 feet long and has a maximum height, measured from crest to foundation, of 83 feet.

Non-overflow Intake Structure: The 65-foot-long, 82-foot-high non-overflow intake structure with the top at 1,240 feet is constructed of cyclopean concrete. The intake structure trashracks have a rack spacing of 6-inches from centerline to centerline of each bar. Given that each bar is 5/8-inch-thick, the actual space between bars at the intake structure is 5 3/8-inches. Trashrack spacing on sluice gate no. 4 is 4-inches from centerline to centerline of each bar. Given that each bar is 1/2-inch-thick, the resulting sluice gate trashrack spacing is 3 1/2-inches between bars.

Penstocks: Water is conveyed to the powerhouse through a 15-foot-diameter penstock, which bifurcates into two 90-foot-long, 10.5-foot-diameter penstocks. The 10.5-foot-diameter penstocks lead to two horizontal Kaplan turbine units. The upstream section of the spillway's south wing-wall contains a gatehouse from which the Mohawk Valley Water Authority withdraws water for water supply. Flow into each of the two 42-inch-diameter water supply conduits is controlled by two 3-foot by 4-foot gate valves. These valves lead to a 42-inch-diameter sluice gate at invert 1,161.5 feet.

Powerhouse and Switchyard: The 120-foot-long, 55-foot-wide, 43-foot-high powerhouse is a semi-underground structure located 200 feet downstream of the non-overflow intake structure. The powerhouse contains two 4.5-MW horizontal Kaplan turbine/generator units operating under a maximum head of 67.5 feet, plus surcharge, at normal pool 1,225 feet with a tailwater level at 1,157.5 feet. A transformer is located in a fenced-off portion of the Jarvis Project's powerhouse parking area. Generator leads run underground from the powerhouse approximately 50 feet to the transformer. A 200-foot-long powerline runs from the transformer to the switchyard located north of New York State Route 365.

Tailrace and Low-level Outlet: The tailrace is 280 feet long. A 60-inch-diameter water pipe is located on the powerhouse side of the non-overflow intake structure, and acts as a low-level outlet for the project. There is also a penstock bypass which can act as a low-level outlet.

Recreation Facilities

NYPA operates and maintains one formal recreation facility at the project: the Power Authority Boat Launch. The boat launch, located on the reservoir shoreline approximately 3,000 feet from the northern embankment, is a single lane launch made of concrete planks extending 200 feet into the reservoir. It offers shoreline angler access and parking capacity for 15 vehicles with trailers. In addition to the boat launch, NYPA also maintains an informal scenic area on the northern end of the dam that is used for viewing the reservoir and project facilities.

3.1.2 Existing Project Operations

The Jarvis Project takes advantage of the releases determined by the NYS Canal Corp. in accordance with the 2012 Hinckley Reservoir Operating Diagram (figure 3) to generate power. Project operations are adjusted on a twice-weekly basis. NYPA does not deviate from the operating diagram unless directed to do so by NYS Canal Corp. Reservoir levels are maintained between 1,195 feet and 1,225 feet (the elevation of the spillway crest); however, reservoir water levels can fall below 1,195 feet during a dry season. The Jarvis Project does not operate when reservoir levels are below 1,195 feet.

The project has two horizontal Kaplan units which are each capable of operating between 300 and 900 cfs for a total hydraulic capacity of 1,800 cfs under normal operating conditions. At flows within the operating range of the units (300 to 1,800 cfs), the project provides outflow via generation. At flows below 300 cfs, or when the reservoir water surface elevation is below 1,195 feet, the project does not operate. During these conditions, the low-level sluice gate no. 4 is used to pass a minimum flow of 160 cfs.⁷ At flows greater than 1,800 cfs, and when the reservoir water surface elevation is greater than 1,225 feet, downstream releases are passed via a combination of generation and spillage.

The current FERC license allows for the project to operate in a peaking generation mode. When NYPA is peaking, it will average the outflow required by the operating diagram over the course of the day. When operated in this manner, the project will generate with a lower outflow during non-peak demand periods and then generate with a

⁷ Article 20 of the current license states that the licensee shall operate the project in such manner as to provide a continuous minimum flow of 160 cfs in West Canada Creek downstream of the Nine Mile Creek Feeder Dam, which is 5.1 miles downstream of the project and diverts water to the Erie Canal for navigation purposes (see figure 1).

higher outflow during peak demand periods such that the total daily average flow is equal to the outflow required by the operating diagram.

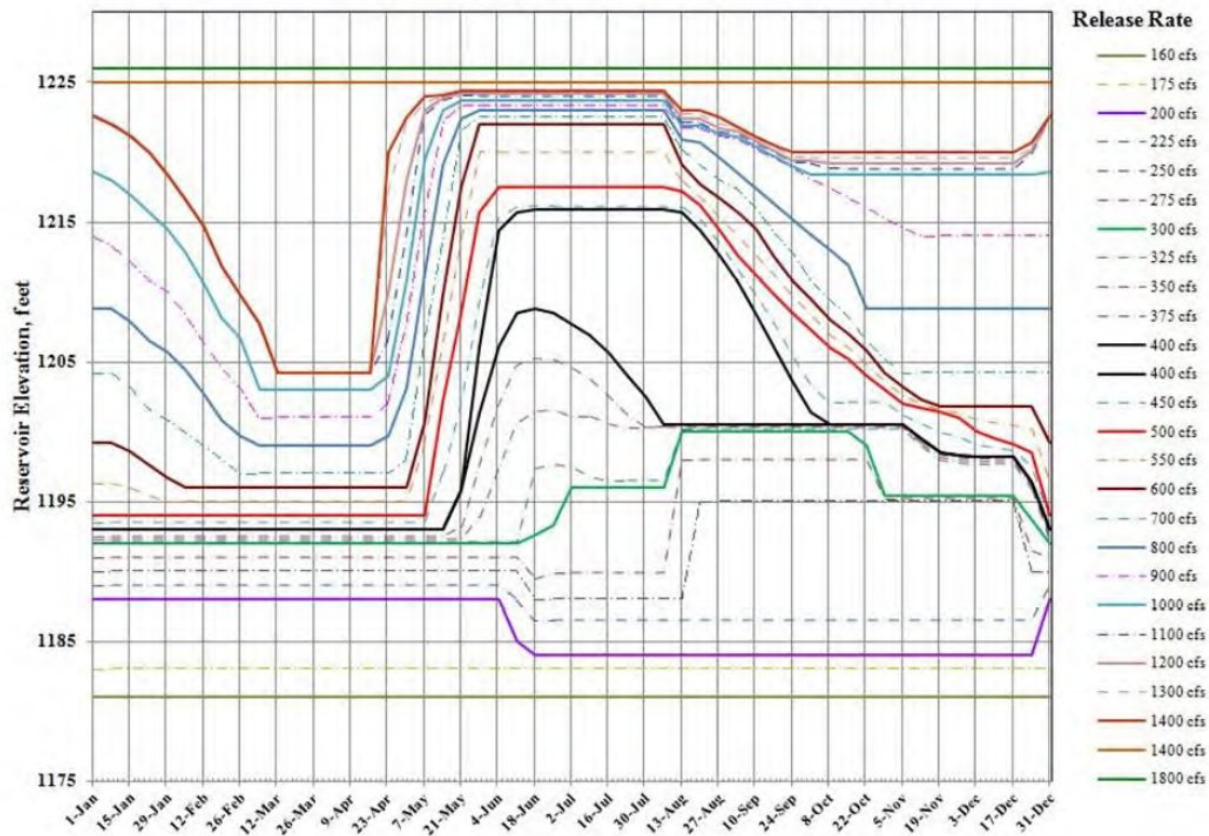


Figure 3. 2012 Hinckley Reservoir Operating Diagram (Source: NYPA).

3.2 APPLICANT'S PROPOSAL

The proposed action is to continue to operate and maintain the Jarvis Project on West Canada Creek, and implement certain environmental protection, mitigation, and enhancement (PM&E) measures. The current license for the project expires on July 31, 2022.

3.2.1 Proposed Project Facilities and Operations

NYPA proposes no new or upgraded facilities, structural changes, or operational changes to the Jarvis Project during the term of the new license at this time.

3.2.2 Proposed Environmental Measures

In its PAD, NYPA does not specifically identify any existing measures or state whether it proposes to continue operating the Jarvis Project with the existing environmental PM&E measures described below. Nor does NYPA propose any new PM&E measures for the Jarvis Project. The potential need for PM&E measures will be evaluated during the relicensing process.

NYPA's existing PM&E measures, consistent with its current license and 2012 Operating Diagram, are as follows:

Geologic and Soil Resources

There are no existing PM&E measures related to geology and soil resources for the Jarvis Project.

Aquatic Resources

- NYPA operates the project in a manner that provides a continuous minimum flow of 160 cfs in West Canada Creek downstream of the NYS Canal Corp. diversion weir at the Nine Mile Creek Feeder Dam.

Terrestrial Resources

There are no existing PM&E measures related to terrestrial resources for the Jarvis Project.

Threatened and Endangered Species

There are no existing PM&E measures related to threatened and endangered species for the Jarvis Project.

Recreation and Land Use

- NYPA provides public access to Hinckley reservoir and maintains the Power Authority Boat Launch.

Cultural Resources

- NYPA is required to consult with the New York State Historic Preservation Officer prior to any ground-disturbing construction activity to ascertain whether any archeological or cultural surveys, or mitigative measures are necessary.

3.3 DAM SAFETY

It is important to note that dam safety constraints may exist and should be taken into consideration in the development of proposals and alternatives considered in the pending proceeding. For example, proposed modifications to the dam structure, such as the addition of flashboards or fish passage facilities, could impact the integrity of the dam structure. As the proposal and alternatives are developed, the applicant must evaluate the effects and ensure that the project would meet the Commission's dam safety criteria found in Part 12 of the Commission's regulations and the Engineering Guidelines (<http://www.ferc.gov/industries/hydropower/safety/guidelines/eng-guide.asp>).

3.4 ALTERNATIVES TO THE PROPOSED ACTION

Commission staff will consider and assess all alternative recommendations for operational or facility modifications, as well as PM&E measures identified by the Commission, the agencies, Indian tribes, NGOs, and the public.

3.5 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY

At present, we propose to eliminate the following alternatives from detailed study in the EA.

3.5.1 Federal Government Takeover

In accordance with § 16.14 of the Commission's regulations, a federal department or agency may file a recommendation that the United States exercise its right to take over a hydroelectric power project with a license that is subject to sections 14 and 15 of the FPA.⁸ We do not consider federal takeover to be a reasonable alternative. Federal takeover of the project would require congressional approval. While that fact alone would not preclude further consideration of this alternative, there is currently no evidence

⁸ 16 U.S.C. §§ 791(a)-825(r).

showing that federal takeover should be recommended to Congress. No party has suggested that federal takeover would be appropriate, and no federal agency has expressed interest in operating the project.

3.5.2 Non-power License

A non-power license is a temporary license the Commission would terminate whenever it determines that another governmental agency is authorized and willing to assume regulatory authority and supervision over the lands and facilities covered by the non-power license. At this time, no governmental agency has suggested a willingness or ability to take over the project. No party has sought a non-power license, and we have no basis for concluding that the Jarvis Project should no longer be used to produce power. Thus, we do not consider a non-power license a reasonable alternative to relicensing the project.

3.5.3 Project Decommissioning

Decommissioning of the project could be accomplished with or without dam removal. Either alternative would require denying the relicense application and surrender or termination of the existing license with appropriate conditions. There would be significant costs involved with decommissioning the project and/or removing any project facilities. The project provides a viable, safe, and clean renewable source of power to the region. With decommissioning, the project would no longer be authorized to generate power.

No party has suggested project decommissioning would be appropriate in this case, and we have no basis for recommending it. Thus, we do not consider project decommissioning a reasonable alternative to relicensing the project with appropriate environmental measures.

4.0 SCOPE OF CUMULATIVE EFFECTS AND SITE-SPECIFIC RESOURCE ISSUES

4.1 CUMULATIVE EFFECTS

According to the Council on Environmental Quality's regulations for implementing NEPA (40 C.F.R. 1508.7), a cumulative effect is the effect on the environment that results from the incremental effect of the action when added to other past, present and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time, including hydropower and other land and water development activities.

4.1.1 Resources that could be Cumulatively Affected

Based on information in the PAD for the Jarvis Project, and preliminary staff analysis, we have identified water quantity and water quality (i.e., dissolved oxygen and water temperature) as resources that could be cumulatively affected by the proposed continued operation and maintenance of the Jarvis Project in combination with other hydroelectric projects and other activities in the West Canada Creek Basin.

4.1.2 Geographic Scope

Our geographic scope of analysis for cumulatively affected resources is defined by the physical limits or boundaries of: (1) the proposed action's effect on the resources, and (2) contributing effects from other hydropower and non-hydropower activities within the West Canada Creek Basin. We have identified the geographic scope for water quality and quantity to include West Canada Creek from Hinckley reservoir (upper end of project boundary) to its confluence with the Mohawk River. We chose this geographic scope because this 35-mile-reach contains hydropower and water supply dams (six dams in total, including Hinckley dam), the operation of which may cumulatively affect water quantity and quality in the identified geographic reach.

4.1.3 Temporal Scope

The temporal scope of our cumulative effects analysis in the EA will include a discussion of past, present, and reasonably foreseeable future actions and their effects on each resource that could be cumulatively affected. Based on the potential term of a new license, the temporal scope will look 30 to 50 years into the future, concentrating on the effect on the resources from reasonably foreseeable future actions. The historical discussion will, by necessity, be limited to the amount of available information for each

resource. The quality and quantity of information, however, diminishes as we analyze resources further away in time from the present.

4.2 RESOURCE ISSUES

In this section, we present a preliminary list of environmental issues to be addressed in the EA. We identified these issues, which are listed by resource area, by reviewing the PAD and the Commission's record for the Jarvis Project. This list is not intended to be exhaustive or final, but contains the issues raised to date. After the scoping process is complete, we will review the list and determine the appropriate level of analysis needed to address each issue in the EA. Those issues identified by an asterisk (*) will be analyzed for both cumulative and site-specific effects.

4.2.1 Geologic and Soils Resources

- Effects of continued project operation on shoreline erosion within the project boundary *and siltation within Hinckley reservoir.*
- *Effects of continued project operation on groundwater and wells within the project boundary.*

4.2.2 Aquatic Resources

- Effects of continued project operation on water quantity and water quality (i.e., dissolved oxygen and water temperature).*
- Effects of continued project operation, including reservoir fluctuations and entrainment mortality, on resident fish species.
- *Effects of continued project operation on macroinvertebrates, including freshwater mussels.*
- *Adequacy of the 160-cfs minimum flow for aquatic resources (including trout) downstream of the project (i.e., below the Nine Mile Creek Feeder Dam).*

4.2.3 Terrestrial Resources

- Effects of continued project operation on riparian and wetland habitat and associated wildlife, including waterfowl and wetland-dependent birds.

- Effects of continued project operation and maintenance activities on upland wildlife habitat and associated wildlife.
- Effects of continued project operation and maintenance activities on state-listed species (e.g., bald eagle, common loon) and natural communities.

4.2.4 Threatened and Endangered Species

- Effects of continued project operation and maintenance activities on the federally listed threatened northern long-eared bat.

4.2.5 Recreation, Land Use, and Aesthetic Resources

- The adequacy of public access and recreation facilities to meet current and future recreation demand.
- Effects of project operation and maintenance activities on recreational opportunities and river access within the project area.
- Effects of project operation and maintenance activities on land use and aesthetic resources within the project area.

4.2.6 Cultural Resources

- Effects of project operation and maintenance on historic properties and archeological resources that are included in, eligible for listing in, or potentially eligible for inclusion in the National Register of Historic Places.
- Effects of project operation and maintenance on any previously unidentified historic or archeological resources or traditional cultural properties that may be eligible for inclusion in the National Register of Historical Places.

4.2.7 Developmental Resources

- Economics of the project and the effects of any recommended environmental measures on the project's economics.

5.0 PROPOSED STUDIES⁹

Depending upon the findings of studies completed by NYPA and the recommendations of the consulted entities, NYPA will consider, and may propose certain other measures to enhance environmental resources affected by the project as part of the proposed action. NYPA's initial study proposals are identified by resource area in table 1. Detailed information on NYPA's initial study proposals can be found in the PAD. Further studies may need to be added to this list based on comments provided to the Commission and NYPA from interested participants, including Indian tribes.

Table 1. NYPA's initial study proposals. (Source: Jarvis Project PAD)

Resource Area and Study Name	Proposed Study
Aquatic Resources	
Assessment of Fish Entrainment and Turbine Passage Survival	NYPA proposes to conduct a desktop study to assess fish entrainment and associated turbine mortality at the project.

⁹ *The applicant will be filing its Proposed Study Plan by December 12, 2017.*

6.0 EA PREPARATION SCHEDULE

At this time, we anticipate the need to prepare a draft and final EA. The draft EA will be sent to all persons and entities on the Commission’s service and mailing lists for the Jarvis Project. The EA will include our recommendations for operating procedures, as well as PM&E measures that should be part of any license issued by the Commission. All recipients will then have 30 days to review the EA and file written comments with the Commission. All comments on the draft EA filed with the Commission will be considered in preparation of the final EA. A schedule for the EA preparation will be provided after a license application is filed.

The major milestones, with pre-filing target dates are as follows:

<u>Major Milestone</u>	<u>Target Date</u>
Scoping Meetings	September 2017
License Application Filed	July 2020
Ready for Environmental Analysis Notice Issued	
Deadline for Filing Comments, Recommendations, and Agency Terms and Conditions/Prescriptions	
Single EA Issued	
Comments on EA Due	
Deadline for Filing Modified Agency Recommendations	
Order Issued	

A copy of NYPA’s process plan, which has a complete list of relicensing milestones for the Jarvis Project, including those for developing the license application, is attached as Appendix B to this **SD2**.

7.0 PROPOSED EA OUTLINE

The preliminary outline for the Jarvis Project EA is as follows:

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8.0 COMPREHENSIVE PLANS

Section 10(a)(2) of the FPA, 16 U.S.C. section 803(a)(2)(A), requires the Commission to consider the extent to which a project is consistent with federal and state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by a project. The staff has preliminarily identified and reviewed the plans listed below that may be relevant to the Jarvis Project. Agencies are requested to review this list and inform the Commission staff of any changes. If there are other comprehensive plans that should be considered for this list that are not on file with the Commission, or if there are more recent versions of the plans already listed, they can be filed for consideration with the Commission according to 18 CFR 2.19 of the Commission's regulations. Please follow the instructions for filing a plan at <http://www.ferc.gov/industries/hydropower/gen-info/licensing/complan.pdf>.

The following is a list of comprehensive plans currently on file with the Commission that may be relevant to the Jarvis Project.

Adirondack Park Agency. 1985. Adirondack Park state land master plan. Ray Brook, New York. January 1985.

Adirondack Park Agency. Undated. New York State wild, scenic, and recreational rivers system field investigation summaries. Albany, New York.

National Park Service. The Nationwide Rivers Inventory. Department of the Interior, Washington, D.C. 1993.

New York Department of Environmental Conservation. 1979. Hudson River Basin water and related land resources: Level B study report and environmental impact statement. Albany, New York. September 1979.

New York Department of Environmental Conservation. 1985. New York State Wild, Scenic, and Recreational River System Act. Albany, New York. March 1985.

New York State Office of Parks, Recreation, and Historic Preservation. New York Statewide Comprehensive Outdoor Recreation Plan (SCORP): 2003-2007. Albany, New York. January 2003.

State of New York Hudson River Regulating District. 1923. General plan for the regulation of the flow of the Hudson River and certain of its tributaries. Albany, New York. June 7, 1923. 63 pp.

U.S. Fish and Wildlife Service. Canadian Wildlife Service. 1986. North American waterfowl management plan. Department of the Interior. Environment Canada. May 1986.

U.S. Fish and Wildlife Service. Undated. Fisheries USA: the recreational fisheries policy of the U.S. Fish and Wildlife Service. Washington, D.C.

9.0 MAILING LIST

The list below is the Commission's official mailing list for the Jarvis Project (FERC No. 3211). If you want to receive future mailings for the Jarvis Project and are not included in the list below, please send your request by email to FERCOnlineSupport@ferc.gov or by mail to: Secretary, Federal Energy Regulatory Commission, 888 First Street, N.E., Room 1A, Washington, DC 20426. All written and emailed requests to be added to the mailing list must clearly identify the following on the first page: Jarvis Project No. 3211-009. You may use the same method if requesting removal from the mailing list below.

Register online at <http://www.ferc.gov/esubscribenow.htm> to be notified via email of new filings and issuances related to this or other pending projects. For assistance, please contact FERC Online Support at FERCOnlineSupport@ferc.gov or toll free at 1-866-208-3676, or for TTY, (202) 502-8659.

Official Mailing List for the Jarvis Project

Cultural Education Center Geologist Geological Survey Albany, New York 12230-0001	Kay E. Darmody 695 State Route 365 Remsen, New York 13438-5716
New York Department of Transportation Director Region 4 1530 Jefferson Rd Rochester, New York 146233110	New York Power Authority Robert Knowlton Director - Civil/Struc. Eng. 123 Main Street, M/S 12F White Plains, New York 10601
New York Power Authority 22nd Floor 1633 Broadway New York, New York 10019-6708	New York Public Service Commission Director 3 Empire State Plaza Albany, New York 12223-1000
New York State Canal Corporation Lawrence J. Frame PO Box 189 Albany, New York 12201-0189	New York State Council of Trout Unlimited William Wellman Region 5 Vice President NYSCTU 7 Helen Street Plattsburgh, New York 12901

New York State Department of Environmental Conservation Commissioner Office of the Commissioner 625 Broadway, 14th Floor Albany, New York 12233-0001	New York State Department of Environmental Conservation Sita Crounse Senior Attorney 625 Broadway Albany, New York 12233-1500
New York State Energy Research & Dev. Authority Commissioner 17 Columbia Circle Albany, New York 12203-6399	Regulatory Branch U.S. Army Corps of Engineers, Buffalo District 1776 Niagara St Buffalo, New York 14207-3111
U.S. Army Corps of Engineers, New York District Kevin Bruce CENAN-OP-RU, Upstate Regulatory Field Office 1 Buffington St, Bld. 10, 3 rd floor North Watervilet, New York 12189-4000	U.S. Coast Guard Commanding Officer MSO Buffalo 1 Fuhrmann Blvd Buffalo, New York 142033105
Commanding Officer U.S. Coast Guard MSO Long Island Sound 120 Woodward Ave New Haven, Connecticut 06512-3628	David Stilwell U.S. Fish & Wildlife Service NY Region 5 Field Office 3817 Luker Rd Cortland, New York 13045-9385
Sherwood L. Boehlert U.S. House of Representatives Alexander Pirnie Federal Building, Room 200 10 Broad St Utica, New York 13501-1233	Charles Schumer U.S. Senate 322 Hart Senate Office Building Washington, DC 20510

APPENDIX A
STUDY PLAN CRITERIA
18 CFR Section 5.9(b)

Any information or study request must contain the following:

1. Describe the goals and objectives of each study proposal and the information to be obtained;
2. If applicable, explain the relevant resource management goals of the agencies or Indian tribes with jurisdiction over the resource to be studied;
3. If the requester is not a resource agency, explain any relevant public interest considerations in regard to the proposed study;
4. Describe existing information concerning the subject of the study proposal, and the need for additional information;
5. Explain any nexus between project operations and effects (direct, indirect, and/or cumulative) on the resource to be studied, and how the study results would inform the development of license requirements;
6. Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate filed season(s) and the duration) is consistent with generally accepted practice in the scientific community or, as appropriate, considers relevant tribal values and knowledge; and
7. Describe considerations of level of effort and cost, as applicable, and why proposed alternative studies would not be sufficient to meet the stated information needs.

APPENDIX B

JARVIS PROJECT PROCESS PLAN AND SCHEDULE

Shaded milestones are unnecessary if there are no study disputes. If the due date falls on a weekend or holiday, the due date is the following business day. Early filings or issuances will not result in changes to these deadlines.

Responsible Party	Pre-Filing Milestone	Date	FERC Regulation
NYPA	Issue Public Notice for NOI/PAD	6/30/17	5.3(d)(2)
NYPA	File NOI/PAD	6/30/17	5.5, 5.6
FERC	Tribal Meetings	7/30/17	5.7
FERC	Issue Notice of Commencement of Proceeding and Scoping Document 1	8/29/17	5.8
FERC	Scoping Meetings and Project Site Visit	9/26/17 9/27/17	5.8(b)(viii)
All Stakeholders	File Comments on PAD/Scoping Document 1 and Study Requests	10/28/17	5.9
FERC	Issue Scoping Document 2 (if necessary)	12/12/17	5.10
NYPA	File Proposed Study Plan	12/12/17	5.11(a)
All Stakeholders	Proposed Study Plan Meeting	1/11/18	5.11(e)
All Stakeholders	File Comments on Proposed Study Plan	3/12/18	5.12
NYPA	File Revised Study Plan	4/11/18	5.13(a)
All Stakeholders	File Comments on Revised Study Plan	4/26/18	5.13(b)
FERC	Issue Director's Study Plan Determination	5/11/18	5.13(c)
Mandatory Conditioning Agencies	File Any Study Disputes	5/31/18	5.14(a)
Dispute Panel	Select Third Dispute Resolution Panel Member	6/15/18	5.14(d)

Responsible Party	Pre-Filing Milestone	Date	FERC Regulation
Dispute Panel	Convene Dispute Resolution Panel	6/20/18	5.14(d)(3)
NYPA	File Comments on Study Disputes	6/25/18	5.14(i)
Dispute Panel	Dispute Resolution Panel Technical Conference	June/July 2018	5.14(j)
Dispute Panel	Issue Dispute Resolution Panel Findings	7/20/18	5.14(k)
FERC	Issue Director's Study Dispute Determination	8/9/18	5.14(l)
NYPA	First Study Season	Spring – Fall 2018	5.15(a)
NYPA	File Initial Study Report	5/11/19	5.15(c)(1)
All Stakeholders	Initial Study Report Meeting	5/26/19	5.15(c)(2)
NYPA	File Initial Study Report Meeting Summary	6/10/19	5.15(c)(3)
All Stakeholders	File Disagreements/Requests to Amend Study Plan	7/10/19	5.15(c)(4)
All Stakeholders	File Responses to Disagreements/Amendment Requests	8/9/19	5.15(c)(5)
FERC	Issue Director's Determination on Disagreements/Amendments	9/8/19	5.15(c)(6)
NYPA	Second Study Season	Spring- Fall 2019	5.15(a)
NYPA	File Preliminary Licensing Proposal (or Draft License Application)	3/3/20	5.16(a)-(c)
NYPA	File Updated Study Report	5/11/20	5.15(f)
All Stakeholders	Updated Study Report Meeting	5/26/20	5.15(f)
All Stakeholders	File Comments on Preliminary Licensing Proposal (or Draft License Application)	6/1/20	5.16(e)
NYPA	File Updated Study Report Meeting Summary	6/10/20	5.15(f)

Responsible Party	Pre-Filing Milestone	Date	FERC Regulation
All Stakeholders	File Disagreements/Requests to Amend Study Plan	7/10/20	5.15(f)
NYPA	File Final License Application	7/31/20	5.17
All Stakeholders	File Responses to Disagreements/Amendment Requests	8/9/20	5.15(f)
NYPA	Issue Public Notice of Final License Application Filing	8/14/20	5.17(d)(2)
FERC	Issue Director's Determination on Disagreements/Amendments	9/8/20	5.15(f)

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