

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20426  
November 13, 2018

OFFICE OF ENERGY PROJECTS

Project No. 10661-050 – Michigan  
Constantine Hydroelectric Project  
Indiana Michigan Power Company

**Subject: Scoping Document 2 for the Constantine Hydroelectric Project  
(FERC No. 10661-050)**

To the Parties Addressed:

The Federal Energy Regulatory Commission (Commission) is currently reviewing the Pre-Application Document filed June 4, 2018, by Indiana Michigan Power Company (I&M Power) for relicensing the Constantine Hydroelectric Project (Constantine Project) (FERC No. 10661). The Constantine Project is located on the St. Joseph River in the Village of Constantine in St. Joseph County, Michigan. The project does not occupy federal land.

Under the Integrated Licensing Process, I&M Power must file its preliminary licensing proposal or draft license application by May 3, 2021. The final license application must be filed with the Commission by September 30, 2021, two years before the license expires.

Pursuant to the National Environmental Policy Act 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.

In our July 25, 2018, Scoping Document 1 (SD1), we disclosed our preliminary view of the scope of environmental issues associated with relicensing the Constantine Project. We requested comments on SD1 and held scoping meetings on August 28 and 29, 2018, to hear the views of all interested agencies and entities on the scope of issues that should be addressed in the EA. Based on verbal comments received at the meetings and the submission of written comments we received throughout the scoping process, we have prepared the enclosed Scoping Document 2 (SD2). The enclosed SD2 is intended to serve as a guide to the issues and alternatives to be addressed in the EA. ***Key changes from SD1 to SD2 are identified in bold italicized type in the enclosed SD2.***

The enclosed SD2 supersedes the July 25, 2018, SD1. SD2 is issued for informational use by all interested parties; no response is required. If you have any question about SD2, the scoping process, or how Commission staff will develop the EA for this project, please contact Lee Emery at [lee.emery@ferc.gov](mailto:lee.emery@ferc.gov) or (202) 502-8379. Additional information about the Commission's licensing process and the Constantine Project may be obtained from our website, <http://www.ferc.gov>.

Enclosure: Scoping Document 2

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**SCOPING DOCUMENT 2**

**CONSTANTINE HYDROELECTRIC PROJECT**  
**(FERC NO. 10661-050)**

**MICHIGAN**



Federal Energy Regulatory Commission  
Office of Energy Projects  
Division of Hydropower Licensing  
Washington, D.C.

November 2018

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## SCOPING DOCUMENT 2

### Constantine Hydroelectric Project No. 10661-050

#### 1.0 INTRODUCTION

The Federal Energy Regulatory Commission (Commission or FERC), under the authority of the Federal Power Act (FPA),<sup>1</sup> may issue licenses for terms ranging from 30 to 50 years for the construction, operation, and maintenance of non-federal hydroelectric projects. On June 4, 2018, Indiana Michigan Power Company (I&M Power) filed a Pre-Application Document (PAD) and Notice of Intent to seek a subsequent license for the Constantine Hydroelectric Project (Constantine Project or project) (FERC Project No. 10661).<sup>2</sup>

The Constantine Project is located at river mile 101.4 on the St. Joseph River in the Village of Constantine, St. Joseph County, Michigan (see figure 1). The project does not occupy federal land.

I&M Power proposes to continue operating the project as a run-of-river facility. The powerhouse for the Constantine Project contains four generating units with a total installed capacity of 1.2 megawatts (MW). The average annual generation is 4,933 megawatt-hours. A more detailed description of the project is provided in section 3.0, *Proposed Action and Alternatives*.

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<sup>1</sup> 16 U.S.C. §§ 791(a)-825(r).

<sup>2</sup> The current license for the Constantine Project was issued on October 20, 1993, with an effective date of October 1, 1993, for a term of 30 years, and expires on September 30, 2023.

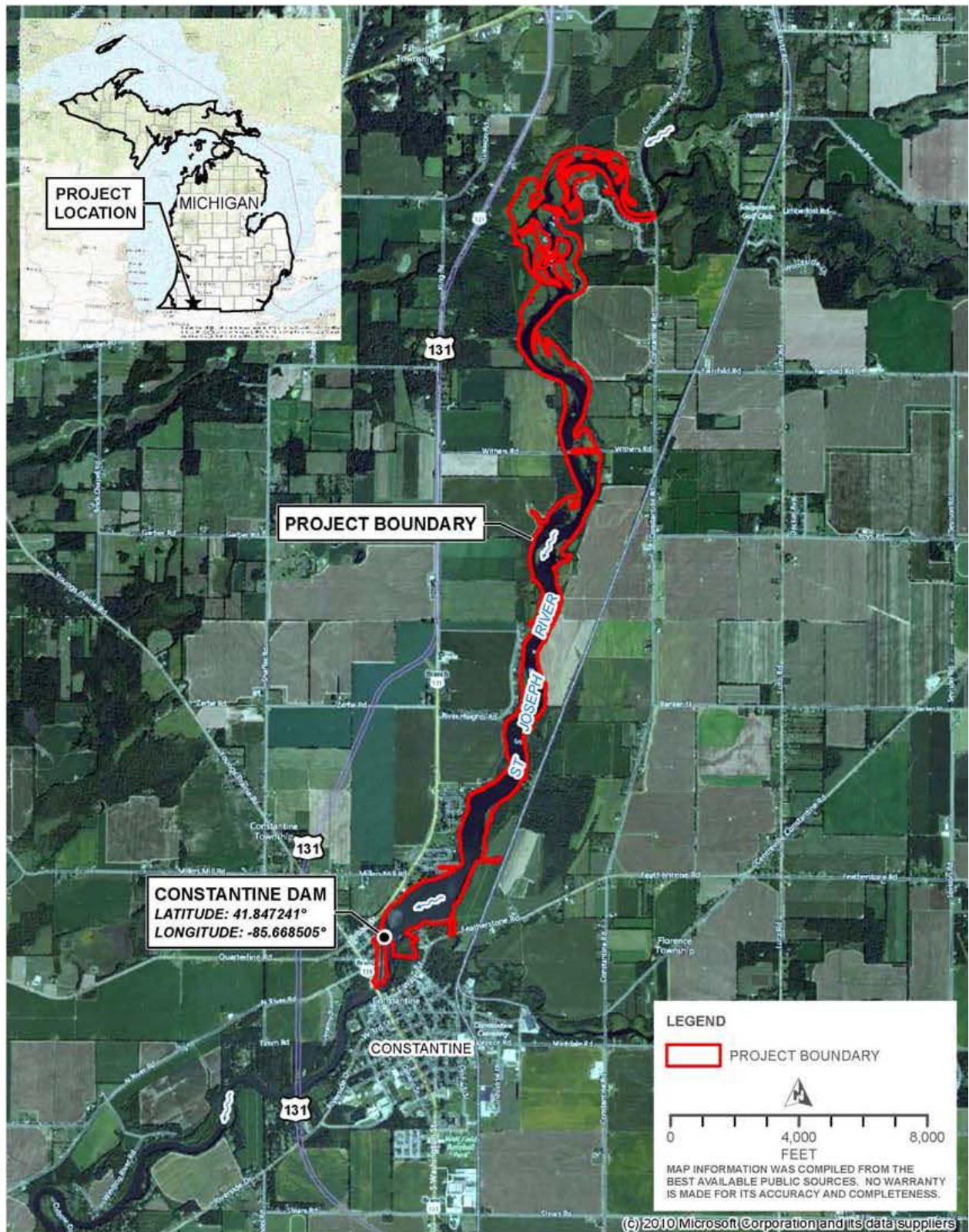


Figure 1. Constantine Project overall location map (Source: I&M Power, 2018).

The National Environmental Policy Act of 1969 (NEPA),<sup>3</sup> the Commission's regulations, and other applicable laws require that we independently evaluate the environmental effects of relicensing the Constantine 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 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 that all pertinent issues are identified and analyzed.

Although our current intent is to prepare an EA, there is a possibility that an environmental impact statement (EIS) may be required. The scoping process will satisfy the NEPA scoping requirements, irrespective of whether the Commission issues an EA or an EIS.

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<sup>3</sup> National Environmental Policy Act of 1969, as amended (Pub. L. 91-190, 42 U.S.C. 4321–4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258, §4(b), September 13, 1982).



## **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 applicant's proposed action and alternatives; (3) preliminary identification of environmental issues; (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 PURPOSE OF SCOPING**

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

- invite participation of federal, state, and local resource agencies; 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**

Commission staff issued Scoping Document 1 (SD1) on July 25, 2018, to enable resource agencies, Indian Tribes, and other interested parties to more effectively participate in and contribute to the scoping process. In SD1, we requested clarification of preliminary issues concerning the project and identification of any new issues that needed to be addressed in the EA.

We conducted two scoping meetings and an environmental site review to identify potential issues associated with the Constantine Project. Scoping meetings were held in Constantine, Michigan on August 28 and 29, 2018. An environmental site review was

conducted on August 28, 2018. The scoping meetings and environmental site review were noticed in local newspapers and the Federal Register. A court reporter recorded and transcribed oral comments made during both scoping meetings.

In addition to oral and written comments received from individuals at the scoping meetings, written comments were filed with the Commission by the following entities:

<b><u>COMMENTING ENTITY</u></b>	<b><u>FILING DATE</u></b>
U.S. Environmental Protection Agency (EPA)	September 28, 2018
Friends of the St. Joe River Association, Inc.	September 28, 2018
Michigan Department of Natural Resources (Michigan DNR)	October 2, 2018
Pokagon Band of Potawatomi	October 3, 2018

We revised SD1 following the scoping meetings and after receiving comments filed during the scoping comment period, which ended on October 2, 2018. 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, italicized type.*** 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 & Filings” link on the Commission’s webpage at <http://www.ferc.gov>. Call (202) 502- 6652 for assistance.

## 2.3 ISSUES RAISED DURING SCOPING

*The issues raised by participants in the scoping process are summarized below. The summaries do not include every oral and written comment made during the scoping process. We revised SD1 to address only those comments related directly to the scope of environmental issues. Several issues were raised that were not identified in SD1, and we have modified SD2 (in bolded italics) accordingly. Comments on the PAD and study requests are not discussed here, but will be considered during study plan development and the ensuing study plan meeting(s). Further, we do not address comments that are recommendations for license conditions, such as protection, mitigation, and enhancement measures, as these will be addressed in the EA or any license order that is issued for the project. We will request final terms, conditions, recommendations, and comments when we issue our Ready for Environmental Analysis notice.*

### Infrastructure

*Comment: EPA recommends that the current condition and integrity of the project's physical infrastructure over the life of the new license be evaluated. EPA cites the National Climate Assessment's<sup>4</sup> findings that in the Midwest, extreme heat, heavy downpours, and flooding will affect infrastructure, and states that measures should be considered to ensure that the project's infrastructure will maintain its structural integrity.*

*Response: The Constantine Project is subject to Part 12 of the Commission's regulations (Safety of Water Power Projects and Project Works) under the current license. Part 12 requires, among other things, periodic operational inspections by Commission staff focusing on the continued safety of the structures. Projects that are subject to Part 12 must also be inspected and evaluated every 5 years by an independent consultant and a consultant's safety report must be submitted for Commission review.*

*As part of the relicensing process, Commission staff would evaluate the continued adequacy of the proposed project facilities under a new license. Special articles would be included in any license issued, as appropriate. Commission staff would continue to inspect the project during any new license term to assure continued adherence to Commission-approved plans and specifications, special license articles relating to construction (if any), operation and maintenance, and accepted engineering practices and procedures.*

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<sup>4</sup> Available: <https://www.globalchange.gov/browse/reports>.

### **Aquatic Resources**

***Comment: EPA recommends that the EA discuss whether the Constantine Project has experienced difficulty maintaining the run-of-river mode of operation due to hydraulic capacity differences between turbines, resulting in downstream water surface level fluctuations.***

***Response: We have revised section 4.2.2, Aquatic Resources to include an evaluation of the effects of run-of-river operation on water level fluctuations.***

***Comment. EPA recommends that the EA evaluate the effects of project operation on impingement, entrainment, and turbine-induced fish mortality.***

***Response: We have revised section 4.2.2, Aquatic Resources to include an evaluation of fish impingement, entrainment, and turbine-induced fish mortality.***

***Comment: EPA recommends that the EA analyze project effects on mussels if they are located in the project area, including whether measures are available to minimize project effects on mussels.***

***Response: I & M Power has proposed a mussel survey for the project reservoir. We have revised section 4.2.2, Aquatic Resources to include an evaluation of project effects on mussels.***

### **Terrestrial Resources**

***Comment: EPA recommends that the EA discuss the effects of project operation and maintenance on the invasive frogbit and Japanese knotweed, including: (1) whether or not they are present within the project area; and (2) if they are monitored or controlled.***

***Response: We have revised section 4.2.3, Terrestrial Resources, to include European frogbit and Japanese knotweed to our list of invasive plants to be analyzed in the EA.***

### **Recreation**

***Comment: EPA recommends that the EA discuss the effects of project operation and maintenance on the segment of the St. Joseph's River that is listed under the Nationwide Rivers Inventory and potentially eligible for inclusion in the National Wild and Scenic River System.***

***Response: We have revised section 4.2.5, Recreation Resources, to include an evaluation of the effects of continued project operation and maintenance on the segment of the St. Joseph's River that is listed under the Nationwide Rivers Inventory and potentially eligible for inclusion in the National Wild and Scenic Rivers System.***

### **Comprehensive Plans**

***Comment: EPA recommends that the Commission use the most recent version of comprehensive plans available to evaluate whether the proposed project is consistent with Federal and/or state comprehensive plans.***

*Response: For a plan to be considered a comprehensive plan, Commission regulations require that the plan be submitted by the state or federal agency that developed it, and meet the criteria for a comprehensive plan. The website <https://www.ferc.gov/industries/hydropower/gen-info/licensing/complan.pdf> contains the criteria for approving comprehensive plans and filing instructions.*

### **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 Constantine 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 (PM&E) would be implemented. We use this alternative to establish baseline environmental conditions for comparison with other alternatives.

##### **3.1.1 Existing Project Facilities**

The Constantine Project consists of the following existing facilities:

- (1) an 525-acre reservoir with a storage capacity of 5,750 acre-feet at a water surface elevation of 782.94 feet National Geodetic Vertical Datum (NGVD);
- (2) a 561.25-foot-long dam consisting of, from east to west: (a) a 250-foot-long, 22.5-foot-high embankment with a top elevation of 790 feet NGVD; (b) a 241.25-foot-long, 12-foot-high uncontrolled concrete overflow spillway dam with a fixed crest elevation of 781.96 feet NGVD, topped by 0.94-foot-high flashboards with a crest elevation of 782.90 feet NGVD, which includes a 4-foot sluice gate at the left abutment; (c) a 70-foot-long earthen embankment;
- (3) a 650-foot-long, 20-foot-high earthen detached dike that begins 1,500 feet east of the left abutment of the spillway dam, with a top elevation of 790 feet NGVD;
- (4) a 68-foot-long, 20-foot-high concrete headgate structure consisting of seven wooden 15-foot-high vertical slide gates with a sill elevation of 770.00 feet NGVD with six 7.83-foot-long gates and one 6.75-foot-long gate located at the entrance to the power canal;
- (5) a 1,270-foot-long power canal with a bottom width of 60 feet;
- (6) a 140-foot-long, 30-foot-wide brick powerhouse, with a design head of 12.5 feet;
- (7) trash racks in front of the forebay at the entrance to the powerhouse;
- (8) four vertical shaft Francis turbines each coupled to a 300-kilowatt generator, for a total installed capacity of 1.2 MW;
- (11) a switchyard adjacent to the powerhouse with three step-up transformers;
- (12) a 50-foot-long, 2.4-kilovolt transmission line; and
- (13) appurtenant facilities.

The existing project facilities are shown in figure 2.





Figure 2. Constantine Project detail location map (Source: Staff)

### **3.1.2 Existing Project Operation**

The Constantine Project is operated in a run-of-river mode, such that outflow from the project approximates inflow, as required by Article 403 of the current license.<sup>5</sup> Project flows through the turbines are controlled by computer or manually operated. Flows in excess of the maximum hydraulic capacity of the four turbines, which is 1,528 cubic feet per second (cfs) at a head of 11.3 feet or 1,720 cfs at a head of 12.5 feet flow uncontrolled over the project's 241.25-foot-long spillway. Flashboards generally fail when the water level in the reservoir is about 785.0 feet NGVD.

## **3.2 APPLICANT'S PROPOSAL**

### **3.2.1 Proposed Project Facilities and Operations**

I&M Power proposes to continue to operate the Constantine Project in a run-of-river mode, such that outflow from the project approximates inflow. No new or upgraded facilities, structural changes, or operational changes are proposed for the project during the term of the new license.

### **3.2.2 Proposed Environmental Measures**

I&M Power proposes to continue operating the Constantine Project with the protection, mitigation, and enhancement (PM&E) measures described below. The potential need for additional PM&E measures will be evaluated during the relicensing process.

#### **Geologic and Soil Resources**

- There are no proposed PM&E measures related to geology and soil resources for the project.

#### **Aquatic Resources**

- There are no proposed PM&E measures for aquatic resources.

#### **Terrestrial Resources**

- Continue to monitor purple loosestrife and Eurasian water milfoil in the project.
- Continue to evaluate options to control invasive plant species in the project.

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<sup>5</sup> 65 FERC ¶62,063 (1993).



### **Recreation Land Use, and Aesthetic Resources**

- There are no proposed PM&E measures related to recreation, land use, and aesthetic resources for the project.

### **Cultural Resources**

- There are no proposed PM&E measures related to cultural resources for the project at this time; however, if resources are identified within the area of potential effects (APE) that may potentially be affected by project operation, an Historic Properties Management Plan would be developed.

### **Socioeconomic Resources**

- There are no proposed PM&E measures related to socioeconomic resources.

## **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 affect 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 environmental measures identified by staff, federal and state agencies, 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 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 Constantine 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.

### **3.5.2 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 ANALYSIS AND 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.

Based on information in the PAD and preliminary staff analysis, we have not identified any resource that could be cumulatively affected by the continued operation and maintenance of the project.

### **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 Constantine Project. This list is not intended to be exhaustive or final, but contains those issues raised to date that could have substantial effects. 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.

#### **4.2.1 Geologic and Soils Resources**

- Effects of continued project operation and maintenance on shoreline erosion within the project boundary, the bypassed reach, and immediately downstream of the powerhouse.

#### **4.2.2 Aquatic Resources**

- Effects of continued project operation on water quality, including dissolved oxygen concentrations and water temperature in the project reservoir and in the St. Joseph River immediately downstream from the project dam (i.e., in the project bypassed reach).
- Effects of *continued project operation on fish impingement, entrainment, and turbine-induced mortality* on fish populations in the project reservoir and in the St. Joseph River downstream from the project.
- *Effects of continued project operation on mussels in project-affected waters, including in the project bypassed reach.*

#### **4.2.3 Terrestrial Resources**

- Effects of continued project operation on riparian, littoral, and wetland habitat and associated wildlife.
- Effects of continued project operation on invasive plant species, including purple loosestrife, Eurasian watermilfoil, *European frogbit*, and *Japanese knotweed*.

#### **4.2.4 Threatened and Endangered Species**

- Effects of continued project operation and maintenance on the following federally-listed threatened and endangered species: copperbelly water snake, Eastern massasauga, Mitchell's Satyr Butterfly, eastern prairie fringed orchid, northern long-eared bat, and Indiana bat.

#### **4.2.5 Recreation and Land Use**

- Adequacy of existing public access and recreational facilities to meet current and future recreation needs.
- *Effects of continued project operation and maintenance on the segment of the St. Joseph's River that is listed under the Nationwide Rivers Inventory and potentially eligible for inclusion in the National Wild and Scenic Rivers System.*

#### **4.2.6 Cultural Resources**

- Effects of continued project operation and maintenance on properties that are included in or eligible for inclusion in the National Register of Historic Places.

#### **4.2.7 Developmental Resources**

- Effects of any proposed or recommended environmental PM&E measures on the project's economics.

## 5.0 PROPOSED STUDIES

I&M Power's initial study proposal is identified by resource area in table 1. Detailed information on I&M Power's initial study proposals can be found in the PAD. Additional studies may be added to this list based on comments provided by Commission staff, federal and state resource agencies, Tribes, and other interested participants during this scoping process.

I&M Power has not identified any issues relating to the following resources: aesthetic or socioeconomic resources. Therefore, no studies are proposed for these resource areas.

Table 1. I&M Power's initial study proposals for the Constantine Project. (Source: I&M Power, 2018).

<b>Resource Area</b>	<b>Proposed Study/Information Need</b>
<b>1. Geology and Soils</b>	Conduct a shoreline stability assessment at the project that would include: (1) a survey to locate any sites of erosion or shoreline instability; (2) an inventory, map, and photographs of any identified erosion areas; (3) a scoring system to identify areas that have a potential to erode at unnaturally high rates; and (4) a prioritization of any areas where remedial action may be needed.
<b>2. Aquatic Resources</b>	<p>Conduct a temperature and dissolved oxygen monitoring study within the project boundary. The locations of monitoring equipment would be determined after consultation with Michigan Department of Environmental Quality (Michigan DEQ) and other stakeholders.</p> <p>Conduct sediment contaminant sampling at locations in the reservoir identified after consultation with Michigan DEQ and other stakeholders. Up to six sediment samples would be analyzed at a qualified laboratory facility to determine the types and concentration of any contaminants in the samples.</p> <p>Conduct a fish survey in the project reservoir and bypassed reach to determine the current fish communities present in project waters. The specific survey sampling locations and sampling methods would be determined in consultation with resource agencies and other stakeholders. In addition, tissue samples would be removed from fish collected in the fall sampling period and analyzed for mercury and polychlorinated biphenyl concentrations.</p>

<b>Resource Area</b>	<b>Proposed Study/Information Need</b>
	<p>Conduct a mussel assessment survey in the summer to identify any mussel populations within the project area including at two locations downstream of the project dam and at three locations in the project reservoir. Specific survey locations would be identified after consultation with resource agencies and other stakeholders.</p> <p>Compare the results of the data collected from I&amp;M Power's proposed fish survey with previous surveys to confirm if species compositions have not changed.</p>
<b>3. Terrestrial Resources</b>	<p>Conduct a desk-top study to review U.S. Fish and Wildlife's National Wetlands Inventory maps, aerial photographs, and information available from Michigan DEQ regarding mapped wetlands. Also field-verify mapped wetlands within the project boundary.</p>
<b>4. Recreation and Land Use</b>	<p>Conduct a recreation assessment of the project to assess recreational opportunities and potential improvements to recreational resources within the project boundary.</p>
<b>5. Cultural Resources</b>	<p>Assess project effects on identified historic and archeological resources and determine the need for: (1) additional archeological site file search; (2) an evaluation of project facilities; and/or (3) a Phase I investigation of the project's APE after consultation with the Michigan State Historic Preservation Office and federally recognized tribes.</p>

## **6.0 EA PREPARATION SCHEDULE**

At this time, we anticipate preparing a single EA. The EA will be sent to all persons and entities on the Commission's service and mailing lists for the Constantine 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.

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

<b><u>Major Milestone</u></b>	<b><u>Target Date</u></b>
Scoping Meetings	August 2018
License Application Filed	September 2021
Ready for Environmental Analysis Notice Issued	
Deadline for Filing Comments, Recommendations, and Agency Terms and Conditions/Prescriptions	
EA Issued	
Comments on EA Due	

Post-filing milestones will be established following I&M Power's filing of the final license application. A copy of the pre-filing portion of the process plan, which has a complete list of the milestones for developing the license application for the Constantine Project, is attached as Appendix A to this SD2.

## 7.0 PROPOSED EA OUTLINE

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

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##### 2.2.2 Proposed Project Operation

##### 2.2.3 Proposed Environmental Measures

##### 2.2.4 Modifications to Applicant's Proposal—Mandatory Conditions

#### 2.3 Staff Alternative



- 2.4 Staff Alternative with Mandatory Conditions
- 2.5 Other Alternatives (as appropriate)
- 2.6 Alternatives Considered but Eliminated From Detailed Analysis
- 3.0 ENVIRONMENTAL ANALYSIS
  - 3.1 General Description of the River Basin
  - 3.2 Scope of Cumulative Effects Analysis
  - 3.3 Proposed Actions and Action Alternatives
    - 3.3.1 Geologic and Soil Resources
    - 3.3.2 Aquatic Resources
    - 3.3.3 Terrestrial Resources
    - 3.3.4 Threatened and Endangered Species
    - 3.3.5 Recreation and Land Use
    - 3.3.6 Cultural Resources
  - 3.4 No-action Alternative
- 4.0 DEVELOPMENTAL ANALYSIS
  - 4.1 Power and Economic Benefits of the Project
  - 4.2 Comparison of Alternatives
  - 4.3 Cost of Environmental Measures
- 5.0 CONCLUSIONS AND RECOMMENDATIONS
  - 5.1 Comprehensive Development and Recommended Alternative
  - 5.2 Unavoidable Adverse Effects
  - 5.3 Recommendations of Fish and Wildlife Agencies
  - 5.4 Consistency with Comprehensive Plans
- 6.0 FINDING OF NO SIGNIFICANT IMPACT (OR OF SIGNIFICANT IMPACT)
- 7.0 LITERATURE CITED
- 8.0 LIST OF PREPARERS

## APPENDICES

A— Draft License Conditions Recommended by Staff

## 8.0 COMPREHENSIVE PLANS

Section 10(a)(2)(A) of the FPA<sup>6</sup> requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project. Commission staff has preliminarily identified and reviewed the plans listed below that may be applicable to the Constantine Project. Agencies are requested to review this list and inform 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 C.F.R. 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 Constantine Project:

- Michigan Department of Environmental Quality. 1996. Non-indigenous aquatic nuisance species, State Management Plan: A strategy to confront their spread in Michigan. Lansing, Michigan.
- Michigan Department of Natural Resources. 1999. St. Joseph River Assessment and Appendix. St. Joseph River Management Plan. Lansing, Michigan. September 1999.
- Michigan Department of Natural Resources. Statewide Comprehensive Outdoor Recreation Plan (SCORP): 2008-2012. Lansing, Michigan.
- National Park Service. The Nationwide Rivers Inventory. Department of the Interior, Washington D.C. 1993.
- U.S. Fish and Wildlife Services. Canadian Wildlife Service. 1986. North American waterfowl management plan. Department of the Interior. Environment Canada. May 1986.
- U.S. Fish and Wildlife Service. n.d. Fisheries USA: The Recreational Fisheries Policy of the U.S. Fish and Wildlife Service. Washington, D.C.

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<sup>6</sup> 16 U.S.C. § 803(a)(2)(A) (2012).

## 9.0 MAILING LIST

The list below is the Commission's official mailing list for the Constantine Project. If you want to receive future mailings for this proceeding and are not included in the list below, please send your request by email to [efiling@ferc.gov](mailto:efiling@ferc.gov), or by mail to: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission, 888 First Street, N.E., Room 1A, Washington, D.C. 20426. All written and emailed requests to be added to the mailing list must clearly identify the following on the first page: Constantine Project (FERC No. 10661-050). You may use the same method if requesting removal from the mailing list.

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

### **Mailing List for Constantine Project,** **FERC Project No. 10661-050**

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Honorable Debbie Stabenow U.S. Senate 133 Hart Senate Office Building Washington, DC 20510	Honorable Frederick Stephen Upton U.S. House of Representatives Washington, D.C. 20515
District Engineer U.S. Army Corps of Engineers 477 Michigan Avenue Detroit, MI 48226-2523	U.S. Fish and Wildlife Service Regional Director 5600 American Blvd. West Ste. 990 Bloomington, MN 55437-1458
U.S. Bureau of Indian Affairs BIA—Midwest Regional Office Norman Pointe II Bldg. 5600 West American Blvd., Ste 500 Bloomington, MN 55437	

## APPENDIX A

### CONSTANTINE PROJECT PROCESS PLAN AND SCHEDULE

This process plan establishes the deadlines for the pre-filing process. 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. Shaded milestones are unnecessary if there are no study disputes.

<b>Responsible Party</b>	<b>Pre-Filing Milestone</b>	<b>Date</b>	<b>FERC Regulation</b>
I&M Power	Issue Public Notice for NOI/PAD	6/4/2018	5.3(d)(2)
I&M Power	File NOI/PAD with FERC	6/4/2018	5.5, 5.6
FERC	Tribal Meetings	7/4/2018	5.7
FERC	Issue Notice of Commencement of Proceeding; Issue Scoping Document 1	8/3/2018	5.8
FERC	Constantine Project Environmental Site Review and Scoping Meetings	8/28/2018 and 8/29/2018	5.8(b)(viii)
All stakeholders	PAD/SD1 Comments and Study Requests Due	10/2/2018	5.9
FERC	Issue Scoping Document 2	11/16/2018	5.10
I&M Power	File Proposed Study Plan (PSP)	11/16/2018	5.11(a)
All stakeholders	Proposed Study Plan Meeting	12/16/2018	5.11(e)
All stakeholders	Proposed Study Plan Comments Due	2/14/2019	5.12
I&M Power	File Revised Study Plan	3/16/2019	5.13(a)
All stakeholders	Revised Study Plan Comments Due	3/31/2019	5.13(b)
FERC	Director's Study Plan Determination	4/15/2019	5.13(c)
Mandatory Conditioning Agencies	Any Study Disputes Due	5/5/2019	5.14(a)
Dispute Panel	Third Dispute Panel Member Selected	5/20/2019	5.14(d)
Dispute Panel	Dispute Resolution Panel Convenes	5/25/2019	5.14(d)(3)
I&M Power	Applicant Comments on Study Disputes Due	5/30/2019	5.14(j)
Dispute Panel	Dispute Resolution Panel Technical Conference	6/4 2019	5.14(j)
Dispute Panel	Dispute Resolution Panel Findings Issued	6/24/2019	5.14(k)

<b>Responsible Party</b>	<b>Pre-Filing Milestone</b>	<b>Date</b>	<b>FERC Regulation</b>
FERC	Director's Study Dispute Determination	7/14/2019	5.14(l)
I&M Power	First Study Season	2019	5.15(a)
I&M Power	Initial Study Report	4/14/2020	5.15(c)(1)
All stakeholders	Initial Study Report Meeting	4/29/2020	5.15(c)(2)
I&M Power	Initial Study Report Meeting Summary	5/14/2020	5.15(c)(3)
All stakeholders	Any Disputes/Requests to Amend Study Plan Due	6/13/2020	5.15(c)(4)
All stakeholders	Responses to Disputes/Amendment Requests Due	7/13/2020	5.15(c)(5)
FERC	Director's Determination on Disputes/Amendments	8/12/2020	5.15(c)(6)
I&M Power	Second Study Season	2020	5.15(a)
I&M Power	Updated Study Report due	4/14/2021	5.15(f)
All stakeholders	Updated Study Report Meeting	4/29/2021	5.15(f)
I&M Power	Updated Study Report Meeting Summary	5/14/2021	5.15(f)
All stakeholders	Any Disputes/Requests to Amend Study Plan Due	6/13/2021	5.15(f)
All stakeholders	Responses to Disputes/Amendment Requests Due	7/13/2021	5.15(f)
FERC	Director's Determination on Disputes/Amendments	8/12/2021	5.15(f)
I&M Power	File Preliminary Licensing Proposal	5/3/2021	5.16(a)
All stakeholders	Preliminary Licensing Proposal Comments Due	8/1/2021	5.16(e)
I&M Power	File Final License Application	9/30/2021	5.17
I&M Power	Issue Public Notice of License Application Filing	10/14/2021	5.17(d)(2)