American Electric Power
1 Riverside Plaza
Columbus, OH 43215
aep.com

Via Electronic Submittal

October 10, 2025

Honorable Debbie-Anne A. Reese, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Subject: Elkhart Hydroelectric Project (FERC No. 2651)
Notice of Intent and Pre-Application Document

Dear Secretary Reese:

Indiana Michigan Power Company (I&M or Applicant), a unit of American Electric Power (AEP), is submitting to the Federal Energy Regulatory Commission (FERC or Commission) the Notice of Intent (NOI) to file an application for a subsequent license and Pre-Application Document (PAD) for the Elkhart Hydroelectric Project (Project) (Project No. 2651), located in the City of Elkhart, Elkhart County, Indiana on the St. Joseph River.

In accordance with 18 Code of Federal Regulations (CFR) § 5.5(e) of the Commission's regulations, the Applicant requests that the Commission designate I&M as the Commission's non-federal representative for purposes of consultation under Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 470f and the NHPA implementing regulations at 36 CFR Part 800. The Applicant also requests that FERC designate I&M as the non-federal representative for the Project for the purpose of consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service, pursuant to Section 7 of the Endangered Species Act (ESA) and the joint agency ESA implementing regulations at 50 CFR Part 402.

The Applicant is distributing this letter to the stakeholders listed on the attached distribution list. For stakeholders who have provided an email address, the Applicant is distributing this letter via e-mail; otherwise, the Applicant is distributing this letter via U.S. mail. Stakeholders interested in the relicensing process may obtain a copy of the NOI and PAD electronically through FERC's eLibrary at https://elibrary.ferc.gov/idmws/search/fercgensearch.asp under docket number P-2651 or on the Applicant's website https://www.aephydro.com/HydroPlant/Elkhart. If any stakeholder would like to request a CD containing an electronic copy of the NOI and PAD, please contact the undersigned at the information listed below.

Appendix B of the PAD includes a single-line electrical diagram of the Project, as required by 18 CFR § 5.6(d)(2)(iii)(D). The information contained in these drawings are deemed as Critical Energy Infrastructure Information (CEII) under 18 CFR § 388.113, thus Appendix B of the PAD will be eFiled as CEII and is not being distributed to the public.

We look forward to working with the Commission's staff, resource agencies, Indian Tribes, local governments, non-governmental organizations, and members of the public, toward developing a license application for this renewable energy facility. If there are any questions regarding this letter or the NOI or PAD, please do not hesitate to contact me at (614) 716-2240 or jmmagalski@aep.com.

Sincerely,

Jonathan M. Magalski
Environmental Manager, Renewables
American Electric Power Service Corporation

cc: Justine Penix (AEP)
Jen Huff (HDR)
Distribution List

Elkhart Hydroelectric Project (FERC No. 2651)
Relicensing Distribution List

Federal Agencies

Debbie-Anne A. Reese Secretary, Office of the Secretary
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Elkhart Hydroelectric Project (FERC No. 2651)
Relicensing Distribution List

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Rod Roberson, Mayor
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Relicensing Distribution List

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James Mueller, Mayor
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Elkhart Hydroelectric Project (FERC No. 2651)
Relicensing Distribution List

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ELKHART HYDROELECTRIC PROJECT
FERC PROJECT NO. 2651
NOTICE OF INTENT TO FILE APPLICATION FOR NEW LICENSE

Indiana Michigan Power Company (I&M or Licensee), a unit of American Electric Power (AEP) and the Licensee of the existing Elkhart Hydroelectric Project (FERC Project No. 2651), hereby notifies the Federal Energy Regulatory Commission (FERC or Commission) of its intent to file an Application for New License for the Elkhart Hydroelectric Project.

Pursuant to 18 CFR §5.5(b) of the Commission's regulations, I&M provides the following information:

(1) Licensee's Name, Address, and Phone Number:

Indiana Michigan Power Company
1 Riverside Plaza
Columbus, OH 43215
(614) 716-2240

(2) FERC Project Number:

FERC Project No. 2651

(3) License Expiration Date:

December 31, 2030

(4) Statement of Intent to File Application for New License:

I&M hereby declares its intent to file an Application for New License for the Elkhart Hydroelectric Project on or before December 31, 2028. I&M will utilize the Commission's Integrated Licensing Process (ILP) in support of this relicensing.

(5) Principal Works of the Elkhart Hydroelectric Project:

The Project has been in operation since 1913. The licensed Project works consist of: (1) a 300-foot (ft)-long, 14-ft-high concrete dam/spillway creating a 512-acre reservoir; (2) 11 Tainter gates 25 ft-wide each and 10.5 ft high separated by 2.5-ft wide piers; (3) six concrete draft tube tunnels approximately 9 ft, 6 inches in diameter transitioning to a 10-ft-wide and 15-ft-high opening; (4) an 86-ft-long by 49-ft-wide by 48-ft-high L-shaped powerhouse on the south side of the dam containing three generating units with a total installed capacity of 3.44 megawatts (MW) (Unit 1=1,440 kilowatts [kW], Unit 2=1,000 kW, Unit 3=1,000 kW); (4) generator leads and associated switchgear to the 4-kilovolt (kV) bus located in the powerhouse; and (5) appurtenant facilities.

(6) Project Location:

The Elkhart Project is located on the St. Joseph River in the City of Elkhart, Elkhart County, Indiana.

(7) Plant Installed Capacity:

The Project's installed capacity is 3.44 MW.

(8)(i) The names and mailing addresses of every county in which any part of the project is located and in which any federal facility that is used by the project is located are:

Brad Rogers
County Commissioner
Elkhart County
117 North Second Street
Goshen, IN 46526

There are no federal lands or facilities associated with the Project.

(8)(ii)(A) The names and mailing addresses of every city, town, or similar political subdivision in which any part of the project is or is to be located and any federal facility that is or is to be used by the project is located:

Rod Roberson
Mayor
City of Elkhart
229 S. 2nd Street
Elkhart, IN 46516

There are no federal lands or facilities associated with the Project.

(8)(ii)(B) The names and mailing addresses of every city, town, or similar political subdivision that has a population of 5,000 or more people and is located within 15 miles of the Project dam:

City of Goshen
Gina Leichty
Mayor of Goshen
202 S. 5th Street
Goshen, IN 46528

City of Elkhart
Rod Roberson
Mayor of Elkhart
229 S. 2nd Street
Elkhart, IN 46516

City of Mishawaka
Dave Wood
Mayor of Mishawaka
100 Lincolnway West
Mishawaka, IN 46544

City of South Bend
James Mueller
Mayor of South Bend
227 West Jefferson Blvd.
Suite 1400 N
South Bend, IN 46601

(8)(iii) The names and mailing addresses of every irrigation district, drainage district, or similar special purpose political subdivision (A) in which any part of the project is located, and any federal facility that is or is proposed to be used by the project is located, or (B) that owns, operates, maintains, or uses any project facility or any federal facility that is or is proposed to be used by the project:

There are no irrigation or drainage districts or similar special purpose political subdivisions associated with or in the general area of the Project. There are no federal lands or facilities associated with the Project.

8(iv) The names and mailing addresses of every other political subdivision in the general area of the project that there is reason to believe would likely be interested in or affected by the notification:

Elkhart County Soil and Water Conservation District
59358 County Route 7
Elkhart, IN 46517

Elkhart Public Works & Utilities
1201 S. Nappanee Street
Elkhart, IN 46516

8(v) The names and mailing addresses of affected Indian Tribes:

Darien Rhodd
Tribal Historic Preservation Officer
Citizen Potawatomi Nation
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Shawnee, OK 74801

Logan York
Tribal Historic Preservation Officer
Miami Tribe of Oklahoma
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Luke Heider
Tribal Historic Preservation Officer
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Matthew Bussler
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Dustin Meshigaud
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Raphael Wahwassuck
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Lakota Hobia
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Onyleen Zapata
Tribal Historic Preservation Officer
Nottawaseppi Huran Band of the
Potawatomi
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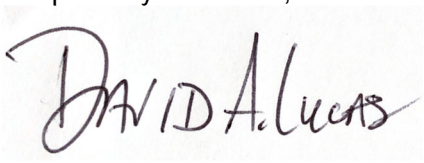
I&M is filing this Notice of Intent (NOI) concurrently with a Pre-Application Document (PAD). In accordance with 18 CFR §5.5(c), the Licensee is sending notification of these filings to the distribution list as attached to the transmittal letter for this NOI; the list includes applicable resource agencies, local governments, Indian Tribes, and non-government organizations.

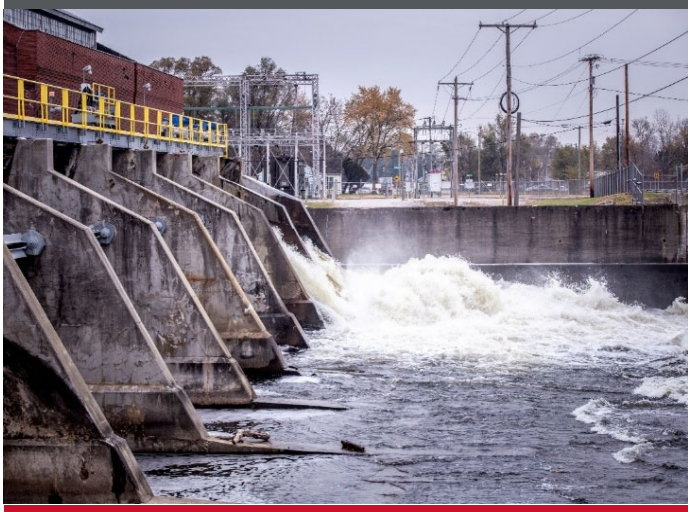
In accordance with 18 CFR §5.5(e), I&M is requesting designation as the non-federal representative for consultation under Section 7 of the Endangered Species Act and Section 106 of the National Historic Preservation Act.

If there are questions concerning this NOI or the PAD, please contact the undersigned at the address or telephone number listed as listed in item (1) above.

Respectfully submitted,



David A. Lucas
VP Generation Transformation, Strategy, and Growth
Indiana Michigan Power Company



PRE-APPLICATION DOCUMENT

Elkhart Hydroelectric Project
FERC NO. 2651

Indiana Michigan Power Company

October 2025

AEP INDIANA MICHIGAN POWER®

A unit of American Electric Power

ELKHART HYDROELECTRIC PROJECT
FERC PROJECT NO. 2651
PRE-APPLICATION DOCUMENT

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LIST OF ACRONYMS

°F	degrees Fahrenheit
°C	degrees Celsius
AEP	American Electric Power
ADA	Americans with Disabilities Act
APE	Area of Potential Effect
Berger	Louis Berger & Associates, Inc.
CEII	Critical Electric/Energy Infrastructure Information
CFR	Code of Federal Regulations
cfs	cubic feet per second
COC	Columbus Operations Center
CRMP	cultural resources management plan
DO	dissolved oxygen
EA	Environmental Assessment
EGLE	Michigan Department of Environment, Great Lakes, and Energy
EIS	Environmental Impact Statement
EL.	Elevation
EPT	Ephemeroptera, Plecoptera, Trichoptera
ESA	Endangered Species Act
FERC or Commission	Federal Energy Regulatory Commission
FPA	Federal Power Act
ft	foot or feet
GLO	General Land Office
HDR	HDR Engineering, Inc.
hp	horsepower
IBI	Index of Biotic Integrity
IHBBC	Indiana Historic Buildings, Bridges, and Cemetaries
I&M or Licensee	Indiana Michigan Power Company
IDEM	Indiana Department of Environmental Management
IDNR	Indiana Department of Natural Resources
ILP	Integrated Licensing Process
kV	kilovolt
kVA	kilovolt ampere
kW	kilowatt
mg/L	milligram per liter
MRLC	Multi-Resolution Land Characteristics Consortium
µs/cm	microsiemens per centimeter

MW	megawatt
MWh	megawatt hour
NEPA	National Environmental Policy Act
NGVD	National Geodetic Vertical Datum of 1929
NHPA	National Historic Preservation Act of 1966
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NRHP	National Register of Historic Places
Ohio DNR	Ohio Department of Natural Resources
PAD	Pre-Application Document
PCB	polychlorinated biphenyls
PM&E	protection, mitigation, and enhancement
Project	Elkhart Hydroelectric Project
PSP	Proposed Study Plan
PURPA	Public Utility Regulatory Policies Act of 1978
RSP	Revised Study Plan
QHEI	Qualitative Habitat Evaluation Index
RMP	Recreation Management Plan
rpm	rotations per minute
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SD1	Scoping Document 1
Section 106	Section 106 of the National Historic Preservation Act of 1966
SHAARD	Indiana State Historic Architectural and Archaeological Research Database
SHPO	State Historic Preservation Office
SOI	Secretary of the Interior
TCF	taxa correction factor
THPO	Tribal Historic Preservation Office
TMDL	Total Maximum Daily Load
USCB	U.S. Census Bureau
USDA NRCS	U.S. Department of Agriculture National Resources Conservation Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USPS	U.S. Postal Service
V	Volts

Section 1
Introduction and Background

Indiana Michigan Power Company (I&M or Licensee), a unit of American Electric Power (AEP), is the Licensee, owner, and operator of the 3.44-megawatt (MW) Elkhart Hydroelectric Project (Project) (Project No. 2651), located in the City of Elkhart, Elkhart County, Indiana on the St. Joseph River. The Project is approximately 77 river miles upstream of the City of St. Joseph, Michigan, where the St. Joseph River empties into Lake Michigan.

The Project is operated as a non-peaking (i.e., run-of-river) facility. The reservoir surface elevation is maintained by adjusting the wicket gates on the generating units and/or operation of the spillway Tainter gates. Project works from right to left (looking downstream) consist of the right abutment, a reinforced concrete spillway, an interior retaining wall located between the spillway and the powerhouse, an integral intake and powerhouse, and the left abutment. The concrete spillway is approximately 300 feet (ft) long and 14 ft high with eleven Tainter gates. The Project has three generating units, each with four horizontal Francis turbine runners (comprised of two camelback pairs), and a total installed capacity of 3.44 MW. Project operations are coordinated with other I&M hydroelectric projects on the St. Joseph River which are the upstream Constantine and Mottville projects and the downstream Twin Branch, Buchanan, and Berrien Springs projects.

The Project is currently licensed by the Federal Energy Regulatory Commission (FERC or Commission) under the authority granted to FERC by Congress by the Federal Power Act (FPA), 16 United States Code §791(a), et seq., to license and oversee the operation of non-federal hydroelectric projects on jurisdictional waters and/or federal lands. The current operating license for the Project was issued on January 11, 2001, and expires December 31, 2030. I&M is currently planning to seek a new FERC license for the Project. In accordance with the Commission's regulations, I&M must file its application for a new license with FERC no later than 24 months before the existing license expires.

In support of preparing an application for a new license, the Licensee has elected to use FERC's Integrated Licensing Process (ILP). The ILP is designed to bring efficiencies to the licensing process by integrating the applicant's pre-filing consultation activities with FERC's National Environmental Policy Act (NEPA) scoping responsibilities. The Licensee believes the ILP is the most effective and efficient process for this relicensing.

The ILP is formally initiated by I&M's filing of this Pre-Application Document (PAD) and Notice of Intent (NOI) with FERC to relicense the Project. The PAD and NOI are distributed to federal and state resource agencies, local governments, Indian Tribes, and interested members of the public

simultaneously upon filing with FERC; the distribution list for this filing is included in the transmittal letter.

Under the Commission's regulations at 18 Code of Federal Regulations (CFR) §5.8, FERC will review this PAD and associated NOI and, within 60 days of receipt, notice the commencement of the licensing proceeding, request comments on the PAD, and issue Scoping Document 1 (SD1). A public scoping meeting and site visit will then be conducted within 30 days of issuing SD1, or within 90 days of the submittal of the PAD.

Section 2
Purpose of the Pre-Application Document

The filing of this PAD and the associated NOI by I&M marks the formal start of the relicensing process for the Project. The purpose of the PAD is to provide a description of the existing Project facilities and operations, and to also provide existing, relevant, and reasonably available information related to the Project. Further, the PAD is intended to assist the Commission, resource agencies, Indian Tribes, non-governmental organizations, and other interested parties with identifying potential resource areas of interest and informational needs, developing study requests, and establishing the information necessary to analyze the license application [18 CFR §5.6(b)].

2.1 Search for Existing, Relevant, and Reasonably Available Information

In support of preparing this PAD, HDR Engineering, Inc. (HDR), on behalf of and in collaboration with I&M, has searched to identify and review information that is reasonably available and relevant to the Project. These efforts consisted of the following activities:

1. A comprehensive search of I&M's files and documentation;
2. The distribution of a PAD questionnaire to stakeholders on the distribution list requesting information related to the Project, Project vicinity, and the region;
3. A search and review of publicly available sources and databases; and
4. A review of the State and Federal Comprehensive Plans relevant to the Project.

A copy of the PAD questionnaire, the distribution list, and completed questionnaires provided by Project stakeholders are included in Appendix A. I&M and HDR reviewed the questionnaire responses and information applicable to the Project. Relevant information has been summarized in the applicable resource sections of this PAD.

2.2 Description of Consultation Process Undertaken by I&M Prior to Submittal of the PAD

I&M performed preliminary consultation with stakeholders in support of preparing this PAD to obtain available information, to determine the potential relationship between stakeholders' interests and Project operations, and to identify potential information gaps and study needs in advance of the formal relicensing process.

The Licensee first identified parties that may have an interest in the Project relicensing by reviewing its distribution lists for current license compliance activities; the Project docket on FERC's eLibrary; staff directories for applicable federal, state and local resource agencies; and on-going FERC licensing proceedings in the St. Joseph watershed. A stakeholder list was compiled and used as the distribution list for the PAD questionnaire. On August 1, 2025, the PAD questionnaire was distributed to stakeholders for a 30-day input period via email and U.S. Postal Service (USPS) mailings. The PAD questionnaire is an online tool used to (1) confirm stakeholder involvement in the relicensing, (2) request additional relevant stakeholder contact information, (3) request existing, relevant, or reasonably available information about the Project environment, and (4) request information on specific resource issues at the Project. The online platform also allowed users to upload relevant documents. I&M received PAD questionnaire responses from the Indiana Department of Natural Resources, U.S. Geological Survey, Michigan Hydro Relicensing Coalition, Town of Bristol, Congressman Rudy Yakym, Elkhart County Convention & Visitors Bureau, and the City of Elkhart. Based on responses received, I&M sent PAD questionnaire survey links to newly identified stakeholders and updated the distribution list for distribution of the PAD.

The PAD questionnaire, responses, and consultation to date in support of this PAD are included in Appendix A.

Section 3
Description of the Consultation Process

3.1 Overall Process Plan and Schedule

The Licensee proposes using the Commission's ILP in support of obtaining a new license for the Project. As presented in Table 3.1-1, I&M has prepared a Process Plan and Schedule that incorporates the overall ILP schedule for this relicensing.

Table 3.1-1. Elkhart Hydroelectric Project ILP Process Plan and Schedule

Activity	Responsible Party	Timeframe	Proposed Date
File NOI and PAD (18 CFR §5.5(d))	I&M	As early as 5.5 years, but no later than 5 years prior to license expiration	10/10/2025
Initial Tribal Consultation Meeting (18 CFR §5.7)	FERC	No later than 30 days of filing NOI and PAD	11/9/2025
Issue notice of NOI/PAD and SD1 (18 CFR §5.8(a))	FERC	Within 60 days of filing NOI and PAD	12/9/2025
Conduct scoping meetings and site visit (18 CFR §5.8(b)(viii))	FERC	Within 30 days of NOI/PAD notice and SD1 issuance	1/8/2026
Comments on PAD, SD1, and Study Requests (18 CFR §5.9(a))	Stakeholders	Within 60 days of NOI/PAD notice and issuance of SD1	2/7/2026
File Proposed Study Plan (PSP) (18 CFR §5.11)	I&M	Within 45 days of deadline for filing comments on PAD	3/24/2026
Issuance of Scoping Document 2, if necessary (18 CFR §5.10)	FERC	Within 45 days of deadline for filing comments on SD1	3/24/2026
PSP Meeting (18 CFR §5.11(e))	I&M	To be held within 30 days of filing PSP	4/23/2026
Comments on PSP (18 CFR §5.12)	Stakeholders	Within 90 days after PSP is filed	6/22/2026
File Revised Study Plan (RSP) (18 CFR §5.13(a))	I&M	Within 30 days of deadline for comments on PSP	7/22/2026
Comments on RSP (18 CFR §5.13(b))	Stakeholders	Within 15 days following RSP	8/6/2026
Issuance of Study Plan Determination (18 CFR §5.13(c))	FERC	Within 30 days of RSP	8/21/2026
Formal Study Dispute Resolution Process if requested (18 CFR §5.14(a))	Agencies with mandatory conditioning authority	Within 20 days of Study Plan Determination	9/10/2026
Dispute Resolution Panel Convenes (18 CFR §5.14(d))	Dispute Resolution Panel	Within 20 days of notice of study dispute	9/30/2026
Comments on Study Plan Disputes (18 CFR §5.14(i))	I&M	Within 25 days of notice of study dispute	10/5/2026
Third Panel Member Selection Due (18 CFR §5.14(d)(3))	Dispute Resolution Panel	Within 15 days of when Dispute Resolution Panel convenes	10/15/2026

Activity	Responsible Party	Timeframe	Proposed Date
Dispute Resolution Panel Technical Conference (18 CFR §5.14(j))	Dispute Resolution Panel, I&M, Stakeholders	Prior to engaging in deliberative meetings	To be determined
Dispute Resolution Panel Findings and Recommendations (18 CFR §5.14(k))	Dispute Resolution Panel	No later than 50 days after notice of dispute	10/30/2026
Study Dispute Determination (18 CFR §5.14(1))	FERC	No later than 70 days after notice of dispute	11/19/2026
Conduct First Season of Studies (18 CFR §5.15)	I&M	--	August 2026 to November 2027
Study Progress Reports (18 CFR §5.15(b))	I&M	I&M will provide summary updates every 3 months	November 2026 to November 2027
Initial Study Report (18 CFR §5.15(c))	I&M	Pursuant to the Commission-approved study plan and schedule provided in § 5.13 or no later than 1 year after Commission approval of the study plan	8/21/2027
Initial Study Report Meeting (18 CFR §5.15(c)(2))	I&M and Stakeholders	Within 15 days of filing the Initial Study Report	9/5/2027
File Initial Study Report Meeting Summary (18 CFR §5.15(c)(3))	I&M	Within 15 days of study results meeting	9/20/2027
File Meeting Summary Disagreements (18 CFR §5.15(c)(4))	Stakeholders	Within 30 days of study results meeting summary	10/20/2027
File Responses to Meeting Summary Disagreements (18 CFR §5.15(c)(5))	I&M	Within 30 days of filing meeting summary disagreements	11/19/2027
Resolution of Disagreements (18 CFR §5.15(c)(6))	FERC	Within 30 days of filing responses to disagreements	12/19/2027
Conduct Second Season of Studies (if necessary)	I&M	To be determined	April 2028 to September 2028
File Updated Study Report (18 CFR §5.15(f)) (if necessary)	I&M	Pursuant to the Commission-approved study plan and schedule provided in § 5.13 or no later than 2 years after Commission approval	8/21/2028
Updated Study Report Meeting (18 CFR §5.15(f)) (if necessary)	I&M and Stakeholders	Within 15 days of Updated Study Report	9/5/2028
File Updated Study Report Meeting Summary (18 CFR §5.15(f)) (if necessary)	I&M	Within 15 days of Updated Study Report meeting	9/20/2028
File Meeting Summary Disagreements (18 CFR §5.15(f))	Stakeholders	Within 30 days of study results meeting summary	10/20/2028
File Responses to Meeting Summary Disagreements (18 CFR §5.15(f)(5))	I&M	Within 30 days of filing meeting summary disagreements	11/19/2028
Resolution of Disagreements (18 CFR §5.15(f))	FERC	Within 30 days of filing responses to disagreements	12/19/2028

Activity	Responsible Party	Timeframe	Proposed Date
File Draft License Application (18 CFR §5.16(a))	I&M	No later than 150 days prior to the deadline for filing a new or subsequent license application	8/3/2028
Comments on Draft License Application (18 CFR §5.16(a))	Stakeholders	Within 90 days of filing Preliminary License Proposal or Draft License Application	11/1/2028
File License Application (18 CFR §5.17)	I&M	No later than 24 months before the existing license expires	12/31/2028
Tendering Notice (18 CFR §5.19)	FERC	Within 14 days of filing of License Application	1/14/2029
Commission Decision on Any Outstanding Pre-filing Additional Information Requests (18 CFR §5.19)	FERC	Within 30 days of filing of License Application	1/30/2029
Notice of Acceptance and Notice of Ready for Environmental Analysis (18 CFR §5.22)	FERC	Within 60 days of issuance of Tendering Notice	3/15/2029
File 401 Water Quality Certification Application with Indiana Department of Environmental Management (IDEM) and proof of application with FERC (18 CFR §5.23)	I&M	Within 60 days of issuance of Notice of Ready for Environmental Analysis	5/14/2029
Comments, Interventions, Preliminary Terms and Conditions (18 CFR §5.23)	Stakeholders	Within 60 days of issuance of Notice of Acceptance and Ready for Environmental Analysis	5/14/2029
Parties Submit Alternatives	Stakeholders and I&M	Within 30 days of Comments, Interventions, Preliminary Terms and Conditions	6/13/2029
Parties Request Trial-Type Hearing	Stakeholders and I&M	Within 30 days of Comments, Interventions, Preliminary Terms and Conditions	6/13/2029
Reply Comments	Stakeholders and I&M	Within 45 days of Comments, Interventions, Preliminary Terms and Conditions	6/28/2029
Interventions and Responses	Stakeholders	Within 15 days of Parties Requesting Trial-Type Hearing	6/28/2029
Agency Response to Trial-Type Hearing	Mandatory Conditioning Agency	Within 30 days of Interventions and Responses	7/28/2029
Agency Hearing Referral	Mandatory Conditioning Agency	Within 5 days of agency response to trial type hearing	8/2/2029
Trial Type Hearing Decision	Mandatory Conditioning Agency	Within 90 days of agency hearing referral	10/31/2029
Commission issues Non-Draft Environmental Assessment (EA) (18 CFR §5.24)	FERC	Within 75 days of reply comments deadline	9/11/2029
Comments on Non-Draft EA (18 CFR §5.24)	Stakeholders	Within 30-45 days of Commission issuance of Non-Draft EA or Environmental Impact Statement (EIS)	10/26/2029
Modified Terms and Conditions Based on Any Hearing Decision, Comments, and Proposed Alternatives (18 CFR §5.24)	Stakeholders	Within 60 days of filing of comments on Draft EA or EIS	12/25/2029
Commission issues License Order (18 CFR §5.25)	FERC	To be determined	12/31/2030

1. If the due date falls on a weekend or holiday, the deadline is the following business day.
2. All Director's determinations are subject to request for rehearing to FERC pursuant to 18 CFR § 375.301(a) and 385.713. Requests for rehearing must be filed within 30 days of determination.

3. Shaded actions are not necessary if there are no study disputes.
4. This schedule is based upon FERC's issuance of a Non-Draft EA. FERC can also issue a Draft EA, which would modify the schedule slightly.

3.2 Scoping Meeting and Site Visit

Pursuant to 18 CFR §5.8(b), FERC will hold a Scoping Meeting and Project Site Visit within 30 days of issuing notice of the PAD and NOI (estimated to be on or before January 8, 2026) in accordance with its responsibilities under NEPA. The Scoping Meeting will be held at a location selected by FERC in the general vicinity of the Project. FERC will issue a public notice regarding the Scoping Meeting that will include the meeting date, meeting location, and additional instructions for attending the meeting.

3.3 ILP Participation

The licensing process for the Project is open to the public and interested individuals and organizations are encouraged to participate. A contact list, compiled by the Licensee, will be maintained to include agencies, organizations, individuals, or groups with whom consultation is required by FERC's licensing regulations or who have requested to be included as licensing participants.

The contact list will be used to provide notice of any public meetings, as well as notice of the availability of information for public review. The current contact/distribution list is included in Appendix A.

Parties desiring to be added to or removed from the contact list should contact the individual(s) listed below:

Mr. Jonathan Magalski
Environmental Manager, Renewables
c/o Indiana Michigan Power Company
1 Riverside Plaza
Columbus, OH 43215
(614) 716-2240
jmmagalski@aep.com

Ms. Justine Penix
Plant Support Specialist
Indiana Michigan Power Company
13840 East Jefferson Road
Mishawaka, IN 46545
(574) 236-1682
jpenix@aep.com

3.4 Communication and Meeting Protocol

During the Project relicensing process, communication will take place through public meetings, online meetings, and/or written correspondence. To establish the formal consultation record, all phases of formal correspondence require adequate documentation. The intent of the Communication Protocol described in this section is to provide a flexible framework for the dissemination of information and for documenting consultation among the participants throughout the relicensing proceeding. The

Communication Protocol will remain in effect until issuance of the Project's new license by the Commission.

3.4.1 Maintenance of Public Website

I&M will maintain a public Project website (http://www.aephydro.com/) for access to major documents developed during the course of the licensing process, such as the PAD and NOI, public meeting notices and materials, study plans, study reports, and the draft and final license applications.

3.4.2 Distribution of Relicensing Materials

I&M will distribute formal relicensing materials (to the relicensing distribution list) via email or by mailing notifications of the online availability of formal relicensing filings and documents. If I&M has not been provided with a stakeholder's email address, I&M will mail notification of the availability of documents via regular (USPS) mail. Documents filed with the Commission will be available on I&M's public relicensing website (http://www.aephydro.com/) and (presumed) from FERC's eLibrary at www.ferc.gov/docs-filing/elibrary.asp by searching under Docket P-2651.

Requests for hard copies of relicensing documents should be sent to Mr. Jon Magalski using the contact information provided in Section 3.3 and should clearly indicate the document name, publication date (if known), and FERC Project No. 2651. A reproduction charge and postage costs may be assessed for hard copies requested by the public. Federal, state, and tribal entities will not be subject to document processing or postage fees.

Certain documents are restricted from general distribution. These documents include: (1) those covered under FERC's regulations protecting Critical Electric/Energy Infrastructure Information (CEII) (18 CFR §388.113), and (2) documents containing sensitive information (e.g., engineering design drawings, archaeological survey reports or other information identifying the locations of historic properties, and reports containing information regarding the locations of protected species), which are covered under FERC's regulations protecting Privileged Information (18 CFR §388.112).

A variety of technical documents will be produced during licensing consultation, including the PAD, study plans, study reports, and the draft and final license applications. Whenever comments on documents are solicited, review periods will be established and communicated to licensing participants. Review periods will typically be at least 30 days unless longer periods are required by FERC licensing regulations. I&M will consider adjustment of review periods on an as-needed or as-appropriate basis, to best utilize available time within the course of pre-filing consultation without jeopardizing the overall relicensing schedule. Such adjustments will be made in consultation with

licensing participants.

3.4.3 Meetings

Meetings will be scheduled as required by FERC regulations[1] and as otherwise needed throughout the licensing process. I&M will be responsible for scheduling consultation meetings. I&M will notify licensing participants of formal meetings scheduled by the Licensee at least 14 days prior to the meeting date. When necessary, I&M may hold a meeting with specific stakeholders with less notice. Meetings may be held virtually, if circumstances warrant.

3.4.4 FERC Communication

FERC has not yet identified a staff member to serve as the licensing coordinator for the Project. The role of the FERC licensing coordinator will be in accordance with the rules and regulations for the ILP. For additional information regarding public involvement in FERC hydropower licensing proceedings and pre-filing consultation, refer to the on-line FERC guide, "Hydropower Licensing – Get Involved: A Guide for the Public."[2]

Communications to FERC regarding Project relicensing must reference the **Elkhart Hydroelectric Project FERC No. P-2651 - Application for New License**.

FERC strongly encourages paperless electronic filing of comments through its eFiling or eComment systems. Information and links to these systems can be found at the FERC webpage http://www.ferc.gov/docs-filing/ferconline.asp. Stakeholders without internet access may submit comments to FERC at the address below via hardcopy but should be aware documents sent to FERC by regular mail can be subject to docket-posting delays. Hardcopies must be sent to:

Honorable Debbie-Anne A. Reese, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

[1] Consultation Requirements–18 CFR §4.38

[2] https://www.ferc.gov/sites/default/files/2020-04/hydro-guide.pdf.

Section 4

Project Location, Facilities, and Operations

4.1 Authorized Agent

The exact name, business address, telephone number, and email address of each person authorized to act as an agent for I&M is listed below.

Mr. Dave Lucas
VP Generation Transformation, Strategy, and Growth
c/o Mr. Jonathan Magalski
Environmental Manager, Renewables
Indiana Michigan Power Company
1 Riverside Plaza
Columbus, OH 43215
(614) 716-2240
jmmagalski@aep.com

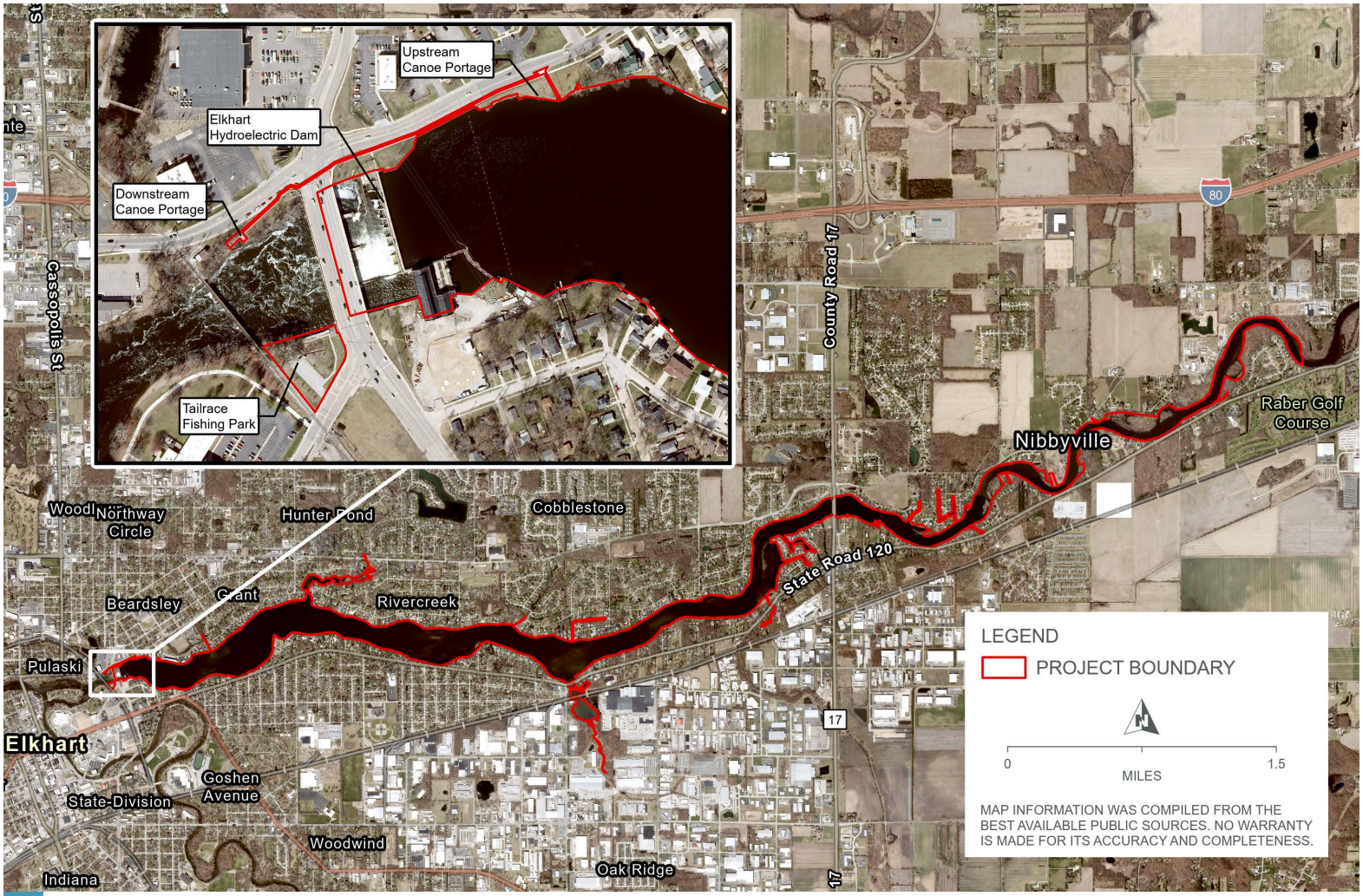
4.2 Project Location

The Project is located in the City of Elkhart, Elkhart County, Indiana on the St. Joseph River at river mile 77. The powerhouse and spillway are approximately 100 ft upstream of the Johnson Street Bridge, which crosses over the St Joseph River. The reservoir is approximately 512 acres in surface area and 7.5 miles long and the surrounding area is heavily developed for residential and business use. The upstream boundary of the reservoir is about half a mile downstream from the downstream city limits of Bristol, Indiana. The Indiana/Michigan state line is about 14 miles upstream from the dam (5 miles north of the dam). Approximately 0.1 mile downstream of the dam, the Christiana Creek tributary flows in from the right bank and the Elkhart River joins from the left bank approximately 0.45 miles downstream. Figure 4.2-1 provides an overview of the Project location and the FERC Project Boundary. The Project Boundary encompasses approximately 610.3 acres; Project facilities are described further in Section 4.3.

I&M has reviewed available information and does not believe that the Project is located within the coastal zone. I&M will consult with IDEM to confirm that the Project is located outside the state's coastal zone.

Land use near the Project is dominated by agricultural, residential, commercial, industrial, and recreational uses. Elkhart County is part of a five-county population center in Indiana which has a strong economic base in agriculture, manufacturing, and retail and the City of Elkhart is a key center in the Great Lakes industrial belt; a well-established infrastructure of railroads and highways exists (AEP 1998). As reported in 2024, the population of Elkhart County was 207,436 and the population of the City of Elkhart was 53,690 (StatsIndiana 2025).

Figure 4.2-1. Aerial View of Project Facilities



PROJECT FACILITES
ELKHART HYDROELECTRIC PROJECT (FERC NO. 2651)
ELKHART COUNTY, INDIANA

\\CLTSMAIN\GIS_DATA\GIS\PROJECTS\6976_AMERICANELECTRICPOWER\10429957_ELKHART_PAD\7.2_WIP\APRX\AEP_ELKHART_PAD_FIGURES.APRX DATE: 7/24/2025

JULY 2025

4.3 Project Facilities

The Project has been in operation since 1913. The licensed Project works consist of: (1) a 300-ft-long, 14-ft-high concrete dam/spillway creating a 512 -acre reservoir; (2) 11 Tainter gates 25 ft-wide each and 9.5 ft high (from crest of spillway) separated by 2.5-ft wide piers; (3) six concrete draft tube tunnels approximately 9 ft, 6 inches in diameter transitioning to a 10-ft-wide and 15-ft-high opening; (4) an 86-ft-long by 49-ft-wide by 48-ft-high L-shaped powerhouse on the south side of the dam containing three generating units with a total installed capacity of 3.44 MW (Unit 1=1,440 kilowatts [kW], Unit 2=1,000 kW[3], Unit 3=1,000 kW; (4) generator leads and associated switchgear to the 4-kilovolt (kV) bus located in the powerhouse; and (5) appurtenant facilities.

The facilities and structures listed above are detailed below. For the three-year[4] period 2022 through 2024, the average annual production for the Project was 12,473 megawatt hours (MWh).

4.3.1 Reservoir

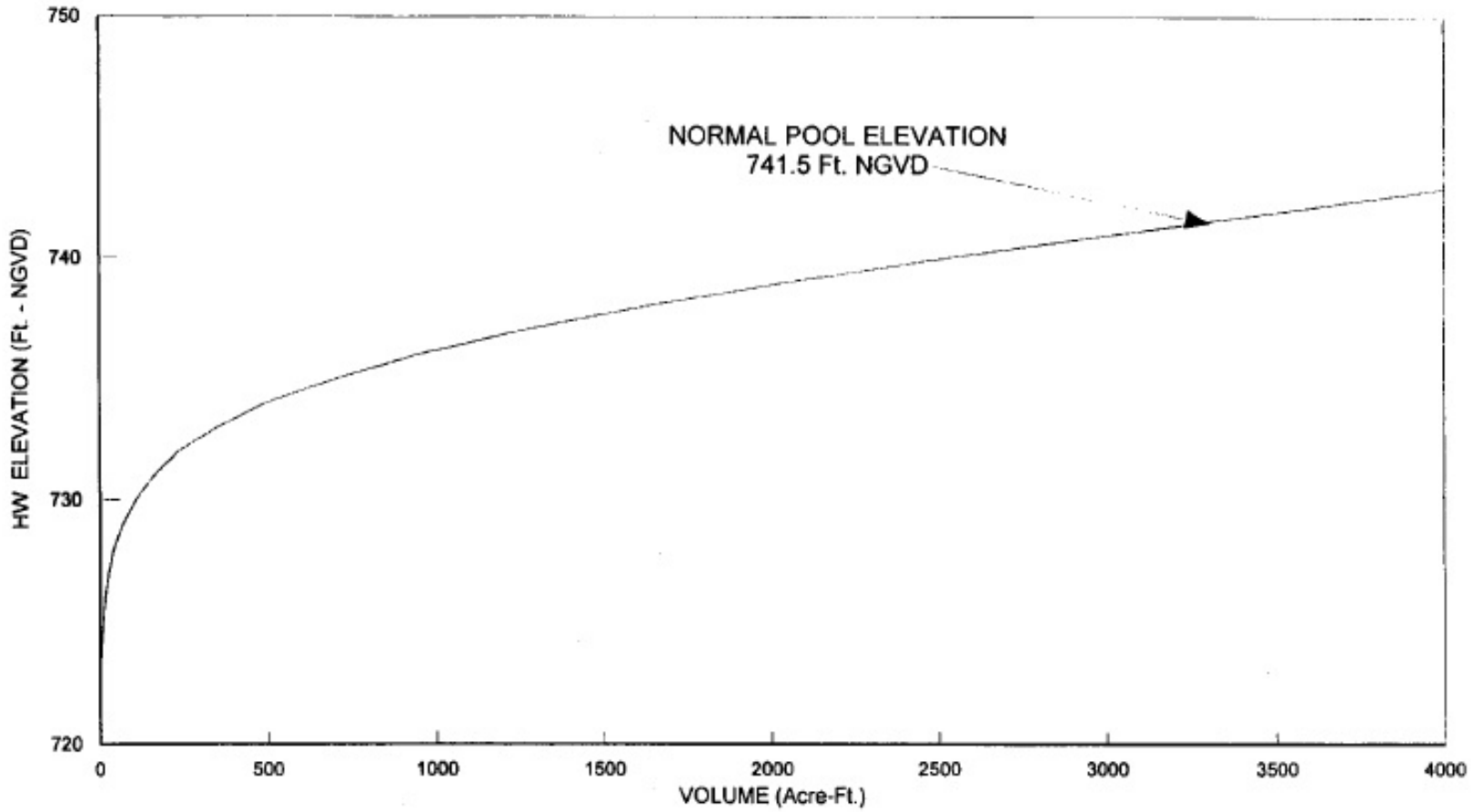
The reservoir formed by the Project is approximately 7.5 miles long and covers a surface area of 512 acres. The drainage area at the Project dam is 2,542 square miles. The gross storage capacity is approximately 3,300 acre-feet at the normal operating elevation (EL.) of 741.5 ft[5]. Operation of the Project is run-of-river with no storage of water, therefore, only a gross storage capacity is presented (Figure 4.3-1). Storage volume and surface area are estimated based on mapping and surveys from 1994.

[3] Unit 2 has been inoperable since May 2020; I&M plans to begin the Unit 2 restoration planning and design effort after 2028.

[4] The Project did not generate from October 2020 through August 2021 due to upgrade of on-site electric substation and associated power interruption to/from Elkhart powerhouse.

[5] All elevations herein are referenced to National Geodetic Vertical Datum of 1929 (NGVD). The normal operating level of 741.5 ft is implemented from April 1 through November 30; from December 1 through March 31, normal operating elevation is 739.5 ft to help manage ice. This is not required by the license but is considered typical operations during the current license period.

Figure 4.3-1. Reservoir Storage Capacity Curve



4.3.2 Main Dam/Spillway

The spillway was constructed in 1913 and consists of a gated, reinforced concrete ogee-shaped weir with concrete retaining walls at both abutments. The spillway is approximately 300 ft long and 14 ft high from toe to crest. Above the crest are 11 steel Tainter gates each 25 ft wide and 9.5 ft high separated by 2.5-ft-wide piers.

Along the north shoreline upstream of the spillway is a steel sheet pile bulkhead wall approximately 550 ft long. The steel sheet pile bulkhead wall was installed in 1992 and runs parallel to the original concrete retaining wall. On the opposite side of the river is a concrete retaining wall of similar length. Extending for a length of approximately 75 ft and connected to the powerhouse and the concrete retaining wall is a floating log boom, oriented approximately 45 degrees to river flow. Adjacent to the north abutment wall is a reinforced concrete fish chute, which is no longer operable. The fish chute was constructed along with the spillway, but the steel sheet pile bulkhead installed in 1992 effectively sealed the upstream opening of the fish chute.

A stilling basin and thrust block are located at the downstream toe of the spillway. The stilling basin extends downstream from the toe of the spillway approximately 25 feet, and the thrust block extends approximately 30 feet downstream. In 1986, the original concrete apron was converted to a thrust block, with tension anchors, to provide additional sliding resistance and stability. Further downstream beyond the thrust block are the original concrete slabs and grouted boulder slabs, which extend approximately 85 ft downstream.

4.3.3 Powerhouse

The L-shaped brick powerhouse is located adjacent to and immediately south of the spillway. The powerhouse consists primarily of the generator room, transformer room, and former steam powered turbine room (the transformer and steam turbine rooms are now used as storage). The transformer room also houses bus structures and switchgear. The generator room is situated along the northwest side of the powerhouse structure and houses three generators, control equipment, hydraulic exciter units (no longer active), switchgear, operators office, and an overhead crane. The room is approximately 86 ft long, 49 ft wide, and 48 ft high. Roofing over the generator room is pitched and made of built-up composite material supported on exposed steel trusses. An 18-ft-wide section of roofing runs along the centerline of the generator room and is supported on a 7-ft-high glass monitor to allow natural light into the room.

The transformer and former steam powered turbine rooms are adjacent to and east of the generator room. These rooms extend the rectangular shaped generator room to form the “L” shape; this

extension is approximately 84 ft long, 62 ft wide, and 32 ft high.

4.3.4 Draft Tubes

Each draft tube is formed concrete beginning at the floor of the turbine bay as an approximately 9-ft, 6-inch diameter opening and continuing below the generator room to a 10-ft wide, 15-ft high opening at the discharge opening. The concrete surrounding the draft tubes is the foundation for the turbine bays and generator room. Near the mid-point of the generator room, draft tubes expand to two 18.5-ft-high, 10-ft-wide discharge tunnels, which extend below the generator room floor to the outlet at the powerhouse face. Discharge from below the powerhouse is directed to the tailrace area consisting of a concrete apron 75 ft wide and 60 ft long, with a concrete retaining wall to the south and a concrete training wall to the north, separating the tailrace from the adjacent spillway apron. Concrete and grouted slabs which meet the river bottom at their terminus extend approximately 55 ft downstream from the tailrace apron.

4.3.5 Turbines and Generators

The three generating units at the Project each consist of four turbine runners directly coupled to a waterwheel generator. The three generators housed within the generator room of the powerhouse are horizontal spoke-wheel, single-axle units. Unit No. 1, installed in 1921, and manufactured by Westinghouse Electric and Manufacturing Company, is rated at 1,440 kW, 1,800 kilovolt ampere (kVA), 3-phase, 60 cycle, and 4,000 volts (V). Units 2 and 3, installed in 1913 (also manufactured by Westinghouse Electric and Manufacturing Company) are each rated at 1,000 kW, 1,000 kVA, 3-phase, 60 cycles, and 4,000 V. All units have a rotational speed of 120 rotations per minute (rpm). Information regarding Project turbine and generator data is included in Table 4.3-1 and Table 4.3-2. Note that Unit 2 has been non-operational since May 2020.

The horizontally aligned Francis turbine runners for each unit are oriented in two camelback pairs on a common shaft. The turbine bays are each approximately 81 ft long, 22 ft wide, and 23 ft high, separated by 2.5-ft-thick concrete walls. The turbines for Turbine Bay No. 1 are 52-inch type “N” quadruple units manufactured by S. Morgan Smith Co. rated at 2,400 horsepower (hp) and have a rated speed of 120 rpm. The total estimated maximum hydraulic capacity of the turbines for Turbine Bay No. 1 is 1,280 cubic ft per second (cfs) and the minimum hydraulic capacity for 35% gate is 393 cfs. The 50-inch Sampson turbines in Turbine Bays 2 and 3 were manufactured by the James Leffel & Company and are rated at 1,400 hp, have a rated speed of 120 rpm, and have a total maximum estimated hydraulic capacity of 1,050 cfs and a minimum hydraulic capacity of 295 cfs at 35% gate opening. A Tainter gate at the upstream end of each turbine bay is used to isolate the turbine bays for maintenance and repair of the turbines.

Table 4.3-1. Elkhart Project Turbine and Generator Data (Unit 1)

Turbine	
Type	52-inch Type N Quadruple (Horizontal Francis Type Turbines in Camelback Pairs [2 pairs per unit])
Manufacturer	S. Morgan Smith
Installation date	1921
Rated horsepower	2,400 hp
Rated speed	120 rpm
Max hydraulic capacity	1,214 cfs
Number of wicket gates	20
Height of wicket gates	26 inches
Number of buckets	16
Length of buckets	28.5 inches
Runner outlet diameter	72.5 inches
Generator	
Type	Horizontal spoke-wheel
Manufacturer	Westinghouse
Frequency	60 hertz
Voltage	4,000 V
Amperage	260 amperes
Rated power	1,440 kW
Power factor	80%
Number of poles	60
Speed	120 rpm

Table 4.3-2. Elkhart Project Turbine and Generator Data (Units 2 and 3)

Turbine	
Type	50-inch Sampson (Horizontal Francis Type Turbines in Camelback Pairs [2 pairs per unit])
Manufacturer	James Leffel & Co.
Installation date	1913
Rated speed	120 rpm
Max hydraulic capacity	997 cfs
Number of wicket gates	12
Height of wicket gates	23.5 inches
Number of buckets	18
Length of buckets	40 inches
Runner outlet diameter	50 inches
Generator	
Type	Horizontal spoke-wheel
Manufacturer	Westinghouse
Frequency	60 hertz
Voltage	4,000 V
Amperage	144.3 amperes
Rated power	1,000 kW
Power factor	100%
Number of poles	60
Speed	120 rpm

4.3.6 Transmission

All power generated at the Project flows through generator leads and switchgear to a 4-kV bus located in the powerhouse. This bus supplies, through switchgear, four overhead feeders and three network feeders for the City of Elkhart. The 4-kV bus is also connected through two transformers of 7,500-kVA

capacity to a 34.5-kV substation located outside of the Project Boundary. A 7,500-kVA synchronous condenser located in the powerhouse has been retired in place and is no longer operating. The 4-kV bus, transformers, and substation are not considered part of the Project as defined by the FPA, 16 United States Code 796 (11). The generator leads and associated switchgear are part of the Project.

The Project's single-line electrical diagram is included in Appendix B (CEII).

4.3.7 Appurtenant Facilities

Additional mechanical, electrical, and transmission equipment appurtenant to the Project are listed in Table 4.3-3**.** Also included are other mechanical and electrical equipment required for the efficient operation of the Project excluding transmission and distribution lines and related equipment.

Table 4.3-3. Appurtenant Facilities

Equipment	Manufacturer	Description
Penstock Tainter Gate Hoists	Designed by Fargo Engineering	One 7½-ton capacity, GE motor, 5 hp, 440 V, 3-phase
	Designed by Kiser-Johnson	One 9-ton capacity self-propelled, 3.2 hp motor, 440 V, 3-phase
Tainter Gate Hoists on Dam	Exeter Machine Co. (gearing by Foote Bros.)	Three GE motors, 3.2 hp, 440 V, 3-phase
Traveling Crane (Generator Room)	Northern Engineering Co.	One 60,000-pound capacity, type 161, 48-ft span, 44-ft lift, hand operated

4.4 Project Operations

4.4.1 Current and Proposed Operations

The Project is operated under the current license as a non-peaking or run-of-river facility; I&M currently plans to continue operating in this mode during the next license term. The run-of-river operation is maintained by minimizing fluctuations in the surface elevation of the reservoir. Headwater fluctuations are typically kept within 0.5 ft of the normal headwater operating elevation of El. 741.5 ft (i.e., 1-ft operating range).[6] As further discussed in Section 4.4.2, current operations include lowering the operating reservoir elevation during the winter (approximately December 1 – March 31) to help manage ice build-up in the reservoir and along the shorelines. There are no minimum flow requirements for the Project. Project operations are coordinated with other projects on the St. Joseph River including the Constantine and Mottville projects located upstream, and the Twin Branch,

[6] Larger fluctuations may occur during emergencies beyond the control of the Licensee, or may be necessary to facilitate maintenance activities at the Project.

Buchanan, and Berrien Springs projects located downstream. See Section 5.1.3 for additional information regarding other projects and project locations on the St. Joseph River.

Unit 1 has wicket gates that can be operated in auto-float mode, which minimize reservoir surface elevation fluctuations. I&M plans to also set up Unit 3 wicket gates to be operated in auto-float mode in the near future. Units are shut down and started manually depending on the amount of flow available to the Project. When the hydraulic capacity of the available turbine units is exceeded, the spillway Tainter gates are opened and headwater control is maintained. Tainter gates 10 and 11, which are located closest to the powerhouse, can be operated in auto-float mode from the powerhouse. The other nine Tainter gates can only be operated manually at the spillway. At the request of Indiana Department of Natural Resources (IDNR), I&M has previously agreed to avoid opening (to the extent possible) the gates at the north end of the spillway to help minimize potential effects to the fishery along the downstream northern bank. When river flows exceed the hydraulic capacity of the units, gates 10 and 11 at the southern end of the spillway are opened first. If needed, additional gates are opened in a sequence that distributes flow across the spillway, thus minimizing erosion of the downstream riverbed. The gates at the northern end of the spillway are opened last in this sequence. I&M plans to continue this sequencing under the new license.

Headwater and tailwater elevations are monitored and recorded continuously at I&M's Operations Center in Columbus, Ohio (COC), along with Project generation. The COC is staffed 24 hours a day, 7 days a week. If an emergency alarm sounds or information is received at the COC that indicates necessary modification of operations, hydro mechanics are dispatched to the Project. Once dispatched, arrival time of the hydro mechanic is usually less than 60 minutes. The tailwater transducer is located in a standpipe in the powerhouse against the west wall adjacent to the Unit 2 generator. The headwater transducer is located near the headwater staff gauge. Forebay and tailwater elevations are continuously monitored and data is digitally stored. The headwater and tailwater elevation staff gauges are located against the south wall of the headrace and tailrace, respectively. Forebay elevation data is available for public viewing on AEP's Recreation website.[7]

The Project is visited by I&M hydro personnel as needed to maintain operations. While the plant has personnel onsite, flow through the units and Tainter gates are estimated based on manufacturer data. Personnel also record headwater and tailwater elevations at the plant along with wicket gate positions and Tainter gate settings.

[7] https://www.aep.com/recreation/hydro/

The estimated maximum hydraulic capacity of the Project is 3,270 cfs. The spillway rating curve (elevation vs. discharge [cfs]) for the Project is shown on Figure 4.4-1. The hydraulic capacity is determined from manufacturer's data for the units along with the tailwater curve developed for the Project, which is shown on Figure 4.4-2. The maximum hydraulic capacity is estimated at a head of 18.7 ft, which occurs at the normal operating EL. 741.5 ft and an associated tailwater EL. 722.8 ft. Flows in excess of the powerhouse's hydraulic turbine capacity are discharged through the spillway.

Headwater and tailwater data for the Project from the last 5 years are provided in Table 4.4-1Table 4.4-1. The table includes the maximum and minimum forebay limits as well as the daily maximum and average measured elevations per month. Daily headwater fluctuations are minimal and maximum daily fluctuations reflect months when pool is drawn down for the winter and allowed to refill in the spring. The Licensee attempts to operate within the smallest range possible to minimize headwater fluctuations to reduce potential impacts to resources. In support of this goal, I&M has upgraded the auto-float controllers at the Project, enabling more control over operations and allowing the Project to operate in a narrower operating range. The equipment at the Project maintains headwater fluctuations with 0.5-ft of the normal headwater elevation during normal operations.

The Project is a run-of-river facility and does not act as a flood control structure. Typically, there is only 0.5 ft of freeboard maintained above the normal operating level of EL. 741.5 ft (which fills quickly) before spillway gates are overtopped (in the closed position). While there is no significant capacity to provide flood control, the Project can provide minimal flood control during isolated, local thunderstorm events depending on upstream and downstream conditions.

Figure 4.4-1. Spillway Rating Curve

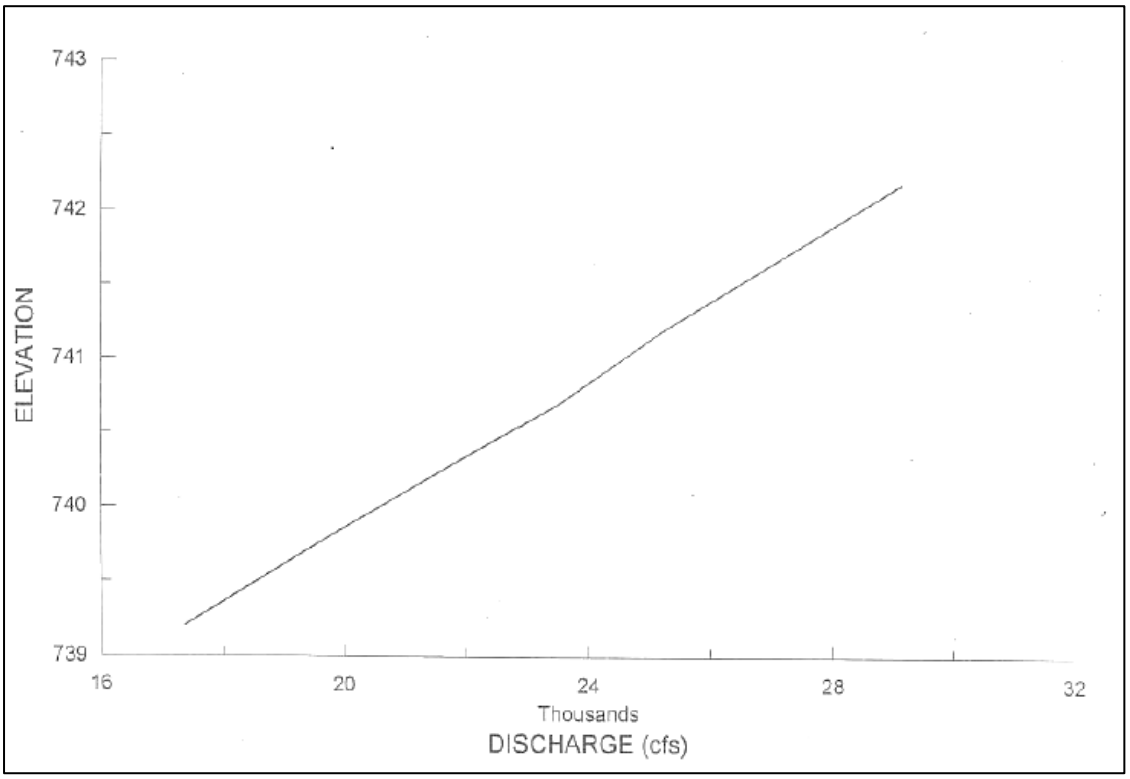


Figure 4.4-2. Tailwater Rating Curve

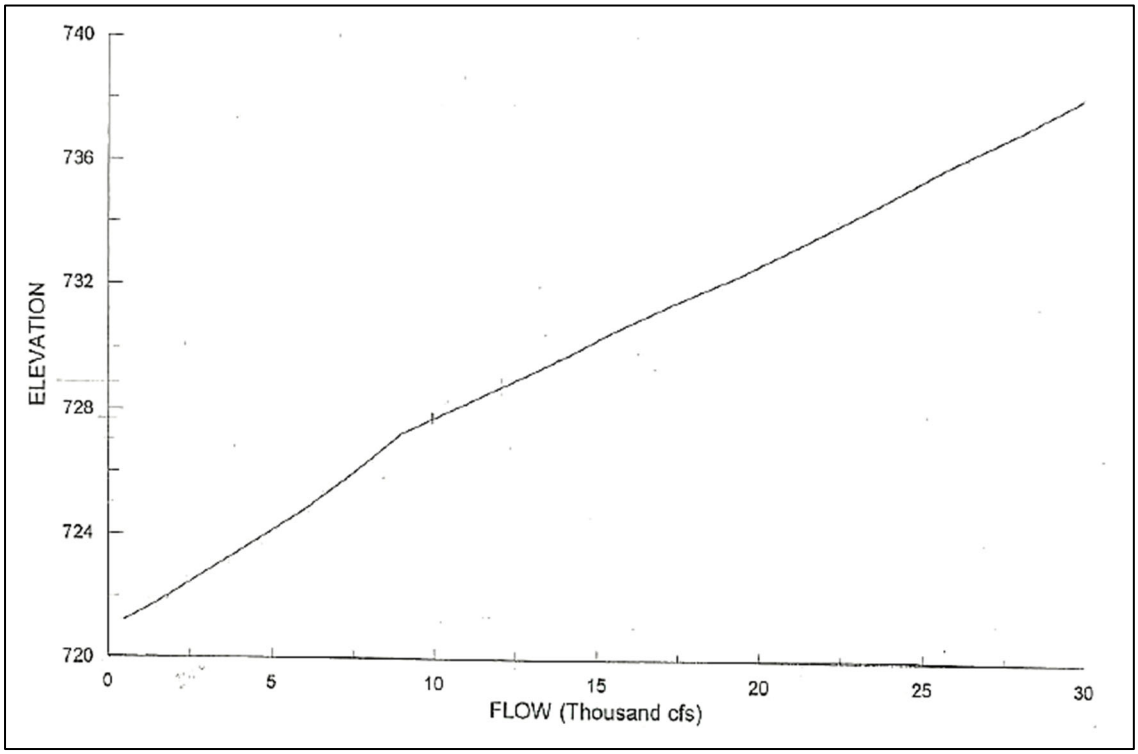


Table 4.4-1. Headwater and Tailwater Data 2020-2024

Year	Month	Forebay Max Limit	Forebay Min Limit	Daily Forebay Max	Daily Forebay Average	Daily Tailwater Average
2020	Jan	740.0	739.0	739.57	739.54	723.04
	Feb	740.0	739.0	739.55	739.54	722.54
	March 1-15	740.0	739.0	739.55	739.54	722.52
	March 20-31	742.0	741.0	741.22	741.21	722.49
	April	742.0	741.0	741.63	741.58	723.79
	May	742.0	741.0	741.63	741.61	724.34
	June	742.0	741.0	741.70	741.55	723.7
	July	742.0	741.0	741.57	741.55	723.29
	Aug	742.0	741.0	741.57	741.57	723
	Sept	742.0	741.0	741.60	741.56	723.03
	Oct	742.0	741.0	741.65	741.57	723.05
	Nov	742.0	741.0	741.59	741.57	723.08
	Dec 1-13	742.0	741.0	741.59	741.58	723.13
	Dec 18-31	740.0	739.0	739.51	739.50	723.12
2021	Jan	740.0	739.0	739.51	739.50	723.16
	Feb	740.0	739.0	740.01	739.50	723.04
	March 1-14	740.0	739.0	739.62	739.50	723.33
	March 19-31	742.0	741.0	741.59	741.57	723.31
	April	742.0	741.0	741.59	741.57	723.29
	May	742.0	741.0	741.84	741.61	723.09
	June	742.0	741.0	741.88	741.59	723.26
	July	742.0	741.0	741.62	741.57	723.63
	Aug	742.0	741.0	741.62	741.57	723.28
	Sept	742.0	741.0	741.63	741.58	723.15
	Oct	742.0	741.0	741.67	741.58	723.78
	Nov	742.0	741.0	741.73	741.61	723.83
	Dec 1-19	742.0	741.0	741.65	741.51	723.65
	Dec 23-31	740.0	739.0	739.53	739.50	722.31
2022	Jan	740.0	739.0	739.54	739.51	721.98
	Feb	740.0	739.0	739.53	739.51	722.42
	March 1-20	740.0	739.0	739.53	739.51	722.56
	March 25-31	742.0	741.0	741.57	741.53	722.79
	April	742.0	741.0	741.57	741.56	722.58
	May	742.0	741.0	741.62	741.56	722.46
	June	742.0	741.0	741.60	741.56	722.21
	July	742.0	741.0	741.61	741.59	722.16
	Aug	742.0	741.0	741.60	741.56	721.94
	Sept	742.0	741.0	741.59	741.56	721.74
	Oct	742.0	741.0	741.63	741.59	721.61
	Nov	742.0	741.0	741.63	741.61	721.63
	Dec 1-11	742.0	741.0	741.57	741.57	721.65
	Dec 16-31	740.0	739.0	739.61	739.51	721.59
2023	Jan	740.0	739.0	739.55	739.53	721.84
	Feb	740.0	739.0	739.55	739.53	721.98
	March 1-19	740.0	739.0	739.54	739.54	723
	March 24-31	742.0	741.0	741.62	741.61	722.63

Year	Month	Forebay Max Limit	Forebay Min Limit	Daily Forebay Max	Daily Forebay Average	Daily Tailwater Average
	April	742.0	741.0	741.62	741.61	722.55
	May	742.0	741.0	741.63	741.61	722.13
	June	742.0	741.0	741.62	741.60	721.67
	July	742.0	741.0	741.61	741.60	721.77
	Aug	742.0	741.0	741.61	741.60	721.86
	Sept	742.0	741.0	741.61	741.60	721.58
	Oct	742.0	741.0	741.62	741.61	721.7
	Nov	742.0	741.0	741.63	741.62	721.66
	Dec 1-17	742.0	741.0	741.60	741.58	721.77
	Dec 22-31	740.0	739.0	739.54	739.52	721.82
2024	Jan	740.0	739.0	739.55	739.53	722.05
	Feb	740.0	739.0	739.55	739.54	722.34
	March	740.0	739.0	739.54	739.53	722.07
	April	740.0	739.0	739.54	739.53	722.44
	May 1-8	740.0	739.0	739.64	739.51	722.28
	May 17-31	742.0	741.0	741.61	741.59	722.21
	June	742.0	741.0	741.60	741.59	722.07
	July	742.0	741.0	741.61	741.60	722.67
	Aug	742.0	741.0	741.61	741.59	722.08
	Sept	742.0	741.0	741.61	741.60	721.7
	Oct	742.0	741.0	741.62	741.61	721.62
	Nov	742.0	741.0	741.62	741.61	721.66
	Dec 1-15	742.0	741.0	741.62	741.43	721.55
	Dec 21-31	740.0	739.0	739.54	739.52	721.67

Note: Shaded cells represent transition between summer/winter pool; therefore, the drawdown and raising dates of the Elkhart forebay elevations are omitted. In 2024, winter pool was maintained through May due to ongoing construction work in the forebay.

4.4.2 Winter Operations

During winter months, the operating surface elevation of the reservoir is lowered approximately 2 ft to EL. 739.5 ft in anticipation of the river freezing. This is done to preclude ice accumulation at Six-Span Bridge and subsequent flooding upstream as well as to better accommodate initial spring run-off flows. Once spring runoff flows begin, the reservoir is returned to and maintained at its normal surface elevation of EL. 741.5 ft. The practice of lowering the reservoir during winter was initiated in 1967 in response to a complaint of flooding at the Six-Span Bridge; flooding was alleviated when I&M lowered the reservoir by nearly 2 ft. Drawdowns were performed periodically in response to icing conditions between 1967 and 1975, and have been performed every winter, typically beginning in December, since 1976.

In December 1994, FERC requested information related to the winter drawdown operation and I&M responded in January 1995. By letter dated August 4, 1995, the Commission stated the drawdown practice was reasonable and appropriate and was not the cause of damage to adjacent property owner

seawalls (complaints were received from three homeowners between 1985 and 1987 regarding water fluctuation impacts on private seawalls). FERC also requested the practice of winter drawdowns be reviewed with U.S. Army Corps of Engineers and IDNR; both agencies agreed with the practice as it relates to river engineering and flood mitigation, however, IDNR was concerned about reduction of winter habitat in the reservoir. In response, I&M undertook further hydraulic studies to evaluate the winter drawdown practice at the Project and results of these studies concluded that the formation and location of ice jams along the St. Joseph River is natural. Operations at the Project cannot eliminate occurrences, however, operations can help alleviate flooding effects due to ice cover at flowrates less than 4,000 cfs (during higher flows, operations at the Project are insignificant). Generation and Outflow Records

The Project operates in a run-of-river mode under normal operations. Table 4.4-2 provides a summary of monthly and annual Project generation in gross MWh for the previous five years (2020-2024), and Table 4.4-3 provides a summary of monthly and annual average flows through the Project in cfs for the years 2020-2024. For the purposes of this document, flows at the Project were estimated from U.S. Geological Survey (USGS) gage 02056000, which is immediately downstream of the Project. See Section 5.3 (Water Resources) for more information on flows.

Average annual generation at the Project for the last five years (2020-2024) is 9,763.6 MWh; however, that includes data from 2020 and 2021 which had months of zero generation. Representative average annual generation from the last three years (2022-2024), which is more representative of generation at the Project, was 12,473.2 MWh.

Table 4.4-2. Monthly and Annual Generation (MWh) (2020-2024)*

Period	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Average Monthly
January	1,162.8	0.0	1,251.4	1,373.4	1,299.7	1,017.5
February	1,340.1	0.0	653.5	1,120.3	1,206.5	864.1
March	1,514.7	0.0	775.1	987.5	1,349.6	925.4
April	1,428.8	0.0	1,463.6	1,288.7	1,164.8	1,069.2
May	1,148.2	0.0	1,645.6	1,006.0	1,338.8	1,027.7
June	516.3	0.0	1,339.4	598.4	998.5	690.5
July	656.5	0.0	1,370.2	553.2	1,174.1	750.8
August	655.0	0.0	1,299.3	661.2	1,354.7	794.0
September	223.6	46.8	903.3	669.3	680.2	504.6

Period	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Average Monthly
October	0.0	1,370.1	783.8	685.2	719.9	711.8
November	0.0	770.1	745.3	648.9	761.6	585.2
December	0.0	565.7	1,118.0	1,470.5	960.3	822.9
Gross Annual Generation	**8,646.0**	**2,752.7**	**13,348.3**	**11,062.5**	**13,008.6**	**9,763.6**

Source: I&M (via email) August 2025. *Unit 2 has been inoperable since May 2020; I&M currently plans to begin the Unit 2 restoration planning and design effort after 2028. Note: No electric generation October 2020 - August 2021 due to upgrade of on-site electric substation and associated power interruption to/from the Elkhart powerhouse.

Table 4.4-3. Monthly and Annual Average Project Outflows (cfs) (2020-2024)

Period	Year 2020	Year 2021	Year 2022	Year 2023	Year 2024	Monthly Average
January	5,845.6	1,831.2	3,210.8	2,401.5	2,684.0	3,194.6
February	4,877.6	1,441.5	3,907.2	2,775.4	2,981.6	3,196.7
March	4,774.8	2,101.2	4,599.7	5,398.2	1,946.2	3,764.0
April	4,591.0	2,203.6	4,610.4	4,601.2	3,100.2	3,821.3
May	5,628.4	1,628.2	3,906.3	2,774.6	2,367.1	3,260.9
June	3,508.5	1,837.7	2,932.1	743.8	1,886.0	2,181.6
July	2,054.8	3,413.8	2,794.6	964.6	3,263.4	2,498.2
August	1,352.4	2,602.6	2,103.2	1,286.9	2,039.4	1,876.9
September	1,324.4	2,381.4	1,714.1	659.4	1,099.6	1,435.8
October	1,448.3	4,311.6	1,501.7	1,073.1	430.7	1,753.1
November	1,512.4	4,800.3	1,651.0	1,138.8	950.2	2,010.5
December	1,701.4	4,027.5	1,779.7	2,203.2	1,598.3	2,262.0
Annual Average	**3,218.3**	**2,715.1**	**2,892.6**	**2,168.4**	**2,028.9**	**2,604.6**

Source: I&M (via email) August 2025.

4.4.3 Dependable Capacity

Dependable capacity is generally defined as the amount of load a hydroelectric plant can carry under adverse hydrologic conditions during a period of peak demand; for example, during the hot, dry conditions typical in late summer near the Project. The estimated dependable capacity for the Project under the current license is 1.0 MW. This estimate is based on the monthly daily flow duration curves for the months of January and August, which are the peak demand months for AEP's system, and

manufacturer's data on equipment performance. For January, the dependable capacity is estimated at 1.9 MW. For August, the estimated value is 1.3 MW (which takes into account the annual 2-ft drawdown).

4.5 Current License Requirements and Compliance History

4.5.1 Current License Requirements

The Project's current license was issued by FERC on January 11, 2002. As presently licensed, the primary compliance requirements are summarized in the license articles below:

- Article 401: Operate Project in a run-of-river mode.
- Article 402: File an Operational Compliance Monitoring Plan. Order Modifying and Approving Operational Compliance Plan issued September 13, 2001 (96 FERC ¶62,257).
- Article 403: File an Aquatic and Riparian Habitat Enhancement and Protection Plan for aquatic, terrestrial, and wildlife resources on lands within the Project Boundary. Order Modifying and Approving Aquatic and Riparian Habitat Enhancement and Protection Plan issued July 30, 2013 (144 FERC ¶62,080).
- Article 404: File a Recreation Management Plan (RMP). Order Approving Recreation Plan issued January 17, 2002 (102 FERC ¶62,041).
- Article 405: File a copy of the Licensed Hydropower Development Recreation Report, Form 80 with the Commission, IDNR, and City of Elkhart Parks and Recreation Department, and consult with agencies on the need for additional recreation enhancements at the Project. Form 80s are no longer required to be completed and filed with the Commission; however, every six years, I&M must consult with IDNR and the City of Elkhart Parks and Recreation Department regarding the need for additional recreation enhancements at the Project.
- Article 406: Consult with State Historic Preservation Office (SHPO) and prepare a plan if archaeological sites are found during Project operation.

4.5.2 Compliance History

To the best of I&M's knowledge and based on a review of historical records, I&M has been and continues to be in compliance with the applicable terms and conditions of the FERC license, and there

have been no license violations[8] or recurring situations of non-compliance over the license term.

4.6 Lands of the United States

There are no lands of the United States located within the Project Boundary for the Project.

4.7 Current Net Investment

The current net investment in the Project (through 2024) is approximately $3.5 million. This value should not be interpreted as the fair market value of the Project.

4.8 Potential for New Project Facilities

I&M has implemented recent engineering measures to improve the long-term stability of Elkhart Dam and has submitted design plans for additional measures to be implemented during the relicensing period to FERC for review and approval. Engineering plans have been submitted to FERC at regular percent-design intervals and I&M anticipates approval of the planned measures. The additional engineering measures are planned to be completed in two phases over two calendar years beginning in 2026. Implementation of the engineering measures may require temporary closure of Project recreational facilities.

If I&M intends to propose new Project facilities or upgrades in the Final License Application that would affect the scope of relicensing studies, I&M will inform FERC and licensing participants of this proposal early enough in the pre-filing consultation process to ensure the effects of new facilities or upgrades are appropriately evaluated during the relicensing process.

4.9 PURPA Benefits

The Licensee will not be seeking benefits under Section 210 of the Public Utility Regulatory Policies Act (PURPA) of 1978 for qualifying hydroelectric small power production facilities in §292.203 of this chapter.

[8] I&M reported an instance of deviation from License Article 401 when the upper reservoir surface elevation was exceeded on January 31, 2019. The report was filed with FERC on February 5, 2019 and FERC issued a letter (March 1, 2019) stating the incident was not considered a violation of the license.

Section 5

Description of Existing Environment and Resource Impacts

This section provides a description of the Project's Existing Environment and Resource Impacts as required by 18 CFR §5.6(d)(3). This section provides a description of the Project's existing conditions and the results of investigations, evaluations, and consultations conducted by the Licensee to date, addressing the following resource areas:

- Geology, Topography, and Soils;
- Water Resources;
- Fish and Aquatic Resources;
- Wildlife and Botanical Resources;
- Wetlands, Riparian, and Littoral Habitat;
- Rare, Threatened, and Endangered Species
- Recreation and Land Use;
- Aesthetic Resources;
- Cultural and Tribal Resources; and
- Socioeconomic Resources.

Each resource section contains a description of the existing environment, while Section 6 provides an account of potential Project-related effects and a description of I&M's existing protection, mitigation, and enhancement (PM&E) measures, where applicable.

5.1 Description of the River Basin

The St. Joseph River basin is located in the northwestern portion of Indiana and southwest portion of the lower peninsula of Michigan. The river spans the Indiana-Michigan border and empties into Lake Michigan at St. Joseph, Michigan. The entire basin drains 4,685 square miles from 15 counties (Berrien, Branch, Calhoun, Cass, Hillsdale, Kalamazoo, St. Joseph, and Van Buren in Michigan and De Kalb, Elkhart, Kosciusko, Lagrange, Noble, St. Joseph, and Steuben in Indiana). The watershed includes 3,742 river miles and flows through and near the Kalamazoo-Portage, the Elkhart-Goshen, the South Bend, and the St. Joseph/Benton Harbor metropolitan areas.

Regional climate is influenced by Lake Michigan, which causes higher temperatures, snowfall levels, and cloudiness in winter months. During the summer, the lake moderates maximum temperatures. Monthly temperature and precipitation data for 1991-2020, taken from the National Oceanic and

Atmospheric Administration (NOAA) observation station at the South Bend International Airport[9], are presented in Table 5.1-1.

Table 5.1-1. Monthly Meteorological Data

Month	Average Precipitation	Average Snowfall	Maximum Temperature	Average Temperature	Minimum Temperature
	inches	*Inches*	*°F*	*°F*	*°F*
January	2.66	21.6	31.2	24.1	17
February	2.31	16.1	34.9	27.1	19.3
March	2.35	6.8	46.2	36.7	27.2
April	3.49	1	59	48.1	37.1
May	4.2	0	70.1	59.1	48.1
June	4.04	0	79.4	68.8	58.1
July	3.78	0	82.7	72.4	62.1
August	4.01	0	80.8	70.7	60.5
September	3.49	0	74.4	63.7	53
October	3.72	0.2	61.8	52	42.1
November	2.78	5.1	47.7	39.8	31.8
December	2.4	13.7	36.3	29.6	23
Annual	**39.23**	**64.5**	**58.7**	**49.3**	**39.9**

5.1.1 Waterway Description

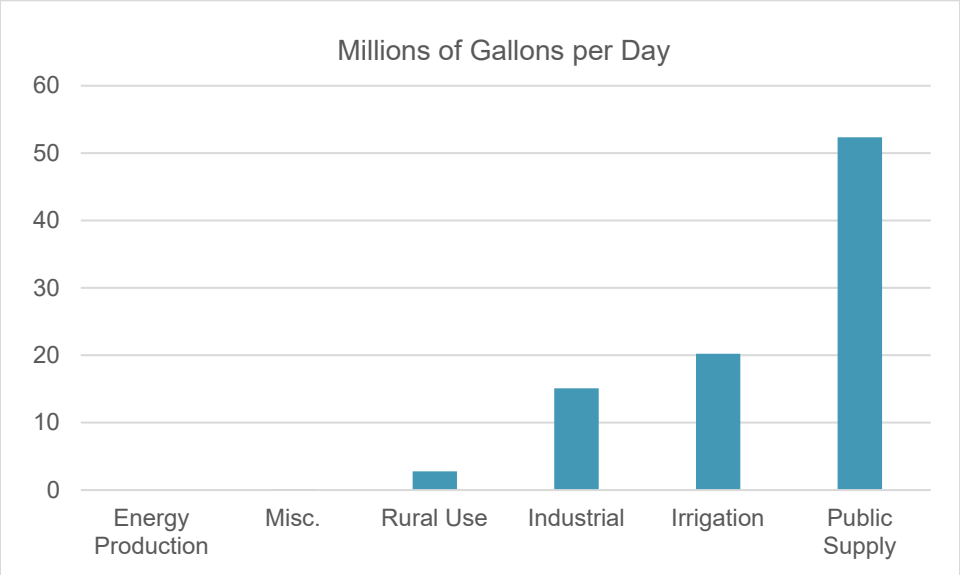
The St. Joseph River is a 210-mile-long river that flows in a generally westerly direction through southern Michigan and northern Indiana with its terminus in Lake Michigan. The river follows a zigzag route generally westward across southern Michigan into northern Indiana. From its headwaters, it flows initially northwest past Hillsdale into southeastern Calhoun County, then turns abruptly southwest to flow past Tekonsha, Union City, Sherwood, and Mendon. The St. Joseph River is considered a large river.

5.1.2 Major Land and Water Uses

Water diverted through the turbines at the Project is used exclusively for hydropower generation and then returned to the St. Joseph River. The Project reservoir is primarily used for recreation (boating, fishing). Several industries in Elkhart County use groundwater and surface water including commercial-institutional, industrial-manufacturing, irrigation, and public water supply. In the St. Joseph River basin, public water supply is the leading water withdrawal, followed by irrigation, industrial, rural use, miscellaneous, and hydro power (IDNR 1987) (Figure 5.1-1). Public water supply conditions are monitored by the City of Elkhart and the Elkhart County Stormwater Partnership.

[9] https://forecast.weather.gov/data/obhistory/KSBN.html

Figure 5.1-1. St. Joseph River Basin Water Use Utilization by Category



Source: IDNR (1987).

The watershed is predominantly agricultural with approximately 70% of the land used for crop and animal production, while 17% remains forested, and roughly 6% is wetlands. A significant remaining portion of the watershed is comprised of residential and commercial uses, particularly along the main stem (Friends of the St. Joseph River Association 2005).

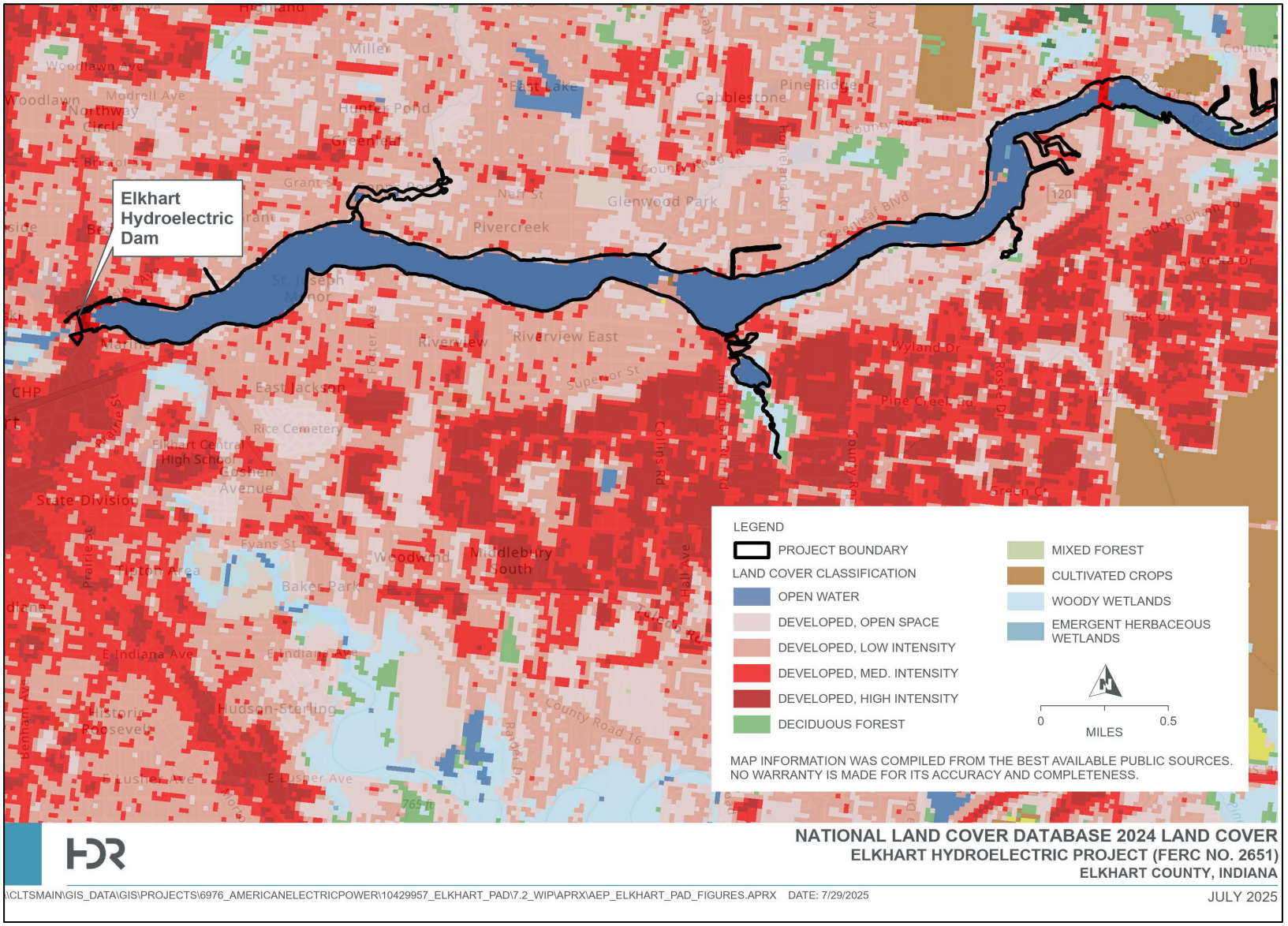
Land use near the dam and powerhouse along the river ranges from open space development to high-intensity development with woody wetlands. Land use categories in the Project Boundary are included in Table 5.1-2 and shown on Figure 5.1-2.

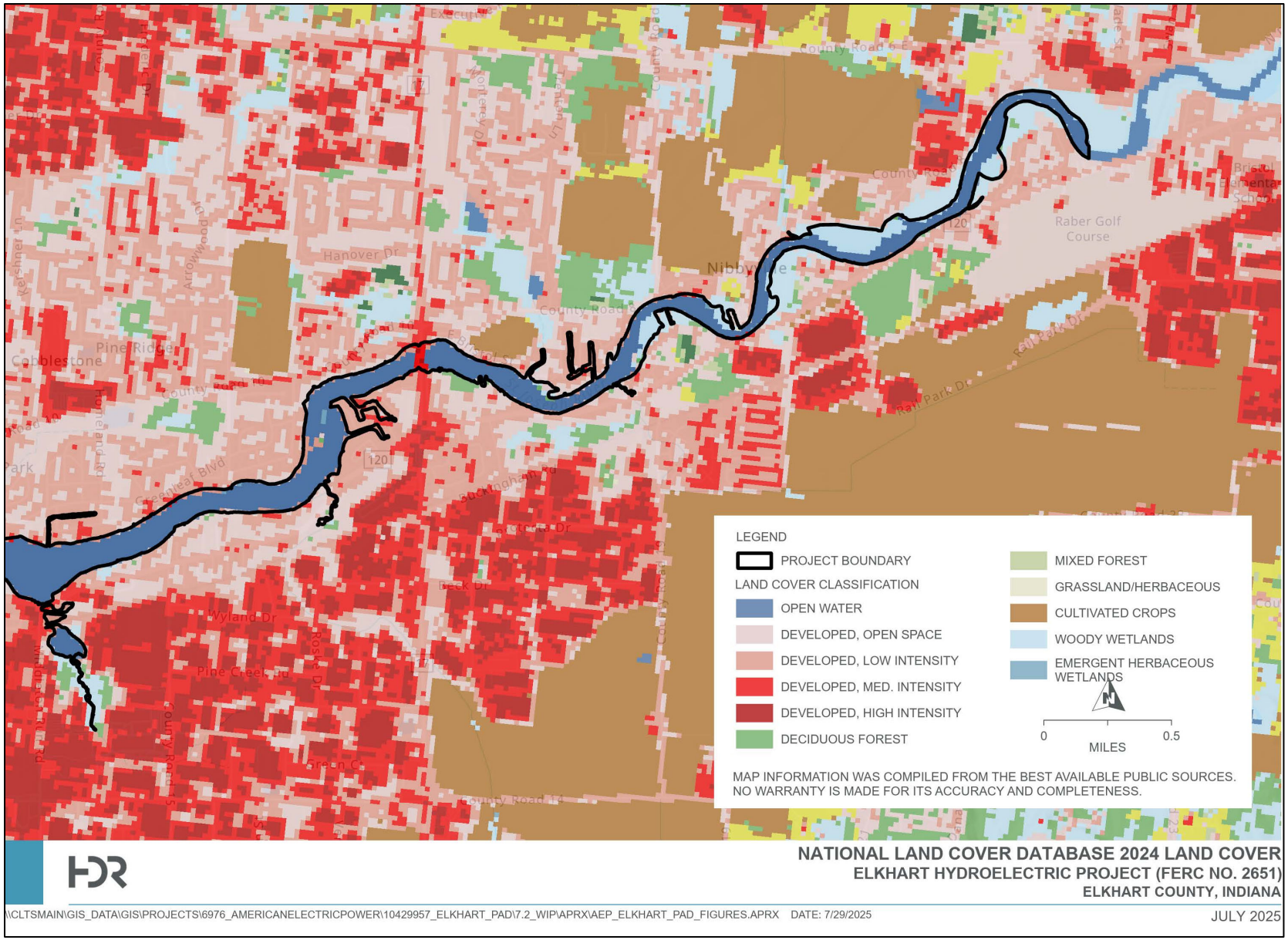
Table 5.1-2. Land Use Classifications for the Project

Category	Acres	Percent of Project
Open Water	488.01	80.0
Developed, Open Space	20.29	3.3
Developed, Low Intensity	47.72	7.8
Developed, Med. Intensity	9.60	1.6
Developed, High Intensity	1.76	0.3
Deciduous Forest	1.42	0.2
Mixed Forest	0.22	0.0
Grassland/Herbaceous	0.89	0.1
Cultivated Crops	0.67	0.1
Woody Wetlands	37.65	6.2

Source: Multi-Resolution Land Characteristics Consortium (MRLC) (2023).

Figure 5.1-2. Land Use and Cover Map




LEGEND
PROJECT BOUNDARY
LAND COVER CLASSIFICATION
OPEN WATER
DEVELOPED, OPEN SPACE
DEVELOPED, LOW INTENSITY
DEVELOPED, MED. INTENSITY
DEVELOPED, HIGH INTENSITY
DECIDUOUS FOREST
MIXED FOREST
GRASSLAND/HERBACEOUS
CULTIVATED CROPS
WOODY WETLANDS
EMERGENT HERBACEOUS WETLANDS
N
0
0.5
MILES
MAP INFORMATION WAS COMPILED FROM THE BEST AVAILABLE PUBLIC SOURCES.
NO WARRANTY IS MADE FOR ITS ACCURACY AND COMPLETENESS.
Raber Golf Course
Hanover Dr
Pine Ridge
Cobblestone
Wyland Dr
Pine Creek Rd
Raw Park Dr
NATIONAL LAND COVER DATABASE 2024 LAND COVER
ELKHART HYDROELECTRIC PROJECT (FERC NO. 2651)
ELKHART COUNTY, INDIANA
\CLTSMAIN\GIS_DATA\GIS\PROJECTS\6976_AMERICANELECTRICPOWER\10429957_ELKHART_PAD\7.2_WIP\APRX\AEP_ELKHART_PAD_FIGURES.APRX DATE: 7/29/2025
JULY 2025

5.1.3 Dams and Diversion Structures within the Basin

There are eight FERC-licensed hydroelectric Projects located on the St. Joseph River (Table 5.1-3). The projects are shown in Figure 5.1-3. In addition to these eight facilities, Berrien Springs hydroelectric plant is also owned and operated by I&M and is located downstream of Buchanan. Berrien Springs was authorized by an act of Congress and, therefore, is not licensed by FERC.

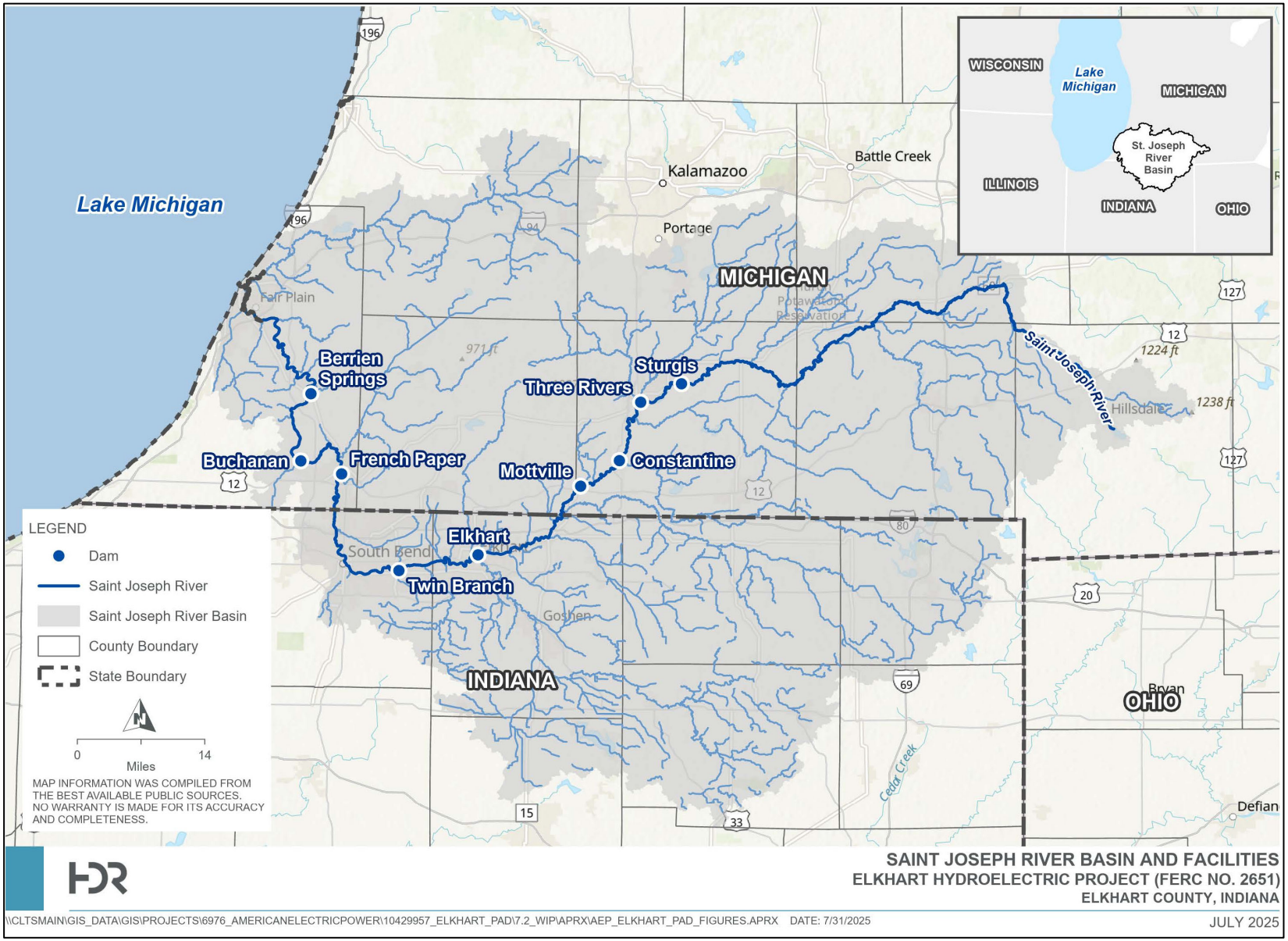
Table 5.1-3. FERC-Licensed Hydroelectric Projects on the St. Joseph River

Project No.	Project Name	Authorized Capacity (kW)	Licensee	State
P-2964	Sturgis Dam	2,720	City of Sturgis	Michigan
P-11797	Three Rivers	900	Grande Pointe Power Corporation	Michigan
P-10661	Constantine	1,200	Indiana Michigan Power Company	Michigan
P-401	Mottville	1,750	Indiana Michigan Power Company	Michigan
P-2651	Elkhart	3,440	Indiana Michigan Power Company	Indiana
P-2579	Twin Branch	4,800	Indiana Michigan Power Company	Indiana
P-10624	French Paper	1,300	French Paper Company	Michigan
P-2551	Buchanan	4,105	Indiana Michigan Power Company	Michigan

5.1.4 Tributary Rivers and Streams

Major tributaries to the St. Joseph River watershed include the Prairie, Pigeon, Fawn, Portage, Coldwater, Elkhart, Little Elkhart, Dowagiac, and Paw Paw Rivers; the St. Joseph River watershed is comprised of 217 sub-watershed units (Friends of the St. Joseph River Association 2005). The Elkhart River flows into the St. Joseph River approximately 0.1 miles downstream of the dam from river left and Christiana Creek flows into the river approximately 0.45 miles downstream of the dam on river right. Both confluences are upstream of the first USGS gage downstream of the dam (USGS 04101000 St. Joseph River at Elkhart, Indiana).

Figure 5.1-3. St. Joseph River Basin Map and Hydro Projects



5.2 Geology

5.2.1 Physiography and Topography

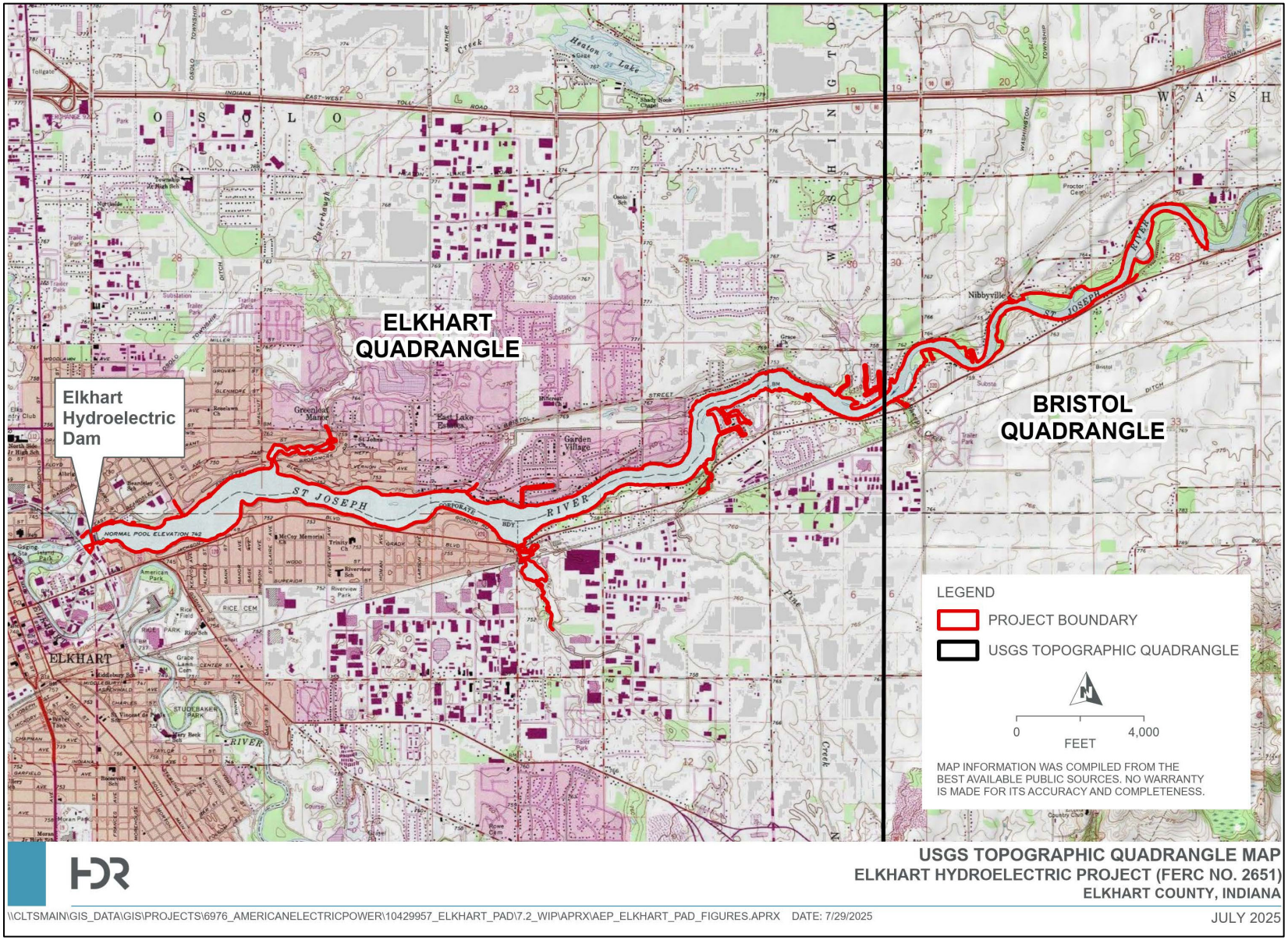
Elkhart County is located in the extreme north central part of Indiana, and the surrounding region is situated between the Michigan Basin and Kankakee Arch physiographic regions. The Kankakee Arch separates the Michigan and Illinois basins, located to the northeast and southwest of the Project, respectively. The terrain surrounding the St. Joseph River in Elkhart County has very little relief. Along the St. Joseph River, the banks are moderately steep immediately adjacent to the river and the river in the vicinity of the Project slopes at about 2.0 ft per mile. The width of the St. Joseph River floodplain is generally less than half a mile (AEP 2020) and the Project reservoir extends through the Elkhart and Bristol topographic quadrangles (see Figure 5.2-1).

5.2.2 Bedrock Geology

The Project is located within the interior lowlands of the Central Stable Region of the North American continent. The deepest basement rocks in the area are ancient crystalline and metamorphic rocks of Precambrian age and are an extension of the Cambrian Shield.

Beginning about 500 million years ago and ending about 370 million years later, a variety of sedimentary rocks were deposited in the Cambrian, Ordovician, Silurian, Devonian, Mississippian, and Pennsylvanian Periods, aggregating about 14,000 ft in bedrock thickness. Most of the rocks in the Project vicinity are Mississippian in age, consisting of shale, siltstone, silty sandstone, hematitic sandstone, conglomerate, limestone, dolomite, evaporates (rock gypsum). Bedrock underlying the dam is a member of the Coldwater Shale formation. The dam foundation is primarily dense sands and gravels and foundation stability is judged to be adequate (AEP 2020).

Figure 5.2-1. Topographic Map in Vicinity of Project



5.2.3 Surficial Geology

The landforms of southwest Michigan and northern Indiana are largely a result of the activities of the extensive glaciation of the Pleistocene epoch (from about 2 million years ago until 10,000 years ago). Six major ice sheets advanced across Michigan during that time, but it was the most recent ice advances during the Wisconsin event that by and large formed and sculpted the current St. Joseph River Valley. The advance and retreat of the Wisconsin ice sheet and subsequent changes to the Lake Michigan Basin caused major changes in the size, profile and direction of the St. Joseph River and left behind a landscape dominated by moraines, till plains, and outwash plains and the heterogeneous grab bag of soils that overlay the shale and sandstone bedrock of the basin (Friends of St. Joseph River Association 2005).

5.2.4 Mineral Resources

Indiana produces 36 million tons of coal each year and is known for mining building stone such as limestone. Mineral resources in Elkhart County are largely sand and gravel glacial deposits, which are used are used for aggregate and concrete (Indiana Geological and Water Survey 2025).

5.2.5 Project Area Soils

Soils in the vicinity of the Project are typically sand and gravels resulting from glacial outwash and more recent alluvial activity. Most are coarse-textured and excessively drained. According to the soil survey of Elkhart County, 18 mapped soil units are within the Project Boundary (see Table 5.2-1 and Figure 5.2-2) (U.S. Department of Agriculture National Resources Conservation Service [USDA NRCS] 2002).

Table 5.2-1. Soils in the Project Boundary

Map Unit Symbol	Map Unit Name	Hydric Rating (%)	Drainage	Area (acre)
AahAK	Abscota loamy sand, 0 to 2 percent slopes, occasionally flooded, brief duration	20	Moderately well drained	3.16
AbhAN	Adrian muck, drained, 0 to 1 percent slopes	100	Very poorly drained	2.57
AbhAU	Adrian muck, undrained, 0 to 1 percent slopes	95	Very poorly drained	8.09
BtxA	Bristol loamy sand, 0 to 2 percent slopes	0	Excessively drained	0.71
BtxB	Bristol loamy sand, 2 to 5 percent slopes	0	Excessively drained	3.31
BtxC	Bristol loamy sand, 5 to 10 percent slopes	0	Excessively drained	0.58
GczA	Gilford sandy loam, 0 to 2 percent slopes, gravelly subsoil	95	Poorly drained	0.05
GodAl	Gravelton loam, 0 to 1 percent slopes, frequently flooded, long duration	100	Very poorly drained	35.00

Map Unit Symbol	Map Unit Name	Hydric Rating (%)	Drainage	Area (acre)
MwzAU	Muskego muck, undrained, 0 to 1 percent slopes	95	Very poorly drained	0.08
Pxo	Psamments	0	Excessively drained	0.39
TxuF	Tyner loamy sand, 18 to 45 percent slopes	0	Excessively drained	0.85
UdkA	Urban land-Brady complex, 0 to 1 percent slopes	4	--	0.16
UdpA	Urban land-Bristol complex, 0 to 1 percent slopes	0	--	10.48
UdpB	Urban land-Bristol complex, 1 to 5 percent slopes	0	--	0.32
UdrA	Urban land-Bronson complex, 0 to 1 percent slopes	5	--	10.36
UeqA	Urban land-Gilford complex, 0 to 1 percent slopes	48	--	0.13
UfzA	Urban land-Mishawaka complex, 0 to 1 percent slopes	0	--	1.21
WcnAl	Waterford loam, 0 to 2 percent slopes, frequently flooded, long duration	90	Somewhat poorly drained	1.94
			Total	78.39

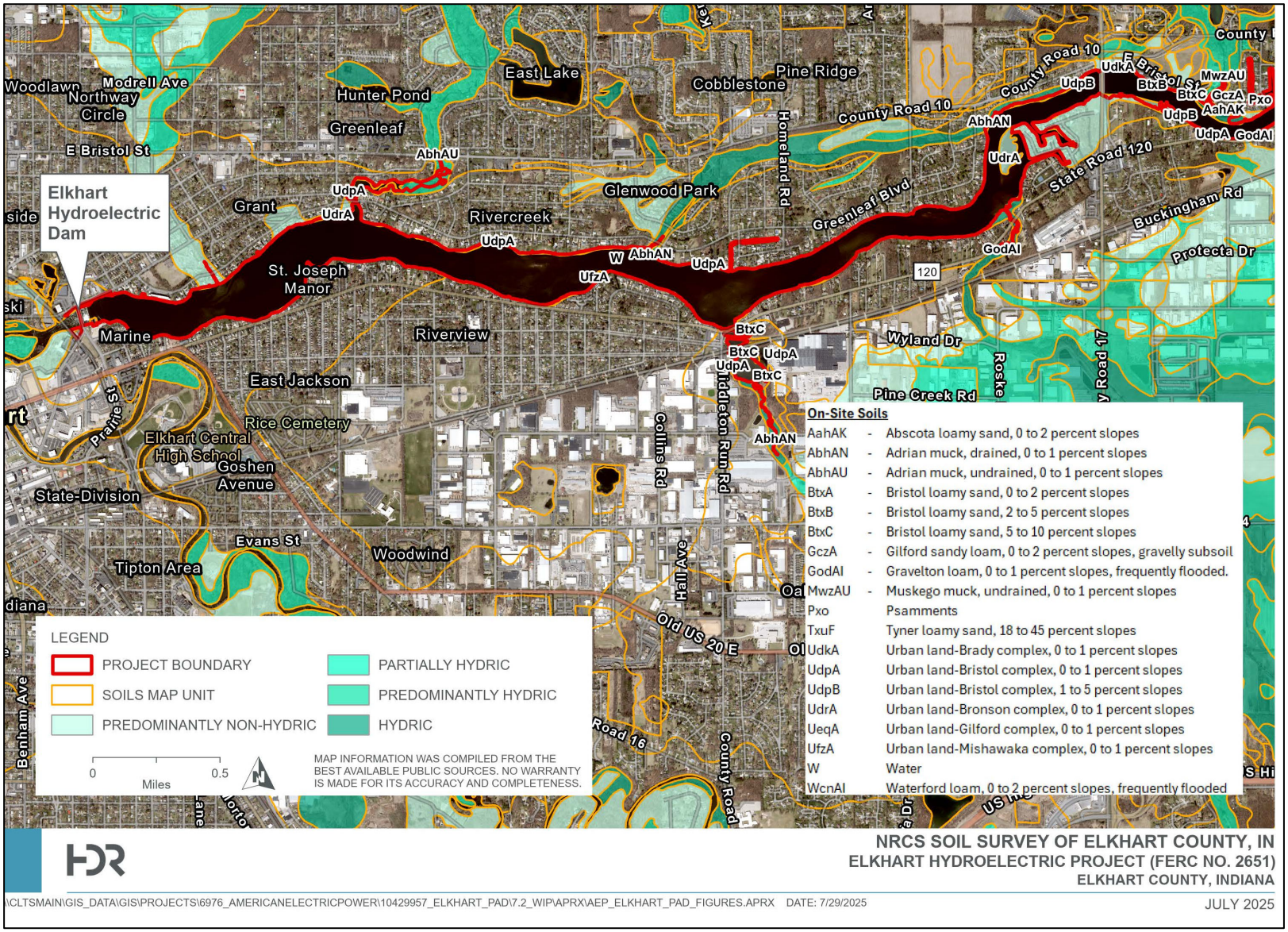
Note: Total area does not sum to 610.28 acres as 530.89 acres or 87% of the Project Boundary is water.

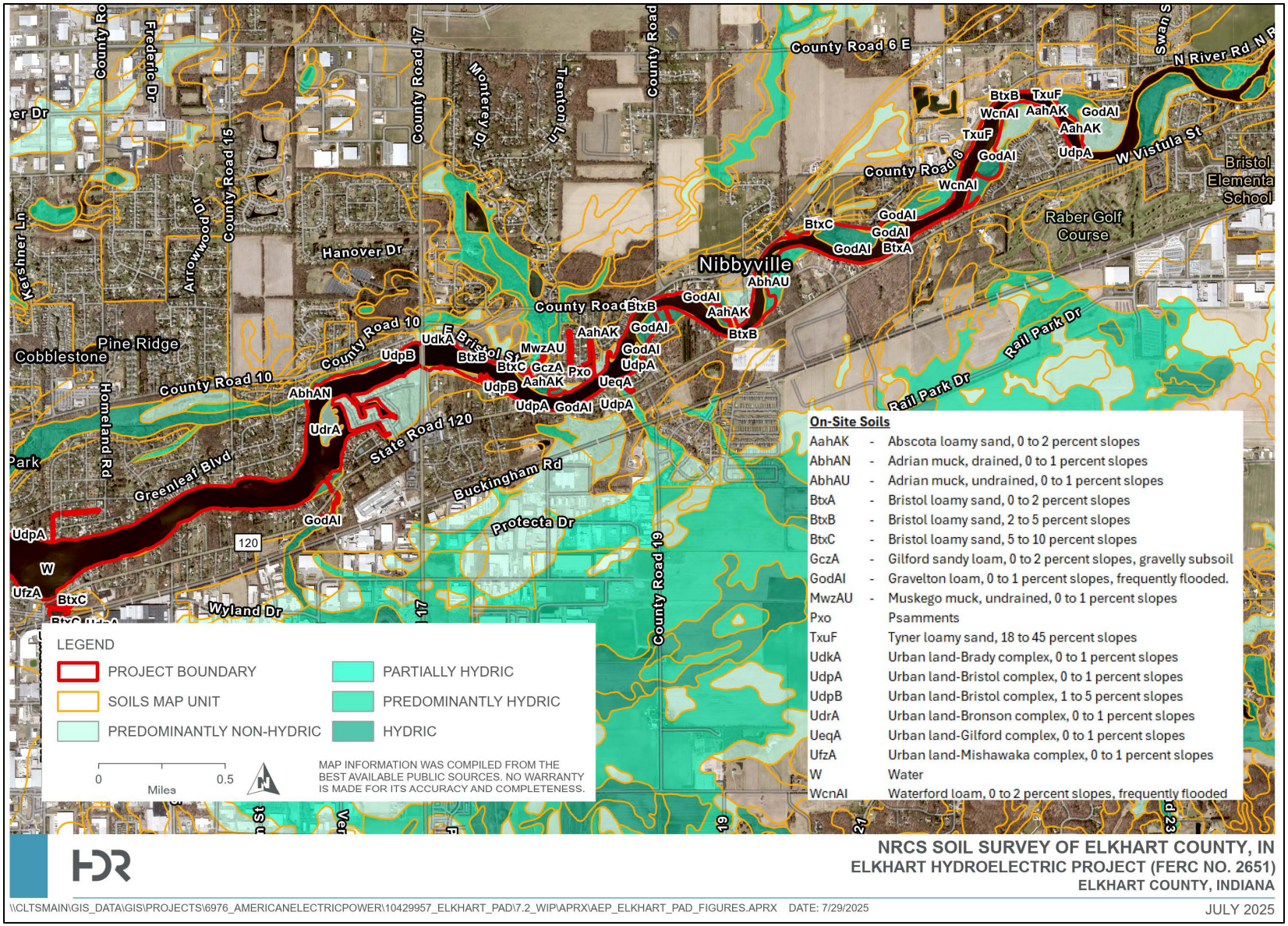
Hydric soils are linked to potential presence of wetlands (see Section 5.6) and ratings are based on hydric percentage classifications shown in Table 5.2-2 (USDA NRCS 2013).

Table 5.2-2. Hydric Soils Classifications

Percent Hydric Soil	Category
100	Hydric
67-99	Predominantly Hydric
34-66	Partially Hydric
1-33	Predominantly Non-hydric
0	Non-hydric

Figure 5.2-2. Project Soil Maps




Nibbyville
Pine Ridge
Cobblestone
Raber Golf Course
Bristol Elementa School
Hanover Dr
County Road 10
County Road 6 E
State Road 120
Buckingham Rd
Protecta Dr
Wyland Dr
Greenleaf Blvd
Rail Park Dr
W Vistula St
N River Rd
Homeland Rd
Arrowood Dr
Frederic Dr
Monterey Dr
Trenton Ln
County Road 17
County Road 19
County Road 15
E Bristol St
Kershner Ln
120
LEGEND
PROJECT BOUNDARY
SOILS MAP UNIT
PREDOMINANTLY NON-HYDRIC
PARTIALLY HYDRIC
PREDOMINANTLY HYDRIC
HYDRIC
0
0.5
Miles
MAP INFORMATION WAS COMPILED FROM THE BEST AVAILABLE PUBLIC SOURCES. NO WARRANTY IS MADE FOR ITS ACCURACY AND COMPLETENESS.
On-Site Soils
AahAK - Abscota loamy sand, 0 to 2 percent slopes
AbhAN - Adrian muck, drained, 0 to 1 percent slopes
AbhAU - Adrian muck, undrained, 0 to 1 percent slopes
BtxA - Bristol loamy sand, 0 to 2 percent slopes
BtxB - Bristol loamy sand, 2 to 5 percent slopes
BtxC - Bristol loamy sand, 5 to 10 percent slopes
GczA - Gilford sandy loam, 0 to 2 percent slopes, gravelly subsoil
GodAl - Gravelton loam, 0 to 1 percent slopes, frequently flooded.
MwzAU - Muskego muck, undrained, 0 to 1 percent slopes
Pxo Psamments
TxuF Tyner loamy sand, 18 to 45 percent slopes
UdkA Urban land-Brady complex, 0 to 1 percent slopes
UdpA Urban land-Bristol complex, 0 to 1 percent slopes
UdpB Urban land-Bristol complex, 1 to 5 percent slopes
UdrA Urban land-Bronson complex, 0 to 1 percent slopes
UeqA Urban land-Gilford complex, 0 to 1 percent slopes
UfzA Urban land-Mishawaka complex, 0 to 1 percent slopes
W Water
WcnAl Waterford loam, 0 to 2 percent slopes, frequently flooded
NRCS SOIL SURVEY OF ELKHART COUNTY, IN
ELKHART HYDROELECTRIC PROJECT (FERC NO. 2651)
ELKHART COUNTY, INDIANA
\\CLTSMAIN\GIS_DATA\GIS\PROJECTS\6976_AMERICANELECTRICPOWER\10429957_ELKHART_PAD\7.2_WIP\APRX\AEP_ELKHART_PAD_FIGURES.APRX DATE: 7/29/2025
JULY 2025

5.2.6 Reservoir Shoreline and Stream Banks

The shoreline of the impoundment is approximately 7.5 miles long. There are no known major identifiable sources or issues of sedimentation / siltation at the Project. The level of sediment accumulation within the reservoir has stabilized over the life of the Project and there are no known areas of stream bank erosion along the reservoir shoreline. Existing seasonal reservoir drawdowns have helped produce stable shoreline conditions, which would continue under the new license. An equilibrium has developed between reservoir levels and shoreline stability at the Project. Shoreline properties downstream of Six-Span Bridge are generally protected by seawalls, while many of the properties upstream of Six-San Bridge use rip rap or similar erosion control measures.

Shoreline stabilization plans for three sites on the Elkhart reservoir were prepared in accordance with the *Order Modifying and approving Aquatic and Riparian habitat Enhancement and Protection Plan Pursuant to Article 403* issued by the Commission on July 30, 2013. The three sites include the Nibbyville Campground, South Bank River Island, and North Bank River Island. Measures included specific stabilization methods (seeding/planting, tree revetments), erosion prevention, schedule for completing habitat enhancement measures, provisions for filing (annually) with the Commission, and documentation of consultation with IDNR were submitted to the IDNR and U.S. Fish and Wildlife Service (USFWS) on November 21, 2013; final plans were submitted to the Commission on January 31, 2014[10]. The final annual reports[11] were filed December 21, 2018, which fulfilled the requirements under Article 403 regarding shoreline stabilization at the Project and a release from monitoring was issued by the Commission via letter dated January 29, 2019.

5.2.7 Seismicity

The Project region is considered tectonically stable. There are no known fault systems in southern Michigan and northern Indiana associated with seismicity. The most highly active seismic area associated with the region is the central Mississippi valley area (New Madrid Seismic Zone), located to the southwest at about 400 miles from the dam site. The Wabash Valley Seismic Zone is located in southwestern Indianna and southwestern Illinois (associated with New Madrid Seismic Zone). An inactive fault, the Royal Center Fault, has been mapped about 38 miles southwest of the Project (I&M 2016).

The seismic hazard of the site was assessed by using the ATC Hazards by Location Tool as

[10] Accession Number: 20140131-5317

[11] AEP 2018. St. Joseph River Shoreline Stabilization/habitat Improvement Projects: 2018 Maintenance and Monitoring Report. Nibbyville Campground, South Bank Island, and North Bank Island. Prepared by Cardno. 2018.

referenced on the USGS Earthquake Hazards web site. Based on the latitude and longitude of the site, the peak ground acceleration at the site with a 2% probability of occurrence in 50 years was found to be 0.056g. This is considered the peak ground acceleration for the maximum credible event for the Project (AEP 2020).

Significant seismic events with regard to the Project were documented in AEP (2020) and are included in Table 5.2-3 below as general information regarding seismicity near the Project.

Table 5.2-3. Significant Seismic Events in the Vicinity of the Project

Event	Details
Closest historic event of M 4.0 or greater:	○ M 4.6 on August 10, 1947 ○ 83 kilometers northeast of the project ○ Coordinates: N 41.93°, W 85.00°
Largest historic event within about 400 kilometers (250 miles):	○ M 5.4 on March 9, 1937 ○ 196 kilometers southeast of the project ○ Coordinates: N 40.47°, W 84.28°
Closest recorded from 2015-2020	○ M 3.6 on March 14, 2000 ○ 224 kilometers southwest of the project ○ Coordinates; N 404.47°, W 84.28°
Largest event 2015-2020 within 400 kilometers (250 miles)	○ M 3.6 on March 14, 2000 ○ 224 kilometers southwest of the project ○ Coordinates; N 39.76°, W 86.75°

5.3 Water Resources

5.3.1 Drainage Area

The St. Joseph River basin drains 4,685 square miles; the drainage area for the Elkhart Project is 2,542 square miles.

5.3.2 Flows

Many small lakes, tributaries, and springs within the basin sustain the flow of the St. Joseh River, therefore, the river is not subject to rapid or excessive increases in stage or particularly low stages. Peak runoff flows occur in April when snowmelt combines with spring rains; low flows usually occur in September. Because the Project is operated as a run-of-river facility, water released from the Project approximates the inflow into the Project reservoir.

I&M completed an Inflow Design Flood study (dam break study) in 1999. The study concluded that the Inflow Design Flood for the Elkhart Project is 22,000 cfs. The study also concluded that since the spillway is rated with a capacity of 27,100 cfs (at normal pond elevation), the spillway capacity is adequate. At the peak Inflow Design Flood discharge elevation, the headwater is EL. 741.5 ft, and the tailwater level is at EL. 734.4 ft.

Monthly daily average flows for the Project for the period of record 1985-2024 range from 1,552 to

3,876 cfs and are included in Table 5.3-1. Flow data were taken from USGS gage 04101000 St. Joseph River at Elkhart, IN, which is immediately downstream of the dam. The gage has a drainage area of 3,370 square miles. Since the Project operates in a run-of-river mode and the drainage areas for the Project (2,542 square miles) and the gage (3,370 square miles) are similar, gage flows were prorated to the Project using a drainage area ratio methodology (i.e., Project Flow = Gage Flow x (2,542 / 3,370). This methodology essentially removes incremental inflows to the St. Joseph River from tributaries (i.e., Christiana Creek and Elkhart River) between the dam and the first USGS gage downstream of the dam.

Table 5.3-1. Daily Flow Data (1985-2024) (USGS 04101000)

Period	Minimum (cfs)	90% Exceedance (cfs)	Average (cfs)	10% Exceedance (cfs)	Maximum (cfs)
January	769	1,440	3,125	5,500	10,787
February	815	1,584	3,282	5,147	15,312
March	800	2,210	3,876	5,764	12,069
April	1,358	2,111	3,690	5,592	9,881
May	1,169	1,871	3,216	5,122	8,373
June	574	1,267	2,660	4,481	11,315
July	462	1,011	1,947	3,117	6,562
August	588	919	1,563	2,286	6,902
September	646	890	1,522	2,317	7,226
October	679	1,025	1,839	3,041	7,060
November	815	1,154	2,231	3,569	6,246
December	800	1,343	2,570	3,818	10,183
Annual	462	1,139	2,623	4,548	15,312

5.3.3 Flow Duration Curves

Annual and monthly flow duration curves covering the years 1985 through 2024 were developed for the Project using flow data from the downstream USGS gage 04101000 (adjusted as described in Section 5.3.2). Flow duration curves are included in Appendix C.

5.3.4 Existing and Proposed Uses of Project Waters

Water diverted through the turbines at the Project is used exclusively for hydropower generation and then returned to the St. Joseph River. The reservoir at the Project is primarily used for fishing and boating (recreation). No additional uses of Project waters are proposed under the new license.

5.3.5 Existing Instream Flow Uses

Existing instream flow uses of waters of the St. Joseph River within the Project Boundary include various recreational activities (e.g., fishing, boating) and hydroelectric generation.

5.3.6 Federally Approved Water Quality Standards

IDEM is the state agency responsible for protecting water quality by implementing and enforcing environmental regulations, monitoring surface waters, and providing resources for public water systems. Water quality standards are the foundation of the water quality-based control programs mandated by the Clean Water Act and are used as the regulatory target for permitting, compliance, enforcement, and monitoring and assessing the quality of the state's waters. Water quality standards in Indiana include three components: designated uses, water quality criteria, and antidegradation policies. Indiana's surface waters are included in either the Great Lakes system or the Mississippi River system and each of the systems carry different implementation rules; the Project is within the Great Lakes system. IDEM water quality standards are included in Indiana Administrative Code Title 327, Article 2 Water Quality Standards.[12]

Designated uses for surface waters in the St. Joseph River basin include at a minimum: agriculture, navigation, industrial water supply, warmwater fishery, other indigenous aquatic life and wildlife, fish consumption, and partial body contact recreation. Additional designated uses (i.e., trout stream, public water supply) may be applied to specific waters, but the St. Joseph River has no additional designations. Water quality standards for pH, dissolved oxygen (DO), and water temperature in the St. Joseph River are identified in Table 5.3-2.

Table 5.3-2. Water Quality Standards for the St. Joseph River

Parameter	Standard	
pH	The pH shall be maintained within the range of 6.5 to 9.0 S.U. in all surface waters of the state, except for those waters where the background pH lies outside the range of 6.5 to 9.0 S.U.	
DO	A minimum of 5 milligrams per liter (mg/L) of DO shall be maintained.	
Water temperature	Rivers, streams, and impoundments naturally capable of supporting warmwater fish shall not receive a heat load which would warm the receiving water at the edge of the mixing zone more than 5 degrees Fahrenheit (ºF) above the existing natural water temperature. Rivers, streams, and impoundments naturally capable of supporting warmwater fish shall not receive a heat load which would warm the receiving water at the edge of the mixing zone to temperatures greater than the following monthly maximum temperatures:	
	January	50 ºF
	February	50 ºF

[12] https://iar.iga.in.gov/code/2026/327/2#327-2-1-1

Parameter	Standard	
	March	55 ºF
	April	65 ºF
	May	75 ºF
	June	85 ºF
	July	85 ºF
	August	85 ºF
	September	85 ºF
	October	70 ºF
	November	60 ºF
	December	56 ºF

S.U. = standard units.

5.3.7 Existing Water Quality Data

St. Joseph River water is required to meet Indiana State water quality standards for designated uses of agriculture, industrial, and public water supply; full body contact; and aquatic life. Operation of the Project does not adversely affect water quality as there are no process waters or chemical treatment of non-contact cooling waters; therefore, no water quality monitoring is performed at the Project. The U.S. Environmental Protection Agency Assessment, Total Maximum Daily Load (TMDL) Tracking and Implementation System, which is a publicly available online system for accessing information about the conditions in the nation's surface water, was queried to review representative water quality conditions near the project as well as IDEM's 2024 Section 303(d) List of Impaired Waters.[13]

I&M does not conduct water quality monitoring at the Project, however, publicly available discrete data points (temperature, pH, DO, specific conductivity) are included in Table 5.3-3 as representative water quality conditions in the Project reservoir. As indicated in Section 1, a PAD questionnaire was sent to stakeholders and responses indicate long-term monitoring of fish communities in the St. Joseph River within the Project Boundary has shown the Project does not cause adverse effects on aquatic life. The City of Elkhart and the City of South Bend's Aquatic Biology Program[14] have carried out assessments that use a standardized ecological tool to evaluate river health. Two monitoring sites within the Project reservoir (Six Span and Nibbyville) are consistently among the highest scoring in the region, indicating

[13] IDEM: Nonpoint Source: Section 303(d) List of Impaired Waters (2025).

[14] Elkhart - South Bend Aquatic Biology Program.

"excellent" fish community structure (see Appendix A-Consultation Documentation). Good health and biodiversity of aquatic resources in a waterbody are typically indicators of good water quality.

Table 5.3-3. Discrete Physical Water Quality Parameters in the Project Reservoir

ID	Lat/Long	Temp (◦C)	pH	DO (mg/L)	Specific Cond. (uS/cm)	Date
INSTOR_WQX-9773 (upstream near Bristol)	41.70417 -85.88099	24.44 25.75 13.59	7.85 7.95 5.76	5.25 6.36 7.10	575 - 556	2005-06-09 2005-08-09 2005-10-19
IN033-414221085532601 (mid-reservoir)	41.70583 -85.89056	19.2 25.8 25.3	8.0 8.0 8.0	NA	490 554 539	2010-06-09 2010-07-20 2010-08-31
INSTOR_WQX-4156 (near Elkhart Dam)	41.69325, -85.96569	15.3 16.68 11.72 14.46 16.78	8.15 8.14 8.27 8.19 7.98	10.52 9.91 7.0 7.56 8.65	611 554 1097 1067 1110	2000-09-27 2000-10-04 2000-10-12 2000-10-19 2000-10-26

Source: How's My Waterway - Community; (°C)=degrees Celsius; (uS/cm)=microsiemens per centimeter.

I&M applied for a Water Quality Certification for the Project on September 23, 1997. IDEM's Office of Water Management issued the Water Quality Certification on October 6, 1997, with the conditions that Project operations and maintenance conformed to specifications set out in the Licensee's FERC license application. To adequately and equitably protect, mitigate damages to, and enhance fish and wildlife, the Licensee operates the Project run-of-river with a maximum reservoir surface elevation fluctuation of 0.5 ft (i.e., 1-ft operating band) (Article 401). In conjunction with Project relicensing, the Licensee will apply for a new 401 Water Quality Certification per 18 CFR § 5.23(b).

Since the Project does not contribute to or exacerbate water quality conditions of the St. Joseph River and no changes are proposed to the equipment or operation of the Project that would create new issues, no measures are proposed to mitigate water quality conditions at the Project.

5.3.8 Impairment Listing

When water quality assessments identify a waterbody as not meeting adopted water quality standards, the assessment may lead to a determination of impairment, initiating further action such as a TMDL or other regulatory procedures aimed at addressing the impairment. IDEM develops and maintains a listing, referred to as the Section 303(d) List, of impaired waters in the state that details the potential pollutant causing each impairment and the potential sources of each pollutant. A TMDL is used to determine the total amount of a pollutant a waterbody can assimilate without resulting in the impaired status of that waterbody.

The St. Joseph River is impaired for the entire length of river in the Project Boundary and included on the 303(d) list (Table 5.3-4). River reaches and unit identifiers are listed below (retrieved for the IDEM

non-point tool[15]) along with the impairment and probable source(s) contributing to impairment. Concentrations of metals in the St. Joseph watershed meet water quality standards with the exception of mercury and PCBs (polychlorinated biphenyls). The entire St. Joseph River watershed and several inland lakes in the watershed have fish consumption advisories due to mercury and PCB levels in fish tissue and these exceedances are addressed by existing mercury and PCB reduction plans in the watershed (Michigan Department of Environment, Great Lakes, and Energy [EGLE] 2016).

Table 5.3-4. Impaired Waters in the Project Reservoir [2024 303(d) List]

Assessment Unit ID	Previously Reported	Stream Length (miles)	Full Body Contact	Human Health and Wildlife	Warm Water Aquatic Life	Source Impairment
INJ01K1_03	Yes	1.81	Good	Impaired	Good	PCBs in fish tissue
INJ01K1_04	Yes	1.16	Good	Impaired	Impaired	Biological Integrity, PCBs in fish tissue
INJ01K1_05	Yes	2.29	Good	Impaired	Impaired	Biological Integrity, PCBs in fish tissue
INJ01K1_06	Yes	2.67	Good	Impaired	Not assessed	PCBs in fish tissue
INJ01K1_07	Yes	0.49	Good	Impaired	Not assessed	PCBs in fish tissue

Note: Assessment Units are individual reaches of the St. Joseph River in the Project Boundary from upstream to downstream.

5.3.9 Gradient for Downstream Reaches

The topography of the St. Joseph River basin ranges from steep slopes and valleys to gently sloping terrain. For the one-mile reach below the Elkhart Dam, the riverbed slopes at an average rate of approximately 125 feet per mile.

5.4 Fish and Aquatic Resources

5.4.1 Aquatic Habitat

The Project is located within the middle St. Joseph River watershed. This portion of the St. Joseph River is generally warm during the summer and stable in flow (Wesley and Duffy 1999). According to habitat surveys completed in 1995 (EA Engineering, Science, and Technology 1998), the St. Joseph River in the vicinity of the Project (i.e., the Project reservoir) is characterized as riverine habitat in the upstream reach of the Project Boundary, which flows to a transitional habitat area before becoming a lacustrine environment (EA Engineering, Science, and Technology 1998) closer to the dam. The upstream riverine habitat area is the smallest of the three habitat types (approximately 16% within the Project Boundary), followed by the transitional area (21%), and lacustrine environment (63%). River velocities decline from upstream to downstream, with slow-fast currents in the upstream riverine

[15] IDEM: Nonpoint Source: St Joseph River (Lake Michigan) WMP (2022).

portion, slow currents within the transitional area, and slow or non-existent currents in the lacustrine environment. Based on currents, substrates shift from coarser materials upstream to finer materials and silt in the downstream areas closer to Elkhart Dam. Habitat cover (such as aquatic macrophyte beds, submerged woody debris, boulders, rock shelves, or rock ledges) at the time of the survey was sparse in most areas except for the right bank in the upstream riverine area, which contained extensive rooted macrophytes (EA Engineering, Science, and Technology 1998).

Habitat assessments are performed as part of the cities of South Bend and Elkhart's joint Aquatics Program. Several locations within or on tributaries just outside of the Project Boundary were evaluated in 2016, 2021, and 2024 (City of Elkhart 2016, 2021, 2024). Habitat was assessed using the Qualitative Habitat Evaluation Index (QHEI) (Rankin 1989, as cited by City of Elkhart 2016). The QHEI evaluates substrate, instream cover, channel morphology, riparian zone and bank erosion, pool/glide and riffle/run quality, and gradient to develop an overall index score on a range of 0 to 100. QHEI scores varied across waterbodies, with an "excellent" rating for the St. Joseph River in the vicinity of Nibbyville, to a low rating of "poor" for the Osolo Township Ditch. The area around St. Joseph River in the upper part of the Project Boundary near Nibbyville is less developed than the lower portion near the confluence with Osolo Township Ditch or the St. Joseph River near Homan Ave, which may influence the QHEI scores due to common effects of urbanization such as impacts on water quality, sedimentation, and stormwater (Table 5.4-1).

Table 5.4-1. QHEI Scores for Locations within or near the Project Boundary

Location	Year Sampled	QHEI Score	Narrative Range
St. Joseph River at Nibbyville	2024	82	Excellent
St. Joseph River at Homan Ave	2016	59	Fair
Sheep Creek	2021	62-67	Good
Menges Ditch	2021	53	Fair
Pine Creek	2021	69-80	Good
Puterbaugh Creek	2016	74	Good
Osolo Township Ditch (Lily Creek)	2016	39	Poor

Source: City of Elkhart (2016, 2021, 2024).

5.4.1.1 Anthropogenic Effects on Aquatic Habitat

In 2007, the IDNR installed brush pile fish attractors at three locations within the Project from Elkhart Dam extending approximately 2.5 miles upstream. Fish attractors provide structure for fish and invertebrates, which improves habitat complexity and supports forage fish populations, which in turn supports predator and game fish populations (Florida Fish and Wildlife Conservation Commission 2025). Brush piles consisted of a total of 560 bundles of woody branches approximately 6 feet long by 4 feet wide and consisting of oak, cherry, maple, mulberry, hickory, or hackberry species. Attractor

sites were approximately 100-300 feet long by 50-300 feet wide.

IDNR also installed concrete tile fish attractors. One-thousand concrete tiles 8-10 inches in diameter and 2 ft long were placed at two locations within the Project. One site was approximately 150 ft long by 75 ft wide, and the second site was approximately 150 ft long by 150 ft wide.

5.4.2 Existing Fish and Aquatic Resources

Fisheries surveys were completed as part of the previous relicensing, as well as more recently to support the City of Elkhart's Aquatic Community Monitoring Program. In 1995, fish were collected via electrofishing, seine netting, and hoop netting upstream of Elkhart Dam in three locations (lower/lacustrine environment, middle/transitional habitat, and upstream/riverine habitat). More recently, boat electrofishing has been implemented upstream of Elkhart Dam, usually in the vicinity of Nibbyville. Fish community diversity has not appeared to change substantially during the past thirty years (Table 5.4-2). Previous years of the City of Elkhart's Aquatic Community Monitoring Program showed that the fish community was and remains to be healthy in the St. Joseph River and within the Project, specifically (City of Elkhart 2024). There has also been a marked decrease in tolerant species, especially Common Carp, observed over the last 20 years. Tolerant species are those that can survive in areas with degraded habitat or water quality; a decline in tolerant species suggests improvements at a site.

Table 5.4-2. Fish Species Collected Upstream of Elkhart Dam in 1995 and 2020-2024

Common Name	Scientific Name	1995	2020	2021	2022	2023	2024
American Brook Lamprey[1]	*Letheneron appendix*				X		
Banded Killifish[2]	*Fundulus diaphanous*		X	X	X	X	
Black Crappie	*Pomoxis nigromaculatus*	X		X	X	X	X
Black Redhorse	*Moxostoma duquesnei*	X	X				
Blackside Darter	*Percina maculata*	X	X	X	X	X	X
Bluegill	*Lepomis macrochirus*	X	X	X	X	X	X
Bluntnose Minnow[2]	*Pimephales notatus*	X	X	X	X	X	X
Bowfin	*Amia calva*	X	X	X		X	X
Brook Silverside[1]	*Labidesthes sicculus*	X	X	X	X	X	X
Brown Bullhead[2]	*Ameiurus nebulosus*		X		X		
Central Stoneroller	*Campostoma anomalum*		X	X			
Channel Catfish	*Ictalurus punctatus*	X				X	X
Chestnut Lamprey	*Ichthyomyzon castaneus*	X	X	X	X	X	X
Common Carp[2]	*Cyprinus carpio*	X	X	X	X		X
Common Shiner	*Luxilus cornutus*	X	X		X		
Creek Chub[2]	*Semotilus atromaculatus*	X		X		X	
Gizzard Shad[2]	*Dorosoma cepedianum*		X	X			X
Golden Redhorse[1]	*Moxostoma erythrurum*	X	X	X	X	X	X
Grass Pickerel	*Esox americanus*	X	X	X	X	X	
Green Sunfish[2]	*Lepomis cyanellus*	X	X	X	X	X	X
Greenside Darter[2]	*Etheostoma blennioides*		X		X	X	X
Hornyhead Chub[1]	*Nocomis biguttatus*		X			X	
Hybrid Sunfish	*Lepomis* sp.				X	X	X
Johnny Darter	*Etheostoma nigrum*	X	X	X	X		X
Largemouth Bass	*Micropterus salmoides*	X	X	X	X	X	X
Logperch[1]	*Percina caprodes*	X	X	X	X	X	X
Longear Sunfish[1]	*Lepomis megalotis*	X	X	X	X	X	X
Longnose Gar[1]	*Lepisosteus osseus*	X	X	X			
Mimic Shiner[1]	*Paranotropis volucellus*	X	X	X	X	X	X
Northern Hog Sucker[1]	*Hypentelium nigricans*	X	X	X	X	X	X
Northern Pike	*Esox lucius*	X	X	X	X	X	X
Pirate Perch	*Aphredoderus sayanus*			X		X	
Pumpkinseed	*Lepomis gibbosus*	X	X		X	X	X
Rainbow Darter[1]	*Etheostoma caeruleum*	X	X	X			X
Redear Sunfish	*Lepomis microlophus*	X	X	X	X	X	
River Redhorse	*Moxostoma carinatum*	X	X	X		X	

Common Name	Scientific Name	1995	2020	2021	2022	2023	2024
Rock Bass[1]	*Ambloplites rupestris*	X	X	X	X	X	X
Rosyface Shiner[1]	*Notropis rubellus*	X		X	X	X	X
Sand Shiner[1]	*Miniellus stramineus*	X	X	X	X	X	X
Shorthead Redhorse[1]	*Moxostoma macrolepidotum*	X	X	X	X	X	X
Silver Lamprey	*Ichthyomyzon unicuspis*	X				X	
Silver Redhorse[1]	*Moxostoma anisurum*	X	X	X	X	X	X
Smallmouth Bass[1]	*Micropterus dolomieu*	X	X	X	X	X	X
Spotfin Shiner[1]	*Cyprinella spiloptera*	X	X	X	X	X	X
Spottail Shiner	*Hudsonius hudsonius*	X					X
Spotted Gar	*Lepisosteus oculatus*		X				
Spotted Sucker	*Minytrema melanops*	X	X	X	X	X	X
Stonecat	*Noturus flavus*	X	X			X	
Striped Shiner	*Luxilus chrysocephalus*	X	X	X	X	X	X
Unidentified Ichthyomyzon	*Ichthyomyzon* sp.	X					
Unidentified Moxostoma	*Moxostoma* sp.	X			X		
Walleye	*Sander vitreus*	X				X	
White Crappie	*Pomoxis annularis*	X					
White Sucker[2]	*Catostomus commersonii*	X	X	X	X	X	X
Yellow Bullhead[2]	*Ameiurus natalis*	X	X	X	X	X	X
Yellow Perch	*Perca flavescens*	X	X	X		X	

Source: EA Engineering, Science, and Technology 1998; City of Elkhart 2020, 2021, 2022, 2023, 2024.
[1] Species that are sensitive to environmental disturbances such as degraded water quality or habitat (City of Elkhart 2021).
[2] Species that are tolerant to environmental disturbances such as degraded water quality or habitat (City of Elkhart 2021).

In 2024, the Index of Biotic Integrity (IBI) was completed to assess the fish community at the Project upstream of Elkhart Dam near Nibbyville. The IBI scores a waterbody based on a range of 0 (poor) to 60 (excellent) using 12 metrics evaluating ecological balance within the fish community. Electrofishing was conducted at two locations near Nibbyville, and the average IBI was calculated to be 52 (out of 60) (Table 5.4-3).

Table 5.4-3. Fish Collected at the Project Upstream of Elkhart Dam in 2024

Category	Transect 1		Transect 2		Average Score
	Metric	Score	Metric	Score	
Total Number of Species	31	5	25	5	5
Number of Darters	5	5	5	5	5
Number of Sunfish	6	5	4	3	4
Number of Suckers	5	5	6	5	5
Number of Sensitive Species	13	5	13	5	5
Tolerant Species (%)	8.78	5	5.05	5	5
Omnivores (%)	7.14	5	3.28	5	5
Insectivores (%)	61.43	5	69.95	5	5
Carnivores (%)	30.82	5	26.01	5	5
Catch Per Unit Effort	980	1	396	3	2
Simple Lithophil (%)[1]	31.53	3	35.1	3	3
DELT Anomalies (%)[2]	1.12	3	1.01	3	3
Total	**--**	**52**	**--**	**52**	**52**

[1]Simple lithophils, such as suckers, are fish that are spawners that don't protect their nest and young. They require high quality, coarse substrate for reproduction. An increase in the proportion of simple lithophils at a site suggests an improvement.
[2]Percentage of fish that exhibit DELT: deformities (D), erosions (E), lesions (L), or tumors (T).

5.4.2.1 Entrainment

An entrainment study was conducted at the Project in 1995 (EA Engineering, Science, and Technology 1998). The impact of entrainment at the Elkhart Project was initially assessed using a review of entrainment data from three nearby Projects (Twin Branch [RMC Environmental Services, Inc. 1994], Buchanan [EA Engineering, Science, and Technology 1991a], and Constantine [EA Engineering, Science, and Technology 1991b]) which showed that the fish community in each study was similar to the fish community at the Elkhart Project, except for some anadromous species collected at Buchanan. Given these data, it was determined that fish entrained at the Project are similar with respect to the species, size frequency distribution, and abundance of fish entrained at the other three Projects and follow a similar temporal trend. In particular, the Twin Branch Project is closest in proximity to Elkhart (12 miles downstream) and has a similar intake configuration, so data from the Twin Branch Project were used to estimate entrainment at Elkhart, following some revisions to account for the biological, physical, and operational conditions at the Project.

Entrainment at the Project was estimated using two methods: the "taxa correction factor (TCF)"

method and the "Operation/TFC" method (EA Engineering, Science, and Technology 1998). The TCF method used taxa correction factors to account for differences between the Twin Branch Project and the Elkhart Project and resulted in a conservative annual entrainment estimate of 183,894 fish. The Operation/TCF method used a combination of taxa correction factors and operating conditions at the Project including hours of operation and discharge data and resulted in a more realistic annual entrainment estimate of 113,984 fish representing 39 taxa. Results indicate species most likely to be entrained at the Project were logperch (42,789 annually; 37.5% of annual entrainment), bluegill (22,956; 20.1%), channel catfish (12,599; 11.1%), white sucker (8,531; 7.5%), spottail shiner (7,160; 6.3%), walleye (6,145; 5.4%), and shorthead redhorse (2,971; 2.6%). Mortality at the Project was estimated using the Monten (1985) model with a correction factor of 0.41, and fish length data from entrainment studies at the Twin Branch, Buchanan, and Constantine projects. Annual mortality estimates based on the Operation/TCF method were between 13,104 and 14,826 fish, and the most likely annual mortality was estimated at 13,971 fish or 12.3% of annual entrainment. Given the most likely annual mortality estimate, the top 90% of species mortality at the Project comprises logperch (5,091), bluegill (1,729), walleye (1,515), channel catfish (1,313), white sucker (1,121), shorthead redhorse (850), and spottail shiner (732).

5.4.2.2 Fish Stocking

Records of fish stocking of walleye and tiger muskellunge (*Esox lucius* x *E. masquinongy*) in the St. Joseph River in Elkhart County date back to 1983 (IDNR 2025a). Upstream of Elkhart Dam, specifically, a total of 391,154 walleye have been released since 2000 (IDNR 2025b) (Table 5.4-4).

Table 5.4-4. Walleye Stocked Upstream of Elkhart Dam

Year	Fish Size	Number
2000	1.04	68,870
2001	1.04	66,293
2002	0.80	75,450
2003	0.90	65,873
2004	1.20	68,171
2006	1.00	35,483
2022	4.74	3,181
2024	5.28	7,833
Total		**391,154**

Source: IDNR 2025b.

5.4.3 Essential Fish Habitat

Based on a review of the National Marine Fisheries Service online database, no essential fish habitat under the Magnuson-Stevens Fishery Conservation and Management Act has been identified in the

vicinity of the Project.

5.4.4 Temporal and Spatial Distribution of Fish Communities

Fish surveys in 2024 (City of Elkhart 2024) showed the St. Joseph River in Elkhart County to contain a typical warmwater fishery. Assuming similar fish communities upstream of Elkhart Dam within the Project as that reported for the St. Joseph River in Elkhart County, the dominant species within the Project consist of shiners, sunfishes, rock bass, black basses, bluntnose minnow, white sucker, golden redhorse, northern hogsucker, and common logperch (City of Elkhart 2024). Life history characteristics for species are described below.

5.4.4.1 Shiners

As stated above, assuming a similar warmwater fish community within the Project as that reported for the total St. Joseph River in Elkhart County, shiners (family Leuciscidae) comprised approximately 38% of the top 90% of species within the Project, consisting of the mimic shiner, sand shiner, spotfin shiner, striped shiner, and rosyface shiner (City of Elkhart 2024). Shiners are found in clear streams, medium sized-creeks, small rivers, and clear, moderately vegetated lakes with the exception of the striped shiner, which can be found in fairly turbid waters (Froese and Pauly 2025). They typically feed on microcrustaceans, midges, some terrestrial insects, algae, and detritus. Shiners spawn in the late spring to early summer (Ohio Department of Natural Resources [Ohio DNR] 2025). Mimic shiners, sand shiners, and rosyface shiners reproduce by broadcast spawning, scattering eggs over sand or gravel substrates with no parental care provided (Ohio DNR 2025; NatureServe 2025). Spotfin shiners lay eggs in crevices of rocks and woody material, while striped shiners create nests at the tail-end of riffles to deposit eggs. Neither spotfin nor striped shiners provide parental care.

5.4.4.2 Sunfishes

Bluegill and longear sunfish comprised approximately 14% of the top 90% of species within the Project (City of Elkhart 2024). *Lepomis* are the largest genus of the Centrarchidae. Bluegill and longear sunfishes are generally found in sluggish streams, lakes, and ponds, often associated with vegetation (Froese and Pauly 2025). They feed on aquatic insects, invertebrates, worms, and small fish and crayfish. Spawning begins in spring with nests constructed singly or colonially in open, shallow areas on sand and small gravel, and are defended by males (Regents of the University of Michigan [U-M] 2020).

5.4.4.3 Rock Bass

Rock bass comprised over 11% of the top 90% of species within the Project (City of Elkhart 2024).

Rock bass are found in rocky, shallow, vegetated areas of lakes and the lower, warmer reaches of streams (Froese and Pauly 2025). They feed on crustaceans, insects, and fish. Like other centrarchids, rock bass form nests in shore areas in the spring and summer and guard the eggs until larvae disperse (U-M 2020; Froese and Pauly 2025).

5.4.4.4 Smallmouth Bass

Smallmouth bass comprised over 9% of the top 90% of species within the Project (City of Elkhart 2024). Smallmouth bass are found in lakes and rivers, preferring cooler waters as opposed to largemouth bass (U-M 2020). They are opportunistic predators and feed on invertebrates, crustaceans, and fish (Smith 1985). As juveniles, their diet consists mostly of insects, other invertebrates, and plankton. Smallmouth bass spawn in late spring to early summer (Smith 1985). Males construct nests and protect the eggs until fry emerge and disperse.

5.4.4.5 Bluntnose Minnow

The bluntnose minnow comprised over 3% of the top 90% of species within the Project (City of Elkhart 2024). Bluntnose minnow are generalists and can be found in a variety of habitats including clear, rocky streams, large rivers, reservoirs, and glacial lakes. They spawn from late spring to early June in nests constructed by males (NatureServe 2025). Nests are typically on the lake or river bottom with eggs attached to the underside of cover.

5.4.4.6 White Sucker

White sucker comprised over 4% of the top 90% of species within the Project (City of Elkhart 2024). White suckers are habitat generalists as they are highly tolerant of polluted, murky, and anoxic waters, as well as a wide array of stream gradients (U-M 2020). They can be found in streams, rivers, and lakes, and reach high abundances in reservoirs. Adult and juvenile white suckers are more active at night, and they’re generally found offshore during the day and inshore during the evening. Fry passively feed on protozoa, diatoms, small crustaceans, and midge larvae. As they mature and their mouthparts move to their underside, white suckers become benthic foragers, feeding on aquatic invertebrates, fish, fish eggs, mollusks, insects, rotifers, insect larvae, and algae.

Spawning takes place in spring and early summer, when white suckers move upstream to quick running water with gravely substrates (U-M 2020). Females spawn with multiple males, with adhesive, demersal eggs dispersed over the spawning area.

5.4.4.7 Northern Hogsucker

Northern hogsucker comprised over 3% of the top 90% of species within the Project (City of Elkhart 2024). Northern Hogsuckers inhabit rocky riffles and pools in clear streams and rivers (Smith 1985). They are frequently found in shallow, rocky areas where the water is only a few inches deep. Northern Hogsuckers often feed on invertebrates and other organisms found among the stones on the stream bottoms that they inhabit. They will also graze on the algae found on these stones.

5.4.4.8 Golden Redhorse

Golden redhorse comprised over 4% of the top 90% of species within the Project (City of Elkhart 2024). They feed primarily on small mollusks, microcrustaceans, insects, detritus, and algae (NatureServe 2025). They spawn in the spring in runs and riffles in the main stream but may move to smaller tributaries. They congregate and defend home territories during the spawning season.

5.4.5 Benthic Macroinvertebrates Habitat and Life-History Information

Benthic macroinvertebrates are sampled as part of the City of Elkhart's Aquatic Community Monitoring Program. Macroinvertebrates can indicate changes in water quality due to the presence or absence of tolerant and intolerant species. Pollution-sensitive species such as mayflies, stoneflies, and caddisflies (Ephemeroptera, Plecoptera, Trichoptera [EPT] taxa) are more susceptible than other organisms to physical and chemical changes in a waterbody (USEPA 2025). Pollution-tolerant species such as midges and worms are less susceptible to changes in physical and chemical parameters.

Samples were collected using a Hester-Dandy sampler (quantitative samples) and sweep nets (qualitative samples). Monitoring since 2020 has shown a generally stable with slight improvement in conditions as indicated by the Invertebrate Community Index (Table 5.4-5).

Table 5.4-5. Macroinvertebrate Types Collected Upstream of Elkhart Dam 2020-2024

Tolerance to Pollution	2020	2021	2022	2023	2024
Fairly Tolerant	31	27	23	32	28
Intolerant	3	2	2	1	1
Moderately Intolerant	24	25	24	27	29
Moderately Tolerant	3	1	2	4	1
Tolerant	4	5	2	2	5
Total Taxa Collected	66	63	56	68	64
No. Organisms	2,430	631	1,864	960	947
Qualitative EPT	16	16	15	19	20
Invertebrate Community Index	**48**	**46**	**50**	**52**	**50**

5.4.5.1 Freshwater Mollusks

Multiple types of freshwater mollusks have been identified upstream of Elkhart Dam during the City of Elkhart Aquatic Community Monitoring surveys. Freshwater mollusks are considered benthic macroinvertebrates and are therefore included as part of the prior section. Mollusks identified include species of freshwater snails, limpets, clams, and mussels. Mussel and clam species include invasive species (see Section 5.4.6) but also include native mussel species such as the rainbow mussel (*Villosa iris*), eastern lampmussel (*Lampsilis radiata luteola*), and Spike (*Elliptio dilatata*) (Table 5.4-6).

Table 5.4-6. Number of Mollusk Species Identified Upstream of Elkhart Dam

Freshwater Mollusk Type	Number of Species				
	2020	2021	2022	2023	2024
Snail	2	4	1	2	4
Limpet	1	0	1	1	0
Clam	1	1	1	2	1
Mussel	2	3	0	0	0

5.4.6 Invasive Aquatic Species

Aquatic invasive species have entered or can enter Indiana waters via a number of pathways including ballast water of ships in the Great Lakes, fish transfer, bait buckets, boats and trailers, aquaculture, water garden hobbies, and the aquarium trade (IDNR 2020a). The IDNR has compiled a list of known aquatic invasive species across the state as part of the Indiana Aquatic Invasive Species Management Plan. In addition to the detected species listed in Table 5.4-5, the management plan also lists a 14 fish, 5 invertebrates, 5 plants, and 4 diseases/parasites on a “watch list” which are not yet detected in Indiana waters but are of concern (Table 5.4-7).

Table 5.4-7. Known Aquatic Invasive Species in Indiana

Common Name	Scientific Name	Pathway(s)	Priority/Concern
Fish			
Alewife	*Alosa pseudoharengus*	Ballast, fish transfer	Concern
Goldfish	*Carassius auratus*	Fish transfer, bait bucket	Concern
Grass Carp	*Ctenopharyngodon idella*	Fish transfer	Concern
Common Carp	*Cyprinus carpio*	Fish transfer, bait bucket	Concern
Threespine Stickleback	*Gasterosteus aculeatus*	Bait, fish transfer	Concern
Silver Carp	*Hypophthalmichthys molitrix*	Fish transfer	Priority
Bighead Carp	*Hypophthalmichthys nobilis*	Fish transfer	Priority
White Perch	*Morone americana*	Fish transfer, bait bucket	Priority
Black Carp	*Mylopharyngodon piceus*	Aquaculture, Fish transfer	Priority
Round Goby	*Neogobius melanostomus*	Ballast, bait bucket	Concern
Sea Lamprey	*Petromyzon marinus*	Ballast	Priority

Common Name	Scientific Name	Pathway(s)	Priority/Concern
Rudd	*Scardinius erythrophthalmus*	Fish transfer, bait bucket	Concern
Invertebrates			
Spiny Water Flea	*Bythotrephes cederstroemi*	Ballast, bait bucket, trailer	Concern
Fishhook Water Flea	*Cercopagis pengoi*	Ballast, bait bucket, trailer	Concern
Chinese Mystery Snail	*Cipangopaludina chinensis*	Aquarium, bait bucket	Concern
Asiatic Clam	*Corbicula fluminea*	Bait bucket, trailer	Concern
Zebra Mussel	*Dreissena polymorpha*	Bait bucket, trailer, ballast	Concern
Quagga Mussel	*Dreissena r. bugensis*	Bait bucket, trailer, ballast	Concern
Rusty Crayfish	*Orconectes rusticus*	Bait	Concern
Red Swamp Crayfish	*Procambarus clarkii*	Bait bucket	Concern
Plants			
flowering rush	*Butomus umbellatus*	Wetland plant transfer	Priority
Brazilian elodea	*Egeria densa*	Aquarium, bait bucket, trailer	Priority
floating water hyacinth	*Eichhornia crassipes*	Trailer, private ponds	Priority
hydrilla	*Hydrilla verticillata*	Aquarium, bait bucket	Priority
yellow flag iris	*Iris pseudacorus*	Wetland plant transfer	Concern
purple loosestrife	*Lythrum salicaria*	Wetland plant transfer	Concern
parrot feather	*Myriophyllum aquaticum*	Trailer, bait bucket	Priority
Eurasian watermilfoil	*Myriophyllum spicatum*	Trailer, bait bucket	Priority
brittle waternymph	*Najas minor*	Aquarium, bait bucket, trailer	Concern
starry stonewort	*Nitellopsis obtusa*	Trailer, bait bucket	Priority
yellow floating heart	*Nymphoides peltata*	Wetland, private pond	Concern
reed canarygrass	*Phalaris arundinacea*	Wetland plant transfer	Concern
common reed	*Phragmites australis*	Wetland plant transfer	Concern
water lettuce	*Pistia stratiotes*	Trailer, private ponds	Concern
curlyleaf pondweed	*Potamogeton crispus*	Aquarium, bait bucket, trailer	Concern
narrow-leaved cattail	*Typha angustifolia*	Wetland plant transfer	Concern
Diseases/parasites			
Largemouth bass virus	Family Iridoviridae	Fish transfer, bait bucket, live well	Concern

5.4.7 Cooperative Agreement

Under the 2001 Cooperative Agreement with IDNR, I&M agreed to provide annual funding of $5,000 (adjusted annually based on the Consumer Price Index, not to exceed five percent per year) to support fisheries enhancements and studies in the vicinity of the Project for the duration of the license, terminating on December 31, 2030 (IDNR 2001).

5.5 Wildlife and Botanical Resources

5.5.1 Botanical Resources

According to recent land cover data (MRLC 2023) (see Section 5.1.2), over 90% of the area within the

Project Boundary consists of open water or developed areas, therefore little area comprises vegetated habitat. Of vegetated areas, woody wetlands consist of 6.5% of land classification in the area, located on the upstream portion of the Project Boundary. Forested, grassland, and cultivated crop areas comprise less than 1% of land classifications in the Project Boundary, combined.

Natural vegetation in the Elkhart Till Plains ecoregion has historically consisted of oak-hickory and beech forests, as well as dry prairie and tamarack swamps (Woods et al. 1998). More recently, upland habitat in much of the ecoregion has been converted to agricultural production (i.e., wheat, soybean, corn) with pasture, woodland, mint and vegetable farming on wetland areas. Upland wooded habitats within the Project Boundary noted during a 2010 riparian and wetland study include red oak (*Quercus rubra*), shagbark hickory (*Carya ovata*), hackberry (*Celtis occidentalis*), sugar maple (*A. saccharum*), black cherry (*Prunus serotina*), basswood (*Tila americana*), and American hophornbeam (*Carpinus caroliniana*) (JFNew 2010). Shrubs in this habitat include Tartarian honeysuckle (*Lonicera tatarica*), chokecherry (*Prunus virginiana*), and green briar (*Smilax* spp.), and herbaceous vegetation consisting of asters (*Aster* spp.), goldenrods (*Solidago* spp.), and Canada rye (*Elmys canadensis*).

Vegetation associated with residential areas adjacent to the Project Boundary primarily include maintained yards, smaller wooded areas with species typical of those mentioned above, and ornamental species (JFNew 2010).

5.5.1.1 Invasive Plants

The Terrestrial Plant Rule (Indiana Administrative Code [IAC] 312, 18-3-25) designates 44 species of plants as invasive pests. This rule makes it illegal to sell, gift, barter, exchange, distribute, transport, or introduce these plants in the State of Indiana. Other rules also restrict certain species including kudzu, purple loosestrife, multiflora rose, and noxious weeds (Table 5.5-1). Invasive aquatic plant species, such as Eurasian watermilfoil and purple loosestrife, are also included as part of IDNR's Indiana Aquatic Invasive Species Management Plan as discussed in Section 5.4.6.

Table 5.5-1. Plant Species Restricted in Indiana

Common Name	Scientific Name	Restricting Rule
Amur Cork Tree	*Phellodendron amurense*	312 IAC 18-3-25
Amur Honeysuckle	*Lonicera maacki*	312 IAC 18-3-25
Asian Bittersweet	*Celastrus orbiculatus*	312 IAC 18-3-25
Autumn Olive	*Elaeagnus umbellata*	312 IAC 18-3-25
Bell's Honeysuckle	*Lonicera x bella*	312 IAC 18-3-25
Black Alder	*Alnus glutinosa*	312 IAC 18-3-25
Black Swallow-Wort	*Vincetoxicum nigrum*	312 IAC 18-3-25
Blunt-Leaved Privet	*Ligustrum obtusifolium*	312 IAC 18-3-25
Bohemian Knotweed	*Reynoutria x bohemica*	312 IAC 18-3-25
Bull Thistle	*Cirsium vulgare*	312 IAC 18-3-25
Burcucumber	*Sicyos angulatus*	IC 15-16-7-2

Common Name	Scientific Name	Restricting Rule
Canada Thistle	*Cirsium avense*	IC 15-16-7-2
Chinese Yam	*Dioscorea polystachya (oppositifolia)*	312 IAC 18-3-25
Columbus Grass	*Sorghum almum*	IC 15-16-7-2
Common Buckthorn	*Rhamnus cathartica*	312 IAC 18-3-25
Common Teasel	*Dipsacus fullonum*	312 IAC 18-3-25
Common Waterhemp	*Amaranthus rudis*	IC 15-16-7-2
Common/Giant Reed	*Phragmites australis australis*	312 IAC 18-3-25
Crown Vetch	*Coronilla varia*	312 IAC 18-3-25
Cut-Leaved Teasel	*Dipsacus laciniatus*	312 IAC 18-3-25
Dame's Rocket	*Hesperis matronalis*	312 IAC 18-3-25
Field Bindweed	*Convolvulus arvensis*	312 IAC 18-3-25
Garlic Mustard	*Alliaria petiolata*	312 IAC 18-3-25
Giant Knotweed	*Reynoutria sachalinensis*	312 IAC 18-3-25
Glossy Buckthorn	*Frangula alnus*	312 IAC 18-3-25
Japanese Barberry	*Berberis thunbergii*	312 IAC 18-3-25
Japanese Chaff Flower	*Achyranthes japonica*	312 IAC 18-3-25
Japanese Honeysuckle	*Lonicera japonica*	312 IAC 18-3-25
Japanese Hops	*Humulus japonicus*	312 IAC 18-3-25
Japanese Knotweed	*Reynoutria japonica*	312 IAC 18-3-25
Japanese Stiltgrass	*Microstegium vimineum*	312 IAC 18-3-25
Johnsongrass	*Sorghum halepense*	IC 15-16-7-2
Kudzu	*Pueraria montana*	312 IAC 18-3-16
Leafy Spurge	*Euphorbia esula*	312 IAC 18-3-25
Marestail Or Horseweed	*Conyza xanadensis*	IC 15-16-7-2
Mile-A-Minute Vine	*Persicaria perfoliata*	312 IAC 18-3-25
Morrow's Honeysuckle	*Lonicera morrowii*	312 IAC 18-3-25
Mugwort	*Artemisia vulgaris*	312 IAC 18-3-25
Multiflora Rose	*Rosa multiflora*	312 IAC 18-3-13
Musk Thistle	*Carduus nutans*	312 IAC 18-3-25
Pale Swallow-Wort	*Vincetoxicum rossicum*	312 IAC 18-3-25
Palmer Amaranth	*Amaranthus palmeri*	IC 15-16-7-2
Pepperweed	*Lepidium latifolium*	312 IAC 18-3-25
Poison Hemlock	*Conium maculatum*	312 IAC 18-3-25 IC 15-16-7-2
Powell Amaranth	*Amaranthus powellii*	IC 15-16-7-2
Purple Loosestrife	*Lythrum salicaria*	312 IAC 18-3-13
Reed Canarygrass	*Phalaris arundinacea*	312 IAC 18-3-25
Rough Pigweed	*Amaranthus retroflexus*	IC 15-16-7-2
Sericea Lespedeza	*Lespedeza cuneata*	312 IAC 18-3-25
Shattercane	*Sorghum bicolor*	IC 15-16-7-2
Small Carpetgrass	*Arthraxon hispidus*	312 IAC 18-3-25
Smooth Pigweed	*Amaranthus hybridus*	IC 15-16-7-2
Spiny Plumeless Thistle	*Carduus acanthoides*	312 IAC 18-3-25
Spotted Knapweed	*Centaurea stoebe*	312 IAC 18-3-25
Tall Waterhemp	*Amaranthus tuberculatus*	IC 15-16-7-2
Tatarian Honeysuckle	*Lonicera tatarica*	312 IAC 18-3-25
Tree-Of-Heaven	*Ailanthus altissima*	312 IAC 18-3-25
White Mulberry	*Morus alba*	312 IAC 18-3-25
Wintercreeper	*Euonymus fortunei*	312 IAC 18-3-25

Source: IDNR 2025c.

5.5.2 Wildlife Resources

The Project area supports a variety of common wildlife. During riparian surveys completed in 2010,

mammals, birds, reptiles and amphibians were incidentally observed and reported by biologists (JFNew 2010). It was noted that uninhabited islands in the area served as “tremendous wildlife refuges” and that stranded logs in shallow areas were well used by perching birds and turtles. A summary of wildlife species observed in the study area is provided in Table 5.5-2.

Table 5.5-2. Common Wildlife Species Observed at the Project

Common Name	Scientific Name
Birds	
Canada goose	*Branta canadensis*
Cardinal	*Cardinalis cardinalis*
Coot	*Fulica americana*
Crow	*Corvus brachyrhynchos*
Flicker	*Colaptes auratus*
Grackle	*Quiscalus quiscula*
Great Blue Heron	*Ardea heroidias*
Kingfisher	*Ceryle alcyon*
Mallard Duck	*Anas platyrchynchos*
Mute Swan	*Cygnus olor*
Osprey	*Pandion haliaetus*
Red-winged blackbird	*Agelaius phoeniceus*
Tree Swallows	*Tachycineta bicolor*
Wood Duck	*Aix sponsa*
Mammals	
Beaver	*Castor canadensis*
Grey Sguirrel	*Scirius carolinensis*
White-tailed deer	*Odocoileus virginianus*
Woodchuck	Marmota monax
Reptiles and Amphibians	
Chorus Frog	*Pseudoacris triseriata*
Turtles	*Chelydriadae and Emydidae*

Source: JFNew 2010.

5.6 Wetlands, Riparian, and Littoral Habitat

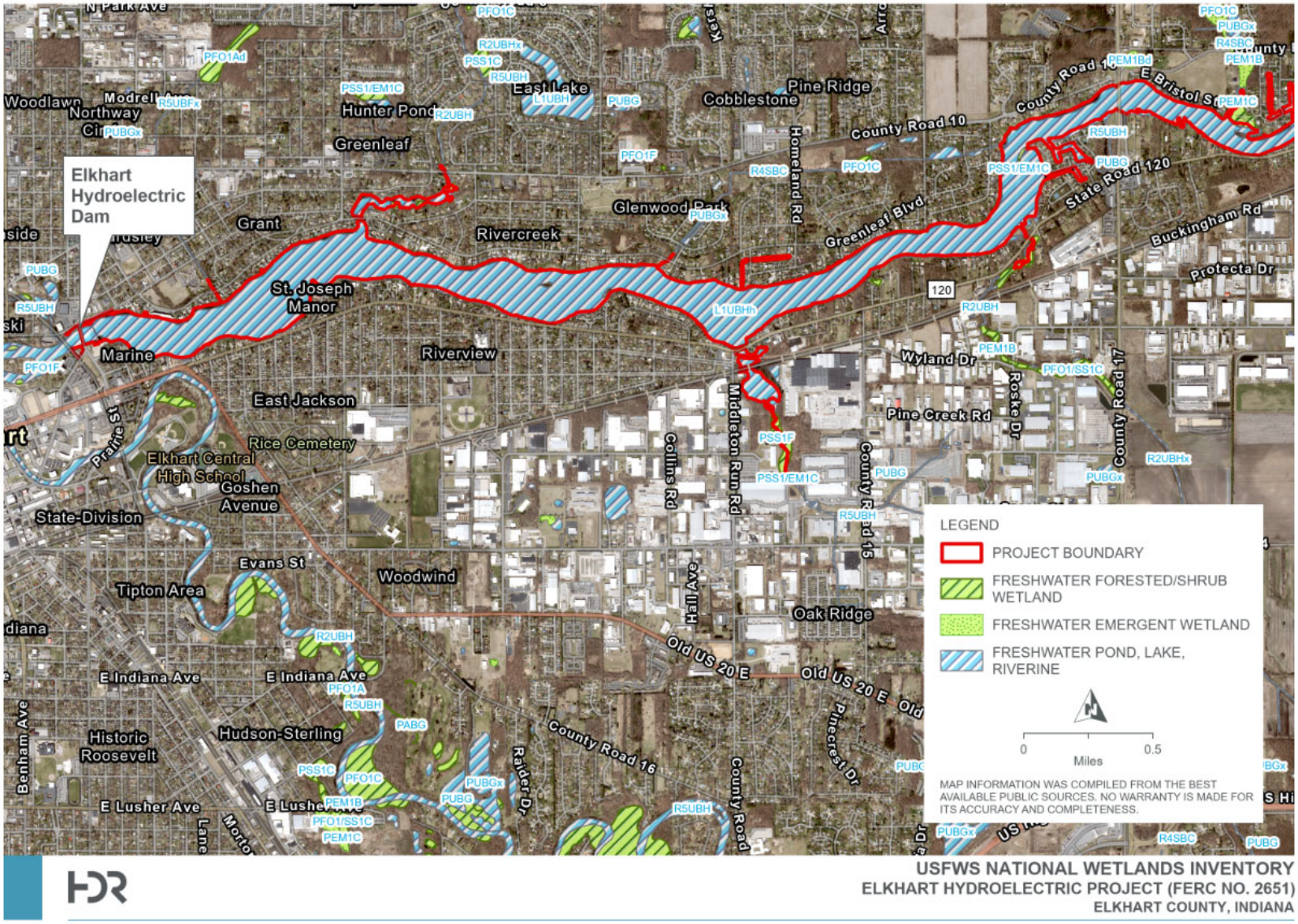
5.6.1 Wetland Habitat

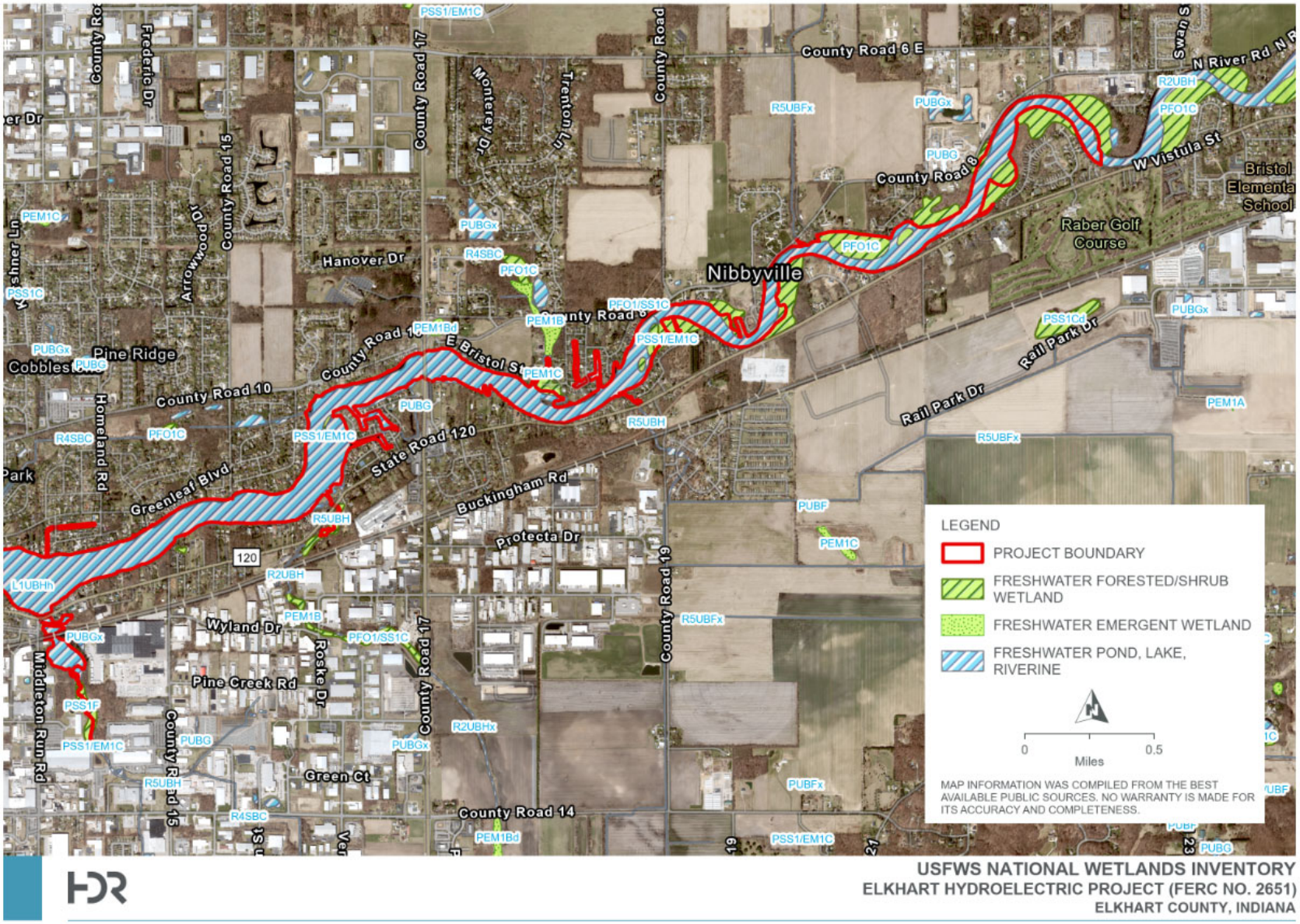
Wetlands are generally defined as areas inundated or saturated by surface or ground water at a frequency and duration sufficient to support vegetation typically adapted for life in saturated soil conditions. Wetlands are primarily located in the upstream portion of Project Boundary, primarily consisting of forested wetlands with small amounts of scrub-shrub and emergent wetlands (Table 5.6-1; Figure 5.6-1).

Table 5.6-1. National Wetlands Inventory Wetlands within the Project Boundary

Wetland Type (Cowardin Classification*)	Number of Wetlands	Area (acres)
Emergent (PEM)	3	1.00
Scrub-Shrub (PSS)	5	3.94
Forested (PFO)	13	30.57

Figure 5.6-1. National Wetland Inventory for the Elkhart Project





USFWS NATIONAL WETLANDS INVENTORY
ELKHART HYDROELECTRIC PROJECT (FERC NO. 2651)
ELKHART COUNTY, INDIANA

5.6.2 Riparian/Littoral and Shoreline Habitat

Riparian surveys completed in 2010 surveyed fourteen miles of shoreline of the St. Joseph River in the Project Boundary (JFNew 2010). The first four miles upstream of Elkhart Dam were dominated by developed residential areas with greater than 90% of the shoreline modified by concrete and sheet pile shoreline protection. Little natural habitat exists in the first four miles with the exception of islands and large woody debris anchored to the substrate. The upper three miles of river consisted of sparse or clustered residential development. Meander bends in the river in the upstream portion of the Project Boundary exhibit alternating forested riparian habitats consisting of mesic forests and scrub-shrub wetlands. Littoral habitat within the Project Boundary ranges from 1.3 to 3.3 meters deep (EA Engineering, Science, and Technology 1998).

5.6.3 License Article 403

In accordance with Article 403 of the current license, the Licensee filed an Aquatic and Riparian Habitat Enhancement and Protection Plan for lands within the Project Boundary. The plan was required to include identification of all high-quality aquatic and riparian habitats on Project lands; a description of how all high-quality aquatic and riparian habitats on Project lands would be managed, enhanced, and protected from increased development; the cost of constructing and maintaining any proposed habitat enhancement or protection measures; and an implementation schedule (FERC 2001). FERC approved the plan on July 13, 2013, and identified four “high quality habitat areas” for protection and/or enhancement (FERC 2013). Three of the four sites underwent enhancement measures such as stabilization, invasive species management, and native plantings. The remaining site was placed under a restrictive covenant so that the site would be protected. Following the enhancement projects, the Licensee was released from monitoring requirements in 2019 but encouraged to continue coordination with IDNR for further site enhancements, mainly, invasive species management (FERC 2019).

5.6.4 Wetland and Riparian Vegetation

A survey conducted within the Project Boundary in 2010 determined that woody wetlands, the most abundant type of vegetated habitat within the Project Boundary and most common wetland type, is dominated by hydrophytic species such as silver maple (*Acer saccharinum*), American elm (*Ulmus americana*), green ash (*Fraxinus pennsylvanica*), Virginia wild rye (*Elymus virginicus*), with smaller areas of black willow (*Salix nigra*), red maple (*Acer rubrum*), sycamore (*Platanus occidentalis*), Tartarian honeysuckle (*Lonicera tatarica*), reed canary grass (*Phalaris arundinacea*), box elder (*Acer negundo*), basswood (*Tilia americana*), riverbank grape (*Vitis riparia*), spicebush (*Lindera benzoin*), blue-flag iris (*Iris virginica*), skunk cabbage (*Symplocarpus foetidus*), and horsetail (*Equisetum hymale*) (JFNew 2010).

Emergent wetlands within the Project Boundary, typically found on the margins of woody wetlands or in backwater areas, was dominated by cattail (*Typha* spp.), arrowhead (*Sagittaria latifolia*), arrow-arum (*Peltandra virginica*), American waterweed (*Elodea canadensis*), pondweed (*Potamogeton* sp.), yellow pond lily (*Nuphar lutea*), purple loosestrife (*Lythrum salicaria*) (an invasive species), and river bulrush (*Scirpus fluviatilis*). Invasive Eurasian watermilfoil (*Myriophyllum spicatum*) was also observed in artificial channels. Scrub-shrub wetlands found in transitional areas between woody and emergent wetlands or on river islands were dominated by black willow, sandbar willow (*Salix exigua*), box elder, silky dogwood (*Cornus amomum*), rod-osier dogwood (*Cornus sericea*), viburnum (*Viburnum* spp.), invasive purple loosestrife, reed canary grass, and cattail.

5.7 Rare, Threatened, and Endangered Species

Some species of fish and wildlife are protected under the Endangered Species Act (ESA) of 1973 and related state laws. The ESA was implemented to provide a framework to conserve and protect threatened and endangered species and their habitats. This act authorizes the determination and listing of species as endangered and threatened; prohibits unauthorized taking, possession, sale, and transport of endangered species; provides authority to acquire land for the conservation of listed species; authorizes civil and criminal penalties for violating the ESA; and other authorizations. An endangered species is defined by the ESA as any species in danger of extinction throughout all or a significant portion of its range. Likewise, a threatened species is likely to become endangered within the foreseeable future throughout all or a significant part of its range. Critical habitats, essential to the conservation of listed species, also can be designated under the ESA. The ESA establishes programs to conserve and recover endangered and threatened species and makes their conservation a priority for federal agencies. Under Section 7 of the ESA, federal agencies are required to consider the potential effects of their proposed actions on endangered and threatened species and critical habitats. If a proposed action has the potential to affect these resources, the federal agency is required to consult with USFWS.

The state of Indiana also maintains a list of plant and animal species considered to be in danger of becoming extirpated. State-endangered species are native to Indiana with five or fewer occurrences state-wide, or otherwise currently “at the brink of extinction.” State-threatened species are native to Indiana with six to twenty occurrences in the state, or that is of conservation concern, or that is otherwise likely to become endangered within the foreseeable future.

5.7.1 Federally Listed Threatened, Endangered, and Candidate Species

An official species list was obtained from the USFWS Information for Planning Consultation system on July 28, 2025. One mammal, bird, reptile, and insect were listed on the USFWS report (USFWS

2025) and are summarized in Table 5.7-1. No critical habitat was reported for the Project Boundary.

Table 5.7-1. Federally Threatened or Endangered Species with Potential for Occurrence in the Project Boundary

Common Name (Scientific Name)	Status*	Required Habitat Conditions
Indiana Bat (*Myotis sodalis*)	FE	Hibernate in tight clusters on the ceilings and sides of caves and mines. Summer habitat includes small to medium river and stream corridors with well-developed riparian buffers and forested areas within 1 to 3 miles of small to medium rivers and streams.
Whooping Crane (*Grus americana*)	NEXP	Breeds, migrates, and forages in inland marshes, lakes, open ponds, shallow bays, wet meadows and rivers, pastures and agricultural fields.
Copperbelly Water Snake (*Nerodia erythrogaster neglecta*)	FT	Found in seasonal wetland complexes with abundant frog and toad productivity for prey.
Monarch Butterfly (*Danaus plexippus*)	PT	Typically found in open grass areas during the breeding season. Adults use a wide variety for flowering plants throughout migration and for foraging, however this species is a milkweed obligate for breeding.

*FE: federally endangered; NEXP: non-essential experimental population; FT: federally threatened; PT: proposed threatened

5.7.2 State-listed Threatened, Endangered, and Candidate Species

The Indiana Natural Heritage Data Center represents a comprehensive effort to determine the state's most significant natural areas through an extensive statewide inventory. Birds, fish, insects, plants, mammals, and reptiles are included on the endangered, threatened, and rare species list for Elkhart County (IDNR 2025d; Table 5.7-2).

Table 5.7-2. State-Protected Species Listed for Elkhart County, Indiana

Common Name	Species Name	Status*
Birds		
American Bittern	*Botaurus lentiginosus*	SE
Common Nighthawk	*Chordeiles minor*	SSC
Golden-Winged Warbler	*Vermivora chrysoptera*	SE
Henslow's Sparrow	*Ammodramus henslowii*	SE
King Rail	*Rallus elegans*	SE
Least Bittern	*Ixobrychus exilis*	SE
Loggerhead Shrike	*Lanius ludovicianus*	SE
Marsh Wren	*Cistothorus palustris*	SE
Northern Harrier	*Circus hudsonius*	SE
Osprey	*Pandion haliaetus*	SSC
Sandhill Crane	*Antigone canadensis*	SSC
Sedge Wren	*Cistothorus platensis*	SE
Upland Sandpiper	*Bartramia longicauda*	SE
Virginia Rail	*Rallus limicola*	SE
Fish		

Common Name	Species Name	Status*
Cisco	*Coregonus artedi*	SE
Common Mudpuppy	*Necturus maculosus*	SSC
Greater Redhorse	*Moxostoma valenciennesi*	SE
Longnose Dace	*Rhinichthys cataractae*	SSC
Insects		
A Caddisfly	*Setodes oligius*	SE
American Burying Beetle	*Nicrophorus americanus*	SX
American Salmonfly	*Pteronarcys dorsata*	SE
Band-Winged Meadowhawk	*Sympetrum semicinctum*	SR
Black-Dashed Apamea	*Apamea nigrior*	ST
Boreal Stonefly	*Acroneuria lycorias*	SE
Cinnamon Tussock Moth	*Dasychira cinnamomea*	SE
Curved Halter Moth	*Capis curvata*	ST
Graceful Underwing	*Catocala gracilis*	SR
Little Virgin Tiger Moth	*Grammia virguncula*	SR
Many-Lined Wainscot	*Leucania multilinea*	SE
Multicolored Brocade	*Meropleon diversicolor*	ST
Orange-Striped Sedge Moth	*Crambus girardellus*	SR
Pitcher Plant Borer Moth	*Papaipema appassionata*	SE
Pitcher Window Moth	*Exyra fax*	SE
Praeclara Underwing	*Catocala praeclara*	SR
Royal Fern Borer Moth	*Papaipema speciosissima*	ST
Salt Marsh Wainscot	*Leucania amygdalina*	SR
Two-Lined Stonefly	*Perlesta golconda*	SE
White-Eyed Sedge-Borer	*Iodopepla u-album*	SR
Wood-Colored Apamea	*Apamea lignicolora*	SR
Mammals		
Badger	*Taxidea taxus*	SSC
Least Weasel	*Mustela nivalis*	SSC
Star-Nosed Mole	*Condylura cristata*	SSC
Plants		
American Wintergreen	*Pyrola americana*	ST
Blackseed Needlegrass	*Piptochaetium avenaceum*	ST
Bog Bluegrass	*Poa paludigena*	ST
Bog Rosemary	*Andromeda glaucophylla*	ST
Carolina Mosquito-Fern	*Azolla caroliniana*	ST
Carolina Yellow-Eyed Grass	*Xyris difformis*	ST
Drummond's Rockcress	*Boechera stricta*	SE
Dwarf Chinquapin Oak	*Quercus prinoides*	SE
Dwarf Umbrella-Sedge	*Fuirena pumila*	ST
Eastern Prairie White-Fringed Orchid	*Platanthera leucophaea*	SE
Eastern White Pine	*Pinus strobus*	ST
Green Adder's-Mouth	*Malaxis unifolia*	SE

Common Name	Species Name	Status*
Green Rockcress	*Borodinia missouriensis*	SE
Green-Keeled Cotton-Grass	*Eriophorum viridicarinatum*	ST
Ground Juniper	*Juniperus communis var. depressa*	ST
Herb-Robert	*Geranium robertianum*	ST
Hickey's Clubmoss	*Dendrolycopodium hickeyi*	ST
Horned Bladderwort	*Utricularia cornuta*	SE
Horsetail Spikerush	*Eleocharis equisetoides*	SE
Kitten Tails	*Besseya bullii*	SE
Large Cranberry	*Vaccinium macrocarpon*	ST
Leafy Northern Green Orchid	*Platanthera aquilonis*	ST
Least Duckweed	*Lemna minuta*	SE
Ledge Spike-Moss	*Selaginella rupestris*	SE
Lesser Bladderwort	*Utricularia minor*	ST
Long-Beaked Baldrush	*Rhynchospora scirpoides*	ST
Michaux's Stitchwort	*Minuartia michauxii var. michauxii*	ST
Mountain Holly	*Ilex mucronata*	ST
Ostrich Fern	*Matteuccia struthiopteris*	ST
Pink Lady's-Slipper	*Cypripedium acaule*	SE
Pipewort	*Eriocaulon aquaticum*	SE
Pipsissewa	*Chimaphila umbellata ssp. Cisatlantica*	SE
Purple Bladderwort	*Utricularia purpurea*	ST
Red Baneberry	*Actaea rubra ssp. Rubra*	SE
Robbins' Spike-Rush	*Eleocharis robbinsii*	ST
Running Serviceberry	*Amelanchier humilis*	SE
Rushlike Aster	*Symphyotrichum boreale*	ST
Shining Ladies'-Tresses	*Spiranthes lucida*	ST
Slender Cotton-Grass	*Eriophorum gracile var. gracile*	ST
Small Cranberry	*Vaccinium oxycoccos*	ST
Small Purple-Fringe Orchid	*Platanthera psycodes*	ST
Smith's Bulrush	*Schoenoplectiella smithii*	ST
Spotted Pondweed	*Potamogeton pulcher*	ST
Straw Sedge	*Carex straminea*	ST
Tall Beaked-Rush	*Rhynchospora macrostachya*	ST
Tall Millet-Grass	*Milium effusum*	ST
Trailing Arbutus	*Epigaea repens*	ST
Tuckerman's Panic-Grass	*Panicum tuckermanii*	ST
Weakstalk Bulrush	*Schoenoplectiella purshiana*	ST
Wild Calla	*Calla palustris*	SE
Winged Cudweed	*Pseudognaphalium macounii*	SX
Reptiles		
Blanding's Turtle	*Emydoidea blandingii*	SE
Eastern Massasauga	*Sistrurus catenatus*	SE
Kirtland's Snake	*Clonophis kirtlandii*	SE

Common Name	Species Name	Status*
Spotted Turtle	*Clemmys guttata*	SE
Woodland Box Turtle	*Terrapene carolina carolina*	SSC
Mollusks		
Pointed Campeloma	*Campeloma decisum*	SSC

*SE: state-endangered; ST: state-threatened; SR: state-rare; SSC: state species of special concern; SX: state-extirpated

5.8 Recreation and Land Use

5.8.1 Existing Recreation Facilities and Opportunities

Elkhart County provides recreational opportunities including Bonneyville Mill and DeFries Gardens, 47 miles of trails and greenways, and 1,424 acres of owned parks and 155 acres of managed (not owned) parks. These facilities offer playgrounds, athletic fields/courts, shelters, cross-county skiing, disc golf, mountain bike trails, hiking/walking trails, and access to water sports such as canoeing/kayaking (Lehman & Lehman, Inc. 2024).

The City of Elkhart Parks and Recreation also provides an extensive park system and is actively involved in maintaining its existing parks as described in the Elkhart River District Implementation Plan and 2024-2028 Master Plan (Elkhart County Parks n.d.).

Primary recreation opportunities within the Project Boundary include boating, fishing, and wildlife and scenery viewing. Boating and fishing occur in both the Project impoundment and tailwater area. Recreational boaters enjoy motorized boats, canoes, and kayaks in the reservoir. The public can access the reservoir via commercial marinas, residential docks, recreational areas, and publicly-accessible shoreline. Fishing opportunities include walleye and smallmouth bass in the spring and early summer. Other sport fish include catfish, rock bass, crappie, bluegills and panfish (I&M 1998).

Article 404 required the Licensee to file a RMP. The RMP was approved by FERC on January 17, 2003, and amended on July 7, 2016. Consistent with the requirements of the RMP, there are three existing FERC-approved recreation facilities (Project Facilities) at the Project. The recreational opportunities at each facility are provided in Table 5.8-1. I&M and the City of Elkhart have a Memorandum of Understanding designating I&M provides annual funding to the City of Elkhart to maintain all three Project facilities. The Project Facilities are shown on Figure 5.8-1.

Table 5.8-1. Existing Project Facilities

Project Facility	Recreational Opportunities
Upstream Canoe Portage (see Figure 5.8-2-)	o Canoe take-out with stone landing and stone-covered ramp o 300 ft of reservoir bank fishing from rip-rapped shoreline o Loading/unloading area o Concrete portage route o Informational and directional signage

Project Facility	Recreational Opportunities
North Side Tailwater Access (see Figure 5.8-3)	○ Canoe put-in (stone) ○ Tailwater bank fishing (unimproved) ○ Americans with Disabilities Act (ADA) concrete portage route ○ Informational and directional signage
South Side Tailwater Access (see Figure 5.8-4)	○ ADA fishing platform (two levels) with concrete access ramp ○ Fishing access along the riverbank via stairs (crushed stone) ○ Picnic area with 3 ADA picnic tables ○ Asphalt parking area (11 parking spaces, including 2 ADA) ○ ADA portable restrooms ○ Trash receptable ○ Information and Directional Signage

Non-project recreational uses are dispersed throughout the Project Boundary and in the vicinity of the Project, providing access for fishing, boating, river viewing, and other recreational activities (Figure 5.8-1). On the upstream end of the Project, IDNR maintains the Six-Span Bridge Public Access site with a boat ramp, ADA canoe/kayak launch, parking area (45 parking spaces), bike path and restrooms. This land was donated by I&M to Elkhart County in 1970 (I&M 1998). Downstream of the Project, there are parks and public access along the St. Joseph and Elkhart Rivers. Beardsley Park, just downstream of the Project and Edgewater Park, further downstream on the St. Joseph River both provide ADA accessible canoe/kayak launches (I&M 2021).

Upstream of Six-Span Bridge is a former campground called Nibbyville (non-Project), however, it is no longer used for recreation and is now a transmission corridor. IDNR was previously interested in leasing this property for recreational development but stated in 2020 it was no longer interested in such a lease (I&M 2021).

Additional state and local recreational opportunities are discussed further in Section 5.8.4.

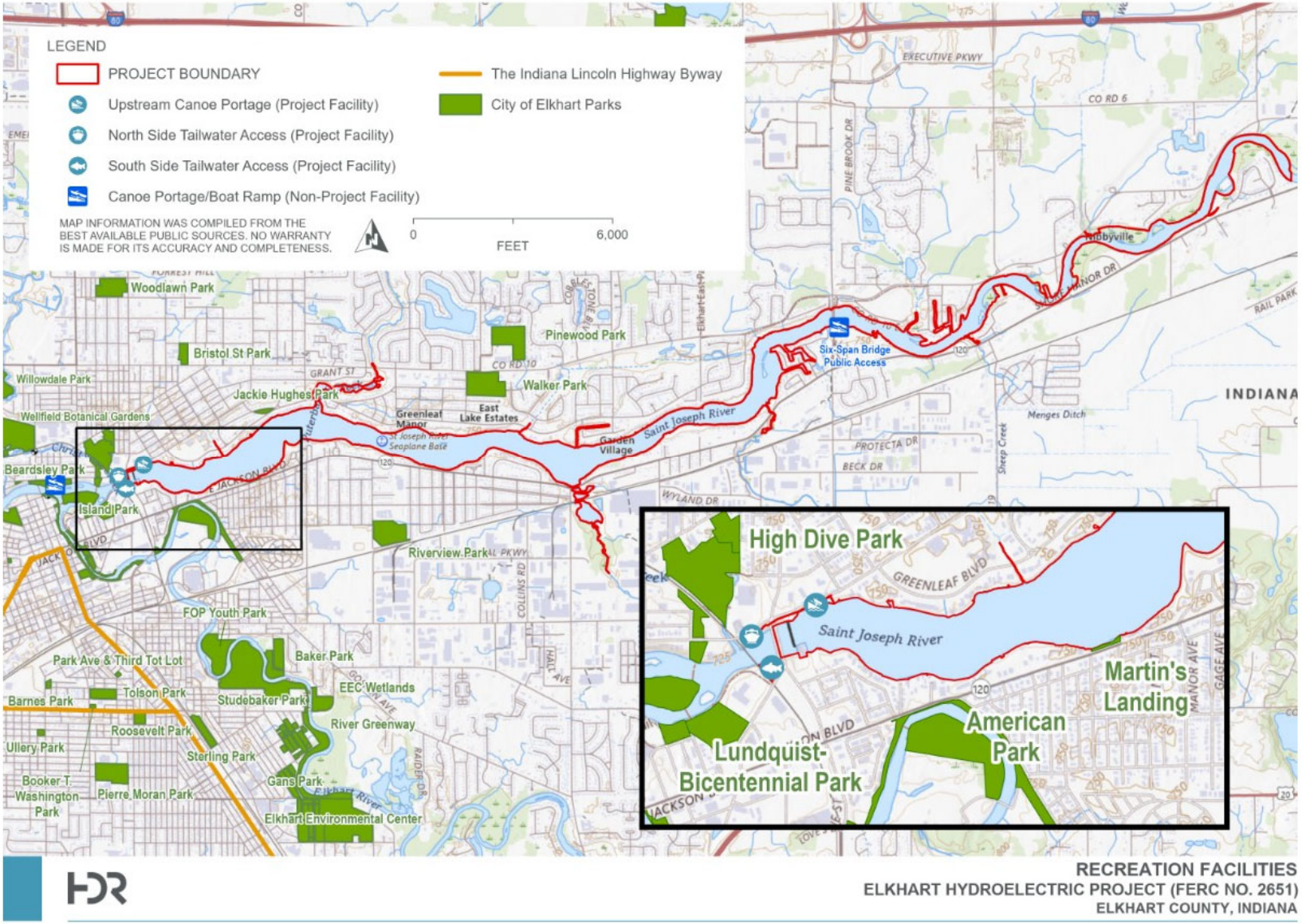


Figure 5.8-1. Elkhart Project Area Recreation Site Map

Figure 5.8-2. Upstream Canoe Portage (Project Facility)

Source: Google Earth, May 2024.

Figure 5.8-3. North Side Tailwater Access (Project Facility)

Source: I&M, September 2025.

Figure 5.8-4. South Side Tailwater Access (Project Facility)

Source: I&M, August 2025.

5.8.2 Current Project Recreation Use Levels

Article 405 required the licensee to consult with the IDNR and City of Elkhart Parks and Recreation for the FERC Form 80. On November 16, 2020, the Commission revised Article 405 to require the Licensee to consult every six years starting in 2021 with the IDNR and City of Elkhart Parks and Recreation on the need for additional recreation enhancements at the Project, including the need for public boat launching facilities and file a summary report of the consultation.

On December 28, 2021, I&M filed with the Commission the Recreation Consultation Summary Report. This report found that eleven recreation areas at the Project provide water-based activities and were managed by I&M, Elkhart County, the City of Elkhart, and the City of Bristol. While population is growing in Elkhart County, the Recreation Consultation Summary Report found that the existing Project facilities should provide sufficient facilities and access to accommodate recreation usage over the next six years (I&M 2021).

As a result of the 2021 Recreation and Consultation Summary Report, I&M has been working with the City of Elkhart to identify a location to install an ADA-compliant EZ Launch. Due to feasibility, safety, and stability concerns, the Canoe Portage Take-Out is no longer considered a feasible location. I&M and the City of Elkhart are working to establish an alternative location, likely at the Environmental

Center on the Elkhart River, south of the Project and outside of the Project Boundary (see Figure 5.8-1).

Consistent with Article 405, I&M will consult with IDNR and the City of Elkhart in 2027 on the need for additional recreational enhancements at the Project and provide a recreational consultation summary report in accordance with Article 405 by December 31, 2027.

5.8.3 Specially Designated Recreation Areas

5.8.3.1 Wild, Scenic, and Recreational Rivers

No portion of the Project has been designated under the National Wild and Scenic Rivers System.

5.8.3.2 Nationwide Rivers Inventory

No portion of the Project has been designated under the National Rivers Inventory System.

5.8.3.3 Scenic Byways

The Indian Lincoln Highway Byway runs north on S. Main Street, then west on W. Jackson Blvd, and southwest along W. Franklin Street through the City of Elkhart, south of the Project powerhouse and spillway (see Figure 5.8-1). The Project is not visible from the Indian Lincoln Highway Byway.

5.8.3.4 National Trails System and Wilderness Areas

There are no National Scenic and National Historic Trails in or near the Project. No portion of the Project has been designated as wilderness area, recommended for such designation, or designated as a wilderness study area under the Federal Wilderness Act.

5.8.4 Regionally or Nationally Significant Recreation Areas and Recreational Attractions in the Vicinity of the Project

There are no known federal recreation opportunities within or near the Project. State and local recreational attractions near the Project provide a wide array of recreational opportunities, as further discussed below.

5.8.4.1 State Recreation Sites in the Project Vicinity

As discussed in Section 5.8.1, IDNR manages one recreation facility near the Project Boundary (Six-Span Bridge Public Access). Additional IDNR managed recreation facilities in the vicinity of the Project Boundary include:

- Elkhart Bog Nature Preserve – Elkhart Bog Nature Preserve is approximately two miles northeast of the Elkhart Dam in Elkhart, IN. It features a large wetland formed on top of a glacial lake, containing a variety of plants that are uncommon or rare in the state. The facility provides parking, ADA trails, and an observation deck (IDNR, n.d.-a).

- Pipewort Pond Nature Preserve – Pipewort Pond Nature Preserve is state protected and is approximately six miles northeast of Elkhart Dam in Bristol, IN. It features a shallow basin with a wide range of water levels, resulting in peaty muck flats and sandflats, providing habitat for herons, ducks, shorebirds and rare plant species. The facility provides parking and a boardwalk overlooking the pond (IDNR, n.d.-b).

5.8.4.2 Local Recreation Sites in the Project Vicinity

As discussed in Section 5.8.1 and shown on Figure 5.8-1, Elkhart County and the City of Elkhart provide recreational opportunities in the vicinity of the Project Boundary. A few of these nearby recreational opportunities include:

- Martin's Landing Park – Martin's Landing Park is managed by the City of Elkhart and is located on the southern side of the reservoir, just upstream of the dam. This facility provides trails, picnic benches and green space overlooking the reservoir (Evendo n.d.).

- Lundquist-Bicentennial Park - Lundquist-Bicentennial Park is managed by the City of Elkhart and is located just downstream of the Project's South Side Tailwater Access. This facility provides trails, fishing, restrooms and picnic tables (Elkhart County 2025).

- Island Park – Island Park was established in 1887 and is managed by the City of Elkhart, just downstream from the Project. This facility provides river views and green space with a gazebo, bandstand, picnic shelter, playground, fishing areas, and paved walkways (City of Elkhart 2025).

Other nearby parks also provide a range of recreational opportunities in Elkhart County.

5.8.5 Recreation Needs Identified in Management Plans

The 2021-2025 Statewide Comprehensive Outdoor Recreation Plan (SCORP) is prepared by IDNR every five years to quantify and analyze Indiana's recreational resources to support regulatory decisions, identify areas to be researched, and support stakeholder synchronization. The SCORP notes that the population in the state decreased over the last five years and overall, the economy may slow down. However, tourism in Indiana continues to grow and provide jobs to boost the economy. Park use also continues to rise, in line with national trends (IDNR 2020b).

IDNR recommends 20 acres of local/state/federal owned and operated public outdoor recreation acres per 1,000 people. The SCORP concluded that Elkhart County does not meet the IDNR recommended per capita outdoor recreation acres or federal/state recreation acres. Elkhart County also meets the IDNRs definition of a “critical county” which is defined as a county that does not have 55 acres of outdoor recreation opportunities per 1,000 people. The SCORP identifies a proposed trail that would connect Elkhart County to LaGrange and Noble counties providing recreational opportunities across county lines (IDNR 2020b).

Elkhart County updates it’s Parks and Recreation Master Plan every five years. The 2024-2028 Master Plan guides the expansive park system in the County by gathering feedback from the public and applying national recreation standards. The Master Plan goals for 2024-2028 include 1) improve the quality of life for citizens by preserving cultural/history, education/experiences, and health and wellness; 2) create parks and historical sites that are unique destinations; 3) diversify funding for parks; 4) establish a plan to improve and update equipment, buildings and amenities; and 5) protect natural resources within the parks and County (Lehman & Lehman, Inc. 2024).

5.8.6 Land Use

Land use in the Project vicinity is dominated by agricultural, residential, commercial, industrial and recreational uses (Figure 5.1-2). A well-established infrastructure of railroads and highways runs through Elkhart County. The area immediately surrounding the Project has been developed for urban and suburban use. Along the perimeter of the reservoir near the powerhouse, development is primarily residential. The Johnson Street bridge is directly downstream of the Project dam and powerhouse and carries a significant flow of local traffic. Upstream from the Project, residential development continues until the Six-Span Bridge at County Road 17 (I&M 1998).

5.8.7 Licensee’s Shoreline Permitting Policies and Buffer Zones

Shoreline habitat is summarized in Section 5.6.2 and includes residential areas with impervious cover within the Project Boundary. Much of the undeveloped land is either steeply-banked, narrow, or wetland. I&M owns the land in-fee or holds easements on the land in the Project Boundary.

Article 407 (Use and Occupancy) defines permissible uses and occupancy of Project lands and waters and I&M’s authority to allow such uses. No buffer zones have been identified within the Project Boundary. Adjoining property owners who want to obtain approval to construct shoreline facilities (i.e., piers, docks, boat landings, bulkheads, and similar structures) must first obtain approval from IDNR for construction within a floodway. Following that approval, I&M will issue adjoining property owners a lease allowing installation of the facilities on I&M’s fee-owned property or provide a letter of authorization for installation of the desired facilities on easement lands held by I&M. The landowner is

responsible for obtaining permits required by federal, state, or local agencies having jurisdiction (I&M 1998).

5.9 Aesthetic Resources

The powerhouse and spillway for the Project are visible from Johnson Street (see Figure 5.9-1) and East Beardsley Ave, which are directly downstream and north of the Project, respectively. The powerhouse and substation are visible from Marine Avenue, which extends south from the Project substation. Aside from the adjacent roadways, there are limited views of the Project from downstream recreation areas due to the elevation of Johnson Street bridge and vegetation in the area. However, there are opportunities to view the Project from upstream. I&M provides a hand carry boat launch approximately 600 ft upstream of the dam on the river right (looking downstream) shoreline. This access area offers views of the historic character of the powerhouse and the scenic vista of the impoundment (see Figure 5.9-2). The residences off Marine Avenue have large trees that partially obscure their view of the substation, powerhouse, and dam. The Project operates in a run-of-river mode which maintains the scenic views and wildlife viewing opportunities to recreationists and residents along the upstream shoreline.

The appearance of the Project blends with the highly developed nature of the surrounding area. The concrete dam and the historical appearance of the brick powerhouse are consistent with the aesthetic characteristics of the area. Trees and shrubbery have been planted near Johnson Street to enhance the visual character of the surrounding Project land. The substation is located in a corridor already containing overhead utility lines. Screening has been installed on a portion of the chain link fence around the substation along Marine Avenue to soften the appearance of the substation. Both the dam and powerhouse along with the surrounding and additional Project facilities appear tidy and well-maintained.

Figure 5.9-1. Upstream View of Elkhart Project Powerhouse and Dam from Johnson Street

Source: I&M, August 2025.

Figure 5.9-2. Downstream View of Elkhart Project Powerhouse and Dam from Hand Carry Boat Launch

Source: I&M, August 2025.

5.10 Cultural Resources

In considering a new license for the Project, FERC has the lead responsibility for compliance with applicable federal laws, regulations, and policies pertaining to historic properties, including the National Historic Preservation Act of 1966 (NHPA), as amended.[16] Section 106 of the NHPA (Section 106)[17] requires federal agencies to take into account the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment.

The Section 106 process and its implementing regulations (defined at 36 CFR Part 800) is intended to accommodate historic preservation concerns with the needs of the federal undertaking through a process of consultation with agency officials, the SHPO, federally recognized Indian Tribes and their Tribal Historic Preservation Officer (THPO), and other parties with a potential interest in an undertaking's effects on historic properties. The Section 106 process is as follows:

1. Initiate Section 106 consultation with the lead federal agency and consulting entities identified by the lead agency;
2. Identify historic properties within the federal undertaking Area of Potential Effects (APE) that may be affected (directly and/or indirectly) by an undertaking;
3. Assess the effects of an undertaking on historic properties; and
4. Seek ways to avoid, minimize, or mitigate adverse effects on historic properties through consultation.

Historic properties are defined in 36 CFR Part 800.16(l) as pre-contact or historic period districts, sites, buildings, structures, or individual objects listed in or eligible for inclusion in the National Register of Historic Places (NRHP). This term includes artifacts, records, and remains related to and located within historic properties, as well as properties of traditional religious and cultural importance (often referred to as "traditional cultural properties") that meet the NRHP criteria.

The Secretary of the Interior has established the criteria for evaluating properties for inclusion in the National Register (36 CFR Part 60). In accordance with the criteria, properties are eligible if they are significant in American history, architecture, archaeology, engineering, or culture. The quality of significance is present in historic properties that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

[16] 54 USC §300101 et seq.
[17] 54 USC §306108

A. Are associated with events that have made a significant contribution to the broad patterns of our history; or

B. Are associated with the lives of persons significant in our history; or

C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant or distinguishable entity whose components may lack individual distinction; or

D. Have yielded or may be likely to yield information important in prehistory or history.

5.10.1 Area of Potential Effects

An APE is defined as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist (36 CFR 800.16[d]). The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking. The Commission has not yet defined an APE for the Project. In the context of the relicensing process, FERC generally defines the APE as follows: “The APE includes all lands within the Project Boundary. The APE also includes lands outside the Project Boundary where cultural resources may be affected by Project-related activities that are conducted in accordance with the FERC license.”

Because the Project Boundary encompasses lands that are necessary for Project purposes, Project-related operations, potential enhancement measures, and routine maintenance activities associated with the implementation of a license issued by the Commission are expected to take place within the Project Boundary. The proposed APE is consistent with the potential scope of Project effects and the manner in which the Commission has defined the APEs for similar hydroelectric relicensing projects in the region.

5.10.2 Archaeological Resources

In anticipation of the Project’s relicensing, the Licensee conducted a review of existing cultural resources survey reports and records and NRHP records to identify previously reported archaeological and historic resources in the Project vicinity.

During the most recent relicensing of the Project, Louis Berger & Associates, Inc. (Berger) conducted a Phase IA Archaeological Investigation of the Project (Chadderdon and Bowers 1996). This study was primarily desktop focused and reviewed existing datasets available through the SHPO and NRHP. The study did not include field surveys within the Project Boundary but results suggested the Project vicinity has a high potential for precontact archaeological sites. Specifically, Paleoindian, Archaic, and Woodland period archaeological sites have been identified within a 2-mile radius of the Project with

additional isolated artifact find spots. Except for islands within the impoundment, the area within the Project boundary was assessed as retaining limited potential due to residential development and because of the low, marshy margins. The islands were assessed as having a high potential for precontact occupation use since they were high terrain within general lowlands prior to construction of the Project. No additional archaeological surveys were recommended.

A review of the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the SHAARD Archaeology and Structures Application identified two previously recorded archaeological resources within the Project Boundary: archaeological sites 12E0189 and 12E0416. Archaeological site 12E0189 is known as Sage's Mill. It is the location of a nineteenth century mill associated with a gentleman named Sage. The site has not been fully identified though no surface remains exist. The site is assumed to be located within the eastern third of the Project area based on General Land Office (GLO) mapping. Site 12E0416 was identified as a precontact scatter of artifacts and fire-cracked rock. It was identified during the Potawatomi Village Survey along the immediate northern shoreline of the reservoir east of the Osolo Township Ditch. Within a 0.25-mile radius of the Project Boundary, four archaeological resources have been identified: the original two identified within the Project Boundary, the remnants of the original Town of Pulaski, and associated early nineteenth houses (sites 12E0324 and 12E0325) west of the Project dam. Most of the Project has not been archaeologically surveyed via subsurface testing.

5.10.3 Historic Architectural Resources

The Project was evaluated for inclusion in the NRHP during the previous relicensing, and it was concluded that the Project facilities do not meet National Register Criteria for Evaluation (36 CFR 60.4) as they do not meet the threshold for Criteria A-D as outlined above. The Project was constructed between 1911-1913 and did not contribute to the significant growth of Elkhart between 1868-1870, attributable to the increased waterpower development that transformed Elkhart's industrial base into a manufacturing center. The Project is not associated with any particular significant person in history, and the physical characteristics of the Project were antiquated at the time of construction and not innovative or significant for its time (Berger 1996). SHPO concurred with this determination in 2000.

A review of SHAARD and the Indiana Historic Buildings, Bridges, and Cemeteries (IHBBC) Map (SHAARD 2025; IHBBC 2025) identified two previously recorded historic resources within the APE: the Project and the Elkhart County Bridge Number 383 (Johnson Street Bridge). While the Project facility has been determined not eligible for the NRHP, according to SHAARD data, the Elkhart County Bridge is the longest of four extant Warren deck truss bridges in Indiana and one of two extant representatives of a "prolific home-town builder." Its status in SHAARD records is noted as "Contributing."

The Middleton Run Cemetery (CR-20-25), dating between 1852 and 2000 is immediately south of the Project Boundary along E Jackson Boulevard, just west of Sparr Avenue. It is not within the Project Boundary, but it is within a surrounding 0.25-mile study radius. A total of 31 County Survey Sites are located within 0.25 miles of the Project Boundary. Primarily barns and houses, these include the notable Conrad Ziesel House—Ziesel being the owner of Ziesel Department Store formerly located in downtown Elkhart—and several other exemplary houses dating to the early-to-mid-twentieth century. Many of these homes are found within the Beardley Avenue Historic District, located approximately 233 meters west of the Project Boundary; the Elkhart Downtown Commercial Historic District, approximately 730 meters southwest of the Project Boundary; and the Elkhart River Race Industrial District, approximately 504 meters southwest of the Project Boundary.

5.10.4 Existing Discovery Measures

Article 406 of the existing license includes measures to protect and manage historic properties:

> Article 406. If archeological or historic sites are discovered during any future project modifications or construction that require land-disturbing activities, or during project operation or maintenance, or if the licensee plans any future modifications, not already approved by this license and other than routine maintenance, to already discovered archaeological or historic sites, the licensee shall: 1) consult with the Indiana SHPO about the discovered sites; 2) prepare a site-specific plan with schedule to evaluate the significance of the site(s) and to avoid or mitigate any impacts to National Register eligible sites; 3) base the site-specific plan on recommendation of the SHPO and the Secretary of the Interior (SOI) Guidelines for Archaeology and Historic Preservation; 4) file the site-specific plan for Commission approval, together with comments of the SHPO; and 5) take the necessary steps to protect the discovered archaeological or historic sites from further impact until notified by the Commission that all of these requirements have been satisfied.
>
> The Commission may require cultural resources surveys and changes to the site-specific plans based on the filings. The Licensee shall not implement a cultural resources management plan (CRMP), begin any land-clearing or land-disturbing activities in the vicinity of any discovered sites until informed by the Commission that the requirements of this article have been fulfilled.

In the Environmental Assessment (FERC 2000) for the previous relicensing, FERC determined that the Project had no effect on known archaeological or historic sites listed or eligible for inclusion in the NRHP; the Indiana SHPO concurred with FERC's assessment.

5.10.5 Identification of Indian Tribes and Traditional Cultural Properties

In a letter dated December 30, 2024, the Commission issued a tribal consultation letter to the Indian Tribes and contacts listed below. As of March 25, 2025, responses were received from the Menominee Indian Tribe, Sault Ste. Marie Tribe of Chippewa Indians, and the Forest County Potawatomi Community. The Forest County Potawatomi Community responded with an update to their THPO and requested that the Project information be emailed to the THPO; FERC subsequently contacted the THPO on February 13, 2025. The Menominee Indian Tribe of Wisconsin responded that the Project is outside of the Tribe's ancestral area of concern, thus they were removed from the Project's distribution list and are not included below. The Sault Ste. Marie Tribe of Chippewa Indians, Michigan responded that they would consult if other Tribes do not participate. No other responses have been received.

Darien Rhodd
Tribal Historic Preservation Officer
Citizen Potawatomi Nation
1601 South Gordon Cooper Drive
Shawnee, OK 74801

Luke Heider
Tribal Historic Preservation Officer
Forest County Potawatomi Community
5416 Everybodys Road
Crandon, WI 54520

Dustin Meshigaud
Tribal Historic Preservation Officer
Hannahville Indian Community
N14911 Hannahville B1 Road
Wilson, MI 49896

Alina Shively
Lac Vieux Desert Band of Lake Superior Chippewa Indians of Michigan
Chippewa Indians of Michigan
East 23968 Pow Wow Trail
Watersmeet, MI 49969

Melissa Wiatrolik
Tribal Historic Preservation Officer
Little Traverse Bay Bands of Odawa Indians, Michigan
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Harbor Springs, MI 49740

Lakota Hobia
Tribal Historic Preservation Officer
Match-e-be-nash-she-wish Band of Pottawatomi Indians of Michigan
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Shelbyville, MI 49344

Logan York
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Matthew Bussler
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Emma Donmye
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Sarah Thompson
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Lac du Flambeau Band of Lake Superior Chippewa Indians
P.O. Box 67
Lac du Flambeau, WI 54538

Onyleen Zapata
Tribal Historic Preservation Officer
Nottawaseppi Huran Band of the Potawatomi
1485 Mno-Bmadzewen Way
Fulton, MI 49052

5.11 Socioeconomic Resources

The Project is located in Elkhart County, which is one of 92 counties in Indiana. Economic development in Elkhart County was founded on a manufacturing economy, powered by hydraulic developments along the St. Joesph River. Construction of the Project transformed the landscape and it remains at the center of the City of Elkhart, providing a variety of benefits to residents.

The 2020 census reported that approximately 207,047 people reside in Elkhart County, which encompasses approximately 463.2 square miles with a population density of 447 persons per square mile (U.S. Census Bureau [USCB] 2020a). Compared to the 2010 census population of 197,559, the current population has increased 4.8% (USCB 2010). The 2023 American Community Survey 1-year population estimated the current population of Elkhart County is 206,409, a 0.3% decrease over the three-year period (USCB 2023a). In 2020, the City of Elkhart had a population of 53,923 (USCB 2020b), which has grown 5.8% since 2010 (USCB 2010).

In 2023, the median household income for Elkhart County was $65,617, lower than the statewide median household income of $70,051 for the same period (USCB 2023b). In 2023, the unemployment rate for Elkhart County was 3.4%, compared to 4.3% in Indiana and a national unemployment rate of 5.2% (USCB 2023c). There are over 5,000 business establishments employing more than 136,000 people in Elkhart County (USCB 2023d). Manufacturing, retail trade, other services (except public administration), construction, health care and social assistance, and accommodation and food services are the most abundant establishments. The manufacturing industry employs the greatest number of people (55.7%), followed by the health care and social assistance industry (8.5%), and retail trade (7.5%) (USCB 2023d).

Section 6
Preliminary Issues, Project Effects, and Potential Studies List

6.1 Consultation to Date

As discussed in Section 2.2, on August 1, 2025, the PAD questionnaire was distributed to stakeholders for a 30-day input period via email and USPS letters. No specific Project effects were identified by stakeholders in response to the PAD questionnaire.

6.2 Preliminary Issues and Studies Needed

6.2.1 Geology and Soils

6.2.1.1 Potential Issues

The continued operation and maintenance of the run-of-river Project is not anticipated to have additional cumulative impacts to geologic or soil resources. No potential issues related to geology or seismicity have been raised.

The shoreline of the impoundment is approximately 7.5 miles long and provides opportunities for access to the St. Joseph River, as constrained by private development. Shoreline habitat is summarized in Section 5.6.2 and includes mainly residential areas with impervious cover within the Project Boundary. Shoreline stabilization plans for three sites on the Elkhart reservoir were prepared in accordance with the *Order Modifying and approving Aquatic and Riparian habitat Enhancement and Protection Plan Pursuant to Article 403.* The final annual reports were filed December 21, 2018, which fulfilled the requirements under Article 403 regarding shoreline stabilization at the Project and a release from monitoring was issued by the Commission via letter dated January 29, 2019.

6.2.1.2 Proposed Studies

The Licensee believes the existing run-of-river mode of the Project and seasonal reservoir drawdowns have produced stable shorelines that, in combination with the vegetated and/or protected nature of the shorelines in the Project Boundary, provide protection against bank erosion. Therefore, I&M does not propose to conduct a study for geology or soils in the Project area.

6.2.2 Water Resources

6.2.2.1 Potential Issues

Existing uses of Project waters include hydropower generation and recreation (fishing and boating);

other water withdrawals are minor. The entire St. Joseph River watershed and several inland lakes in the watershed have fish consumption advisories due to mercury and PCB levels in fish tissue; these exceedances are addressed by existing mercury and PCB reduction plans in the watershed and are notably not attributed to Project operations.

Independent assessments in the Project area have been carried out to evaluate the ecological health of the river. The river reach within the Project area has yielded some of the highest scores in the entire region, indicating an “excellent” fish community structure. Healthy aquatic resources in a waterbody are typically indicators of good water quality and measured water quality parameters are in compliance with state standards supporting designated uses.

6.2.2.2 Proposed Studies

The Licensee will coordinate with IDEM to obtain a Section 401 Water Quality Certification in support of relicensing. The Project does not contribute to or exacerbate water quality conditions in the St. Joseph River, and no changes are proposed to the equipment or operation of the Project that would create new issues. However, because I&M has been unable to identify a recent continuous current water quality dataset at the Project, I&M is proposing to continuously monitor temperature and DO in the forebay and tailwater area from July – August 2026 to demonstrate waters meet or exceed state water quality standards for these parameters.

6.2.3 Fish and Aquatic Resources (Including Related Rare, Threatened, and Endangered Resources)

6.2.3.1 Potential Issues

Aquatic resources (freshwater fish, mussels, and macroinvertebrates) within the Project Boundary could potentially be affected by Project operations and maintenance. However, in accordance with Article 401 of the current license, the Project operates under run-of-river mode with restrictions on reservoir surface elevation to within 0.5 ft of a target elevation of 741.5 feet NGVD. As stated by the Director, operating under these conditions “adequately and equitably protect[s], mitigate[s] damages to, and enhance[s] fish and wildlife” (FERC 2001). No concerns over mussels or macroinvertebrates were expressed during the previous relicensing.

Fish passage facilities are not available at downstream facilities and diadromous fish are not present at the Project. Common warmwater species comprising shiners, sunfishes, rock bass, black bass, bluntnose minnow, white sucker, darters, and golden redhorse are the most common species found at the Project.

The Licensee proposed no changes to current operations; therefore, the current level of entrainment

mortality is the same as the current and previous license. There are no records that suggest current operations have an adverse effect on fish populations in the Project Boundary.

6.2.3.2 Proposed Studies

Fish surveys in the St. Joseph River, including within the Project Boundary, are performed annually as part of the City of Elkhart's Aquatic Community Monitoring Program. Fish community diversity has not appeared to change appreciably during the current license term and the fish community appears to remain healthy at the Project. In fact, recent data shows slight improvements in fish and macroinvertebrate communities by the reduction of species tolerant to pollution, and an increase in intolerant species. Because there is little concern regarding aquatic life communities within the Project and since fish surveys are performed as part of the City of Elkhart's monitoring program, no aquatic life studies are proposed.

Given the findings of the entrainment study conducted for the previous relicensing, the healthy fishery in the Project reservoir, and no significant changes in Project equipment or operations are proposed, the Licensee does not propose to conduct a desktop entrainment study.

6.2.4 Wildlife and Botanical Resources (Including Related Rare, Threatened, and Endangered Resources)

6.2.4.1 Potential Issues

There is limited terrestrial land within the Project Boundary and no potential issues related to wildlife and botanical resources have been identified. The Project has been in operation for over 100 years, and the existing terrestrial environment has developed in response to the current and proposed Project operations. The continued operation and maintenance of the Project is not anticipated to have significant cumulative impacts to terrestrial wildlife or botanical resources.

The Commission's staff concluded when issuing the current license (FERC 2001) that the Project would have "no effect on threatened or endangered species, because the listed species are not likely found in the Project area and no activities are being proposed by I&M that would alter existing habitat or behavioral patterns of the species" and no ESA consultation was recommended. Similarly, the threatened and endangered species currently identified by the USFWS as potentially in the vicinity of the Project (Indiana bat, copperbelly water snake, whooping crane, and monarch butterfly) are unlikely to be found within the Project Boundary or be affected by the Project operations or maintenance activities.

6.2.4.2 Proposed Studies

Because botanical and wildlife species are likely well-established under the current and proposed operations of the Project facilities, and the Licensee does not currently propose activities at or changes to the Project that would adversely affect habitat, no formal study is being proposed for wildlife and botanical resources.

6.2.5 Wetlands and Riparian Habitat (Including Shorelines)

6.2.5.1 Potential Issues

FERC concluded during the previous relicensing that stable run-of-river operating conditions would have no effect on wetlands, aquatic plant communities, or wildlife (FERC 2001). However, due to the presence of wetlands and other "quality habitat" and possibility of shoreline development, FERC recommended that the Licensee develop a plan for the "protection and enhancement of existing aquatic, terrestrial, and wildlife resources on lands within the Project boundary" (FERC 2001). In accordance with Article 403 of the current license, the Licensee developed an Aquatic and Riparian Habitat Enhancement and Protection Plan that was approved by FERC on July 30, 2013. As part of the Aquatic and Riparian Habitat Enhancement and Protection Plan, one riparian woodland site within the Project Boundary was placed under a restrictive covenant agreement such that the area would not be disturbed. Shoreline stabilization activities and monitoring were conducted at three other sites within the Project Boundary from 2014 to 2018. On January 29, 2019, the Licensee was released from monitoring requirements due to the fulfillment of Article 403 requirements.

No changes to Project operations or development projects by the Licensee are proposed which would impact wetlands, riparian, or shoreline habitat.

6.2.5.2 Proposed Studies

The Licensee does not expect Project effects to the existing wetland habitat as no modifications to the Project's current operations are presently proposed.

6.2.6 Recreation and Land Use

6.2.6.1 Potential Issues

No issues have been identified relevant to recreational resources. There may be temporary closures of recreation facilities associated with the engineering measures to improve the long-term stability of the Elkhart Dam, but such closures would be temporary and I&M would communicate with the appropriate stakeholders prior to the closures.

6.2.6.2 Proposed Studies

No studies are being proposed. Per Article 405, I&M will consult with IDNR and the City of Elkhart in 2027 on the need for additional recreational enhancements at the Project and provide a recreational consultation summary report in accordance with Order Amending Article 405 by December 31, 2027. I&M expects to file an updated RMP with the Final License Application.

6.2.7 Aesthetic Resources

6.2.7.1 Potential Issues

No issues have been identified relevant to aesthetic resources.

6.2.7.2 Proposed Studies

No studies are being proposed.

6.2.8 Cultural and Tribal Resources

6.2.8.1 Potential Issues

As part of the Section 106 Process and its implementing regulations defined at 36 CFR Part 800), the Project will consult with the SHPO, federally recognized Indian Tribes, THPOs, and other parties with a potential interest in an undertaking's effects on historic properties. The Phase IA archaeological survey completed in 1996 by Berger suggests there is limited archaeological potential along the shoreline of the reservoir, but more potential for sites on the reservoir islands. The Project itself has been previously determined not eligible for the NRHP under Criteria A-D. The run-of-river operations and lack of additional construction or Project alterations are unlikely to affect (directly or indirectly) visible historic properties within the adjacent districts or neighborhoods. Furthermore, the Project is not proposing ground-disturbing activities or alterations in the Project operations in conjunction with relicensing so it is unlikely it will affect archaeological resources would be affected.

The Licensee believes the potential for continued operation of Project to impact historic and cultural properties is limited, particularly given the previous finding that the Project is not National Register-eligible. However, if present, archaeological resources could be impacted as a result of ground-disturbance associated with maintenance activities during the term of the new license.

6.2.8.2 Proposed Studies

No studies are proposed.

6.2.9 Socioeconomic Resources

6.2.9.1 Potential Issues

No issues have been identified relevant to socioeconomic resources.

6.2.9.2 Proposed Studies

No studies are being proposed.

6.3 Potential Studies or Information Needs List

Based on the information provided in this PAD, I&M is proposing to continuously monitor temperature and DO in the forebay and tailwater area from July – August 2026 to demonstrate waters meet or exceed state water quality standards for these parameters.

I&M respectfully requests that resource agencies, Indian Tribes, and other licensing parties that may request a study consider FERC's study request criteria set forth in 18 CFR §5.9(b) and outlined below:

- Describe the goals and objectives of each study proposal and the information to be obtained;
- If applicable, explain the relevant resource management goals of the agencies or Indian Tribes with jurisdiction over the resource to be studied;
- If the requester is not a resource agency, explain any relevant public interest considerations in regard to the proposed study;
- Describe existing information concerning the subject of the study proposal and the need for additional information;
- 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;
- Explain how any proposed study methodology (including any preferred data collection and analysis techniques, or objectively quantified information, and a schedule including appropriate field 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
- Describe considerations of the level of effort and cost, as applicable, and why any proposed alternative studies would not be sufficient to meet the stated information needs.

Section 7
Comprehensive Plans

In accordance with 18 CFR §5.6(d)(4)(III and IV), HDR, on behalf of I&M, has reviewed the May 2025 FERC List of Comprehensive Plans applicable to Indiana and adopted by FERC under Section 10(a)(2)(A) of the FPA, 16 USC §803(a)(2)(A). The following comprehensive plans are considered applicable to the Project.

- Indiana Department of Natural Resources. Indiana Statewide Outdoor Recreation Plan (SCORP): 2006-2010. Indianapolis, Indiana. January 2007.
- Indiana Department of Natural Resources. Michigan Department of Natural Resources. 1989. St. Joseph River trout and salmon plan. Indianapolis, Indiana. Lansing, Michigan. June 7, 1989.
- Indiana Department of Natural Resources. Michigan Department of Natural Resources. n.d. Environmental impact statement for a cooperative Indiana-Michigan anadromous fisheries program for the St. Joseph River. Indianapolis, Indiana. Lansing, Michigan.
- National Park Service. The Nationwide Rivers Inventory. Department of the Interior, Washington, D.C. 1993.
- Upper Mississippi River & Great Lakes Region Joint Venture. 1993. Upper Mississippi River & Great Lakes Region joint venture implementation plan: A component of the North American waterfowl management plan. March 1993.
- 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.

Based on a review of these comprehensive plans, I&M believes the Project, as currently operated, is consistent with each of these plans. I&M anticipates additional consultation with the relicensing parties to confirm consistency.

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A

Appendix A – Consultation

Subject: I&M Elkhart Hydroelectric Project (FERC No. 2651) - Relicensing Pre-Application Document Questionnaire
Sent: 8/1/2025, 10:16:43 AM
From: Jonathan M Magalski<jmmagalski@aep.com>
Bcc: Mona Livingston; jhammond2@gov.in.gov; luwilson@urc.in.gov; alina.shively@LVD-NSN.gov; allex.holtz@coei.org; aswinger@oucc.in.gov; basindirector@macog.com; benjamin.rhodd@fcp-nsn.gov; bert_frost@nps.gov; BMCcord@dnr.IN.gov; candy@inspiringgood.org; ccommissioners@elkhartcounty.com; chris@elkhartcountybiz.com; CookK@michigan.gov; dabramso@idem.in.gov; dclampe@usgs.gov; dgrignon@mitw.org; DHPAReview@dnr.IN.gov; dustin.meshigaud@hannahville.org; Edonmyer@saultribe.net; Edward S Brennan; evwhite@idem.IN.gov; fotsjr.outreach@gmail.com; griffin.nate@mail.house.gov; h4@iga.in.gov; h48@iga.in.gov; harold.peterson@bia.gov; jacob_harkin@braun.senate.gov; Jamison.Czarnecki@coei.org; Jen.Huff@hdrinc.com; jloichinger@achp.gov; Joe.Foy@coei.org; jon@eccvb.org; jose.diaz@young.senate.gov; Justine E Penix; jschramm@goshen.edu; jscripps@5lakesenergy.com; jweingar@idem.IN.gov; kevin@americanwhitewater.org; lakota.hobia@glt-nsn.gov; latonya.king@coei.org; LREPAO@usace.army.mil; Luke.heider@fcp-nsn.gov; matthew.bussler@pokagonband-nsn.gov; MBuffington@dnr.in.gov; mhasse@sjcindiana.com; michael.pentony@noaa.gov; mike.lightner@coei.org; mikeyoder@bristolindiana.org; MNJohnson@dnr.in.gov; mwiatrolik@ltbbodawa-nsn.gov; onyleen.zapata@nhbp-nsn.gov; paddleheadz@gmail.com; fotsjr.outreach@gmail.com; Patticripe@gmail.com; paulinewenzel@house.mi.gov; pete@inspiringgood.org; Robert A Beller; raphaelwahwassuck@pbpnation.org; RoosP@michigan.gov; ryhadley@oed.in.gov; s12@iga.in.gov; s44@iga.in.gov; sarah.thompson@ldftribe.com; senjlindsey@senate.michigan.gov; stuberbob@gmail.com; THPO@MiamiNation.com; tmartin@lagrangecounty.org; tom@shoff.com; troy.manges@usda.gov; vogel.anne@epa.gov; will_meeks@fws.gov; Yun Gao

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Dear Stakeholder,

Indiana Michigan Power Company (I&M) is the Licensee and operator of the Elkhart Hydroelectric Project (FERC No. 2651) (Project) located on the St. Joseph River in Elkhart County, Indiana. The Project is licensed by the Federal Energy Regulatory Commission (FERC) and the existing license for the Project expires on December 31, 2030. The Licensee intends to pursue a new license for the Project and is preparing the Pre-Application Document (PAD) required by FERC's integrated licensing process (ILP). I&M plans to produce a comprehensive PAD to be filed with FERC in October 2025.

The objective of the PAD is to provide FERC and other entities with existing, relevant, and reasonably available information pertaining to the Project to help identify related information needs, develop resource study requests, and prepare documents analyzing potential Project effects. To prepare the PAD, I&M will use existing Project information and information obtained from stakeholders. Therefore, on behalf of I&M, American Electric Power Service Corporation is sending this letter to (1) notify governmental agencies, non-governmental organizations, Indian Tribes, and interested individuals of the upcoming relicensing proceeding and (2) request stakeholder assistance in identifying existing, relevant, and reasonably available information related to the existing Project -and known impacts and/or benefits of the Project.

I&M requests your help in identifying relevant available information by completing the PAD Questionnaire[1]. The PAD Questionnaire also offers an option to opt out of participating in the relicensing process or provide supplemental or additional stakeholder contact information. We respectfully request that you fill out the survey by August 31, 2025. If we do not receive a response from you before this date, this will indicate you are not aware of existing, relevant, and reasonably available information related to the Project or known potential impacts of the Project.

Thank you in advance for helping to identify information for inclusion in the PAD. We appreciate your assistance and look forward to working with you during the relicensing process. If you have questions regarding this request or would like additional information, please contact me at jmmagalski@aep.com or via phone at (614) 716-2240.

Sincerely,

Jonathan M. Magalski
Environmental Manager
American Electric Power Service Corporation, Environmental Services

AMERICAN ELECTRIC POWER

JONATHAN M MAGALSKI | **ENVIRONMENTAL MGR**
JMMAGALSKI@AEP.COM | D:614.716.2240
1 RIVERSIDE PLAZA, COLUMBUS, OH 43215

[1] The PAD Questionnaire can be accessed at: https://survey123.arcgis.com/share/30d2e2f5e5de4068b3533e3c7bc015a9

[1] The PAD Questionnaire can be accessed at: https://survey123.arcgis.com/share/30d2e2f5e5de4068b3533e3c7bc015a9

Elkhart Hydroelectric PAD Questionnaire

Submitted by: Anonymous user

Submitted time: Aug 1, 2025, 4:12:49 PM

1. Name of person completing form:

Name & Title

Griffin Nate, District Director

Organization

Congressman Rudy Yakym

Address

2410 Grape Road, Suite 2A, Mishawaka, IN 46545

Phone

5747802062

Email Address

griffin.nate@mail.house.gov

o

Same as the response in Question 1

4. Do you or your organization know of existing, relevant and reasonably available information that describes the existing Elkhart Hydroelectric Project's environment (i.e., information regarding the St. Joseph River in or close to the Elkhart Hydroelectric Project)?

No

6. If you have other comments and/or questions regarding the Elkhart Hydroelectric Project or the relicensing process, please provide below.

We are very supportive of the relicensing!

Elkhart Hydroelectric PAD Questionnaire

Submitted by: Anonymous user

Submitted time: Aug 1, 2025, 10:30:30 AM

1. Name of person completing form:

Name & Title

Matt Buffington, Environmental Unit Supervisor

Organization

Indiana Department of Natural Resources, Division of Fish, Wildlife, and Nature Preserves

Address

402 W. Washington St.
Room W273
Indianapolis, IN 46204

Phone

317-233-4666

Email Address

mbuffington@dnr.in.gov

o

Same as the response in Question 1

4. Do you or your organization know of existing, relevant and reasonably available information that describes the existing Elkhart Hydroelectric Project's environment (i.e., information regarding the St. Joseph River in or close to the Elkhart Hydroelectric Project)?

Yes

a. If yes, please select the specific resource area(s) that the information relates to:

- **Water resources**
- **Fish and aquatic resources**
- **Wildlife and botanical resources**
- **Wetlands, riparian, and littoral habitat**
- **Rare, threatened & endangered species**
- **Recreation and land use**

b. Please briefly describe the information referenced above, list available documents, upload and/or provide links to relevant documents.

The DNR has a lot of information that will require time to locate. Fish and wildlife surveys, p[lant surveys, T&E species information, and more. I will provide what I can but there may be other groups within DNR that need to be involved separately. We will share that info when it becomes clear what other groups should be involved.

5. Based on the specific resources listed in 4a, are you aware of specific resource issues at the Elkhart Project?

Yes

Resource Area

aquatic resources

Specific Issue

aquatic species and impacts due to dams

Elkhart Hydroelectric PAD Questionnaire

Submitted by: Anonymous user

Submitted time: Aug 1, 2025, 1:50:59 PM

1. Name of person completing form:

Name & Title

Bob Stuber, Executive Director

Organization

Michigan Hydro Relicensing Coalition

Address

1620 High Street
Traverse City, MI 49684

Phone

2317754321

Email Address

stuberbob@gmail.com

o

Same as the response in Question 1

Name

Bob Stuber

Address

1620 High Street
Traverse City, MI 49684

Phone

2317754321

Email Address

stuberbob@gmail.com

4. Do you or your organization know of existing, relevant and reasonably available information that describes the existing Elkhart Hydroelectric Project's environment (i.e., information regarding the St. Joseph River in or close to the Elkhart Hydroelectric Project)?

No

Elkhart Hydroelectric PAD Questionnaire

Submitted by: Anonymous user

Submitted time: Aug 1, 2025, 2:16:35 PM

1. Name of person completing form:

Name & Title

Mike Yoder, Town Manager

Organization

Town of Bristol

Address

303 E. Vistula Street

Phone

574-298-3331

Email Address

mikeyoder@bristol.in.gov

o

Same as the response in Question 1

3. Please let us know if there is anyone else you believe should receive this questionnaire and provide their contact information.

Jeff Beachy, Town council president. jeffbeachy@bristol.in.gov

4. Do you or your organization know of existing, relevant and reasonably available information that describes the existing Elkhart Hydroelectric Project's environment (i.e., information regarding the St. Joseph River in or close to the Elkhart Hydroelectric Project)?

No

6. If you have other comments and/or questions regarding the Elkhart Hydroelectric Project or the relicensing process, please provide below.

The primary concerns of Bristol residents is the possibility of the dam's removal and the impact of lower river level.

Elkhart Hydroelectric PAD Questionnaire

Submitted by: Anonymous user

Submitted time: Aug 1, 2025, 11:11:28 AM

1. Name of person completing form:

Name & Title

Jeff Woods, Supervisory Hydrologist

Organization

U.S. Geological Survey

Address

5957 Lakeside Blvd., Indianapolis, IN 46278

Phone

317-430-3086

Email Address

jwoods@usgs.gov

o

Same as the response in Question 1

4. Do you or your organization know of existing, relevant and reasonably available information that describes the existing Elkhart Hydroelectric Project's environment (i.e., information regarding the St. Joseph River in or close to the Elkhart Hydroelectric Project)?

Yes

a. If yes, please select the specific resource area(s) that the information relates to:

- **Water resources**

b. Please briefly describe the information referenced above, list available documents, upload and/or provide links to relevant documents.

We operate streamgages that measure water level and compute discharge both upstream and downstream of the facility.

https://waterdata.usgs.gov/monitoring-location/USGS-04099000/#dataTypeId=continuous-00065-0&period=P7D

https://waterdata.usgs.gov/monitoring-location/USGS-04101000/#dataTypeId=continuous-00065-0&period=P7D

5. Based on the specific resources listed in 4a, are you aware of specific resource issues at the Elkhart Project?

No

Outlook

Re: [External] I&M Elkhart Hydroelectric Project (FERC No. 2651) - Relicensing Pre-Application Document Questionnaire

From Emma Diehl <ediehl@achp.gov>
Date Mon 8/4/2025 10:13 AM
To jmmagalski <jmmagalski@aep.com>

Good afternoon Mr. Magalski,

Thank you for providing the Advisory Council on Historic Preservation (ACHP) with a notice on the above-referenced relicensing project. The ACHP, however, should only receive notifications from FERC and its applicants/licensees on hydro project license or relicense applications in accordance with Section 106 of the National Historic Preservation Act, if they will result in adverse effects to historic properties, as defined by 36 CFR 800 (Section 106 implementing regulations). If the Elkhart Hydroelectric relicensing will result in adverse effects to historic properties, please coordinate with FERC on submitting general information on the undertaking and the adverse effects to the ACHP through our electronic Section 106 system.

Thank you,

Emma Diehl
Program Analyst
OFAP- Federal Permitting, Licensing, and Assistance Section
Advisory Council on Historic Preservation
(202) 517-0212
ediehl@achp.gov

From: Jonathan M Magalski <jmmagalski@aep.com>
Sent: Friday, August 1, 2025 10:16 AM
Subject: [External] I&M Elkhart Hydroelectric Project (FERC No. 2651) - Relicensing Pre-Application Document Questionnaire

Dear Stakeholder,

Indiana Michigan Power Company (I&M) is the Licensee and operator of the Elkhart Hydroelectric Project (FERC No. 2651) (Project) located on the St. Joseph River in Elkhart County, Indiana. The Project is licensed by the Federal Energy Regulatory Commission (FERC) and the existing license for the Project expires on December 31, 2030. The Licensee intends to pursue a new license for the Project and is preparing the Pre-Application Document (PAD) required by FERC's integrated licensing process (ILP). I&M plans to produce a comprehensive PAD to be filed with FERC in October 2025.

The objective of the PAD is to provide FERC and other entities with existing, relevant, and reasonably available information pertaining to the Project to help identify related information needs, develop resource study requests, and prepare documents analyzing potential Project effects. To prepare the PAD, I&M will use existing Project information and information obtained from stakeholders. Therefore, on

behalf of I&M, American Electric Power Service Corporation is sending this letter to (1) notify governmental agencies, non-governmental organizations, Indian Tribes, and interested individuals of the upcoming relicensing proceeding and (2) request stakeholder assistance in identifying existing, relevant, and reasonably available information related to the existing Project -and known impacts and/or benefits of the Project.

I&M requests your help in identifying relevant available information by completing the PAD Questionnaire[1]. The PAD Questionnaire also offers an option to opt out of participating in the relicensing process or provide supplemental or additional stakeholder contact information. We respectfully request that you fill out the survey by August 31, 2025. If we do not receive a response from you before this date, this will indicate you are not aware of existing, relevant, and reasonably available information related to the Project or known potential impacts of the Project.

Thank you in advance for helping to identify information for inclusion in the PAD. We appreciate your assistance and look forward to working with you during the relicensing process. If you have questions regarding this request or would like additional information, please contact me at jmmagalski@aep.com or via phone at (614) 716-2240.

Sincerely,

Jonathan M. Magalski
Environmental Manager
American Electric Power Service Corporation, Environmental Services

AMERICAN ELECTRIC POWER

JONATHAN M MAGALSKI | ENVIRONMENTAL MGR
JMMAGALSKI@AEP.COM | D:614.716.2240
1 RIVERSIDE PLAZA, COLUMBUS, OH 43215

[1] The PAD Questionnaire can be accessed at:
https://survey123.arcgis.com/share/30d2e2f5e5de4068b3533e3c7bc015a9

---

[1] The PAD Questionnaire can be accessed at:
https://survey123.arcgis.com/share/30d2e2f5e5de4068b3533e3c7bc015a9

Elkhart Hydroelectric PAD Questionnaire

Submitted by: Anonymous user

Submitted time: Aug 4, 2025, 8:33:03 AM

1. Name of person completing form:

Name & Title

Jon Hunsberger, Executive Director

Organization

Elkhart County CVB

Address

3421 Cassopolis St, Elkhart IN 465143

Phone

574-262-8161

Email Address

jon@eccvb.org

o

Same as the response in Question 1

3. Please let us know if there is anyone else you believe should receive this questionnaire and provide their contact information.

Cindy Ostrom, Cindy @eccvb.org

4. Do you or your organization know of existing, relevant and reasonably available information that describes the existing Elkhart Hydroelectric Project's environment (i.e., information regarding the St. Joseph River in or close to the Elkhart Hydroelectric Project)?

Yes

a. If yes, please select the specific resource area(s) that the information relates to:

- **Recreation and land use**
- **Cultural resources**

b. Please briefly describe the information referenced above, list available documents, upload and/or provide links to relevant documents.

We have information regarding experiences on Elkhart County blueways, including the upper St Joseph River (https://www.visitelkhartcounty.com/things-to-do/outdoors-recreation/kayaking-canoeing/) on our website

5. Based on the specific resources listed in 4a, are you aware of specific resource issues at the Elkhart Project?

No

6. If you have other comments and/or questions regarding the Elkhart Hydroelectric Project or the relicensing process, please provide below.

I am most interested in repurposing the EHP if relicensing is abandoned. Protecting the investments of waterfront property owners is critical. Equally important is maintaining the ability to activate the river in its current form in the long term. I understand the business side of the EHP. Being a good corporate partner to ensure the integrity of the river and the service to the residents is in the best interest of all.

Elkhart Hydroelectric PAD Questionnaire

Submitted by: Anonymous user

Submitted time: Aug 7, 2025, 4:54:43 PM

1. Name of person completing form:

Name & Title

Margaret M. Marnocha, Esq., Asst. City Attorney

Organization

City of Elkhart, Indiana

Address

229 S. Second Street
Elkhart, IN 46516

Phone

5742932572

Email Address

maggie.marnocha@coei.org

o

Same as the response in Question 1

Name

MARGARET M. MARNOCHA

Address

229 S. Second St.
Elkhart, IN 46516

Phone

5742932572

Email Address

maggie.marnocha@coei.org

4. Do you or your organization know of existing, relevant and reasonably available information that describes the existing Elkhart Hydroelectric Project's environment (i.e., information regarding the St. Joseph River in or close to the Elkhart Hydroelectric Project)?

Yes

a. If yes, please select the specific resource area(s) that the information relates to:

- **Water resources**
- **Fish and aquatic resources**
- **Wildlife and botanical resources**
- **Rare, threatened & endangered species**
- **Recreation and land use**
- **Aesthetic resources**
- **Cultural resources**
- **Socioeconomic resources**

b. Please briefly describe the information referenced above, list available documents, upload and/or provide links to relevant documents.

The City of Elkhart has long employed an aquatic biologist to monitor, test, track, and improve aquatic life in the St. Joseph River both upstream and downstream of the I&M hydroelectric power dam. It is the opinion of our aquatic biologist, Daragh Deegan, whose title is Director of Environmental Quality, that the dam has not caused an adverse effect on the river's aquatic life, and has enhanced it. I have attached his summary of that provides the basis of his opinion. There is no environmental benefit for the removal of the dam.
The upstream side of the dam is a robust recreational spot providing a place for boating, kayaking, canoeing, fishing and swimming for residents and visitors. The increased home values reflect the enhanced location opportunities as well as the scenic views.
The downstream side of the dam, with its lower water level, has numerous kayak/canoe boat launches, fishing piers, and Island Park that is home to numerous warm weather activities. Furthermore, there are homes located in low-lying areas near the river that would be flooded and inhabitable by the removal of the dam.
Elkhart is known for its abundance of water-related activities and attracts visitors from all over the region. The dam's economic benefits to the area cannot be overlooked.

please upload files here:

DOCX Summary of ecological significance of elkhart dam.docx
17.2KB

5. Based on the specific resources listed in 4a, are you aware of specific resource issues at the Elkhart Project?

Yes

Ecological Assessment of the Elkhart Dam Area on the St. Joseph River

While dams are often viewed as detrimental to river ecology, the Elkhart Dam presents a unique case in which ecological impacts appear to be minimal — and in some respects, ecologically beneficial.

The St. Joseph River originates in Hillsdale County, Michigan, and flows approximately 210 miles before entering Lake Michigan. About 40 of those miles pass through Elkhart County, Indiana, before the river bends north in South Bend and reenters Michigan.

Since 1998, the City of Elkhart and the City of South Bend's Aquatic Biology Program have studied fish communities throughout the Indiana stretch of the St. Joseph River. Long-term monitoring sites have been established along this 40-mile segment, including locations above and within the Elkhart Dam project boundary. These fish communities are assessed using the Index of Biotic Integrity (IBI) — a standardized ecological tool used to evaluate river health. Data and reports related to the Aquatic Biology Program can be found here:
https://storymaps.arcgis.com/stories/7e0f95e549ef43d18b2363760c719bbc

Notably, two monitoring sites within the Elkhart Dam project area — the Six Span site and the Nibbyville A site — consistently record the highest IBI scores in the region, indicating excellent fish community structure. Other upstream sites also score high, reinforcing the ecological value of this river segment.

The stretch of river between the Elkhart Dam and the Mottville Dam spans roughly 15 miles and contains a mix of habitats:

- 6 miles of impounded water (reservoir-like conditions),
- 7 miles of natural flowing river, and
- 2 miles of transitional habitat where riverine and impoundment conditions mix.

This transitional zone supports exceptional species richness, functioning similarly to a marine estuary — blending species adapted to both flowing and still-water environments. As one of the few Great Lakes tributaries in Indiana, this section of the St. Joseph River provides a critical and unique refuge for aquatic life.

Smallmouth Bass and Habitat Value

The Elkhart Dam impoundment also supports a thriving Smallmouth Bass fishery. This fish population is not only a valuable recreational resource but also an indicator of ecological health. Studies conducted by the Aquatic Biology Program show that Smallmouth Bass in the Elkhart Dam area exhibit superior growth and size compared to other sections of the river.

These fish migrate seasonally: occupying upstream river habitats near Bristol and Mottville in the warmer months, and moving downstream into the deeper, slower impoundment waters in winter — a pattern tracked through a fish-tagging program and angler reports. The impoundment thus provides essential overwintering habitat that supports the longevity and success of this species.

Water Quality and Historical Context

Water quality upstream of the Elkhart Dam is generally superior to that of downstream reaches, due in large part to historical and urban influences. Prior to the 1950s and the implementation of the Clean Water Act, the St. Joseph River — particularly around South Bend — suffered severe pollution from untreated sewage and industrial discharge.

While historical water quality data for Elkhart are limited, studies from the late 1920s and early 1930s in South Bend documented extremely high E. coli levels, dissolved oxygen levels too low to support aquatic life, and widespread ecological degradation. In contrast, the Elkhart Dam area and upstream sections maintained more intact ecological communities, which later played a vital role in repopulating downstream areas after water quality improvements were achieved.

Recreation and Public Health

Today, the Elkhart Dam project area remains an important recreational resource for Elkhart County residents. The area's consistently low E. coli levels — verified through monitoring by the City of Elkhart and the Elkhart County Stormwater Partnership — mean this section of the river remains safe for swimming and recreation, unlike some areas downstream and other rivers and streams in state of Indiana.

Resource Area

Please see comments above

6. If you have other comments and/or questions regarding the Elkhart Hydroelectric Project or the relicensing process, please provide below.

The City of Elkhart, Indiana is in favor of the relicensing of the hydroelectric project. If I & M decides to decommission the hydroelectric portion of the project, we strongly object to the decommissioning of the dam itself due to the overwhelmingly negative effect it would have on the local economy, home values, recreation, health of the river, and the aquatic wildlife.

Outlook

[EXTERNAL] RE: I&M Elkhart Hydroelectric Project (FERC No. 2651) - Relicensing Pre-Application Document Questionnaire

From Buffington, Matt <MBuffington@dnr.IN.gov>
Date Tue 8/12/2025 5:31 AM
To jmmagalski <jmmagalski@aep.com>

1 attachment (2 MB)
FERC Reporting Comments - DFW.zip;

Jon,
Attached are comments from DNR related to various FERC posts.

There are also reports we submit to I&M every other year summarizing how DNR has spent the I&M mitigation money. We have reports and stocking reports that go back years.

These are the two things I know about. There may be more. These are things I&M has received from us already.

Matt Buffington
Environmental Unit Supervisor
Division of Fish and Wildlife
Indiana Department of Natural Resources

E: mbuffington@dnr.in.gov
P: 317-233-4666
www.in.gov/dnr/

** Please let us know about the quality of our service by taking this brief customer survey.*

From: Jonathan M Magalski <jmmagalski@aep.com>
Sent: Monday, August 11, 2025 4:50 PM
To: Buffington, Matt <MBuffington@dnr.IN.gov>
Subject: RE: I&M Elkhart Hydroelectric Project (FERC No. 2651) - Relicensing Pre-Application Document Questionnaire

Hi Matt,

I apologize for not responding to you sooner. Would it be possible to first start with a list of information that IDNR has and then go from there? I don't necessarily want to burden you with sending things that we might already have or need.

I look forward to working with you on this relicensing effort. Feel free to reach out anytime with questions.

Thanks…..Jon

JONATHAN M MAGALSKI | **ENVIRONMENTAL MGR**
JMMAGALSKI@AEP.COM | D:614.716.2240
1 RIVERSIDE PLAZA, COLUMBUS, OH 43215

From: Buffington, Matt <MBuffington@dnr.IN.gov>
Sent: Monday, August 11, 2025 8:07 AM
To: Jonathan M Magalski <jmmagalski@aep.com>
Subject: [EXTERNAL] RE: I&M Elkhart Hydroelectric Project (FERC No. 2651) - Relicensing Pre-Application Document Questionnaire

Jonathan,
Just checking in again. Indiana DNR has lots of files that we have shared with I&M for many years. Are you requesting copies of these documents, or is the request for anything we may have that has not been provided previously?

Matt Buffington
Environmental Unit Supervisor
Division of Fish and Wildlife
Indiana Department of Natural Resources

E: mbuffington@dnr.in.gov
P: 317-233-4666
www.in.gov/dnr/

** Please let us know about the quality of our service by taking this brief* customer survey.

From: Buffington, Matt
Sent: Friday, August 1, 2025 11:08 AM
To: Jonathan M Magalski <jmmagalski@aep.com>
Subject: RE: I&M Elkhart Hydroelectric Project (FERC No. 2651) - Relicensing Pre-Application Document Questionnaire

Jonathan,
As you might expect, DNR probably has info to share but probably scattered in various places. I&M probably has some of it and knows where to find more. I'm hoping to get links documents to send. Is it best to send info through the questionnaire or send it directly to you?

Matt Buffington
Environmental Unit Supervisor
Division of Fish and Wildlife
Indiana Department of Natural Resources

E: mbuffington@dnr.in.gov
P: 317-233-4666
www.in.gov/dnr/

** Please let us know about the quality of our service by taking this brief* customer survey.

From: Jonathan M Magalski <jmmagalski@aep.com>
Sent: Friday, August 1, 2025 10:17 AM
Subject: I&M Elkhart Hydroelectric Project (FERC No. 2651) - Relicensing Pre-Application Document Questionnaire

Dear Stakeholder,

Indiana Michigan Power Company (I&M) is the Licensee and operator of the Elkhart Hydroelectric Project (FERC No. 2651) (Project) located on the St. Joseph River in Elkhart County, Indiana. The Project is licensed by the Federal Energy Regulatory Commission (FERC) and the existing license for the Project expires on December 31, 2030. The Licensee intends to pursue a new license for the Project and is preparing the Pre-Application Document (PAD) required by FERC's integrated licensing process (ILP). I&M plans to produce a comprehensive PAD to be filed with FERC in October 2025.

The objective of the PAD is to provide FERC and other entities with existing, relevant, and reasonably available information pertaining to the Project to help identify related information needs, develop resource study requests, and prepare documents analyzing potential Project effects. To prepare the PAD, I&M will use existing Project information and information obtained from stakeholders. Therefore, on behalf of I&M, American Electric Power Service Corporation is sending this letter to (1) notify governmental agencies, non-governmental organizations, Indian Tribes, and interested individuals of the upcoming relicensing proceeding and (2) request stakeholder assistance in identifying existing, relevant, and reasonably available information related to the existing Project -and known impacts and/or benefits of the Project.

I&M requests your help in identifying relevant available information by completing the PAD Questionnaire[1]. The PAD Questionnaire also offers an option to opt out of participating in the relicensing process or provide supplemental or additional stakeholder contact information. We respectfully request that you fill out the survey by August 31, 2025. If we do not receive a response from you before this date, this will indicate you are not aware of existing, relevant, and reasonably available information related to the Project or known potential impacts of the Project.

Thank you in advance for helping to identify information for inclusion in the PAD. We appreciate your assistance and look forward to working with you during the relicensing process. If you have questions regarding this request or would like additional information, please contact me at jmmagalski@aep.com or via phone at (614) 716-2240.

Sincerely,

Jonathan M. Magalski
Environmental Manager
American Electric Power Service Corporation, Environmental Services

AMERICAN ELECTRIC POWER

JONATHAN M MAGALSKI | **ENVIRONMENTAL MGR**
JMMAGALSKI@AEP.COM | D:614.716.2240
1 RIVERSIDE PLAZA, COLUMBUS, OH 43215

[1] The PAD Questionnaire can be accessed at:
https://protect.checkpoint.com/v2/r01/___https://survey123.arcgis.com/share/30d2e2f5e5de4068b3533e3c7bc015a9___.YzJ1OnN0YXRlb2ZpbmRpYW5hOmM6bzpiMzMyOTY5Y2NhNDkwZWE4YmZjY2I3ZmM5MTRlZGQ1MDo3OjJhMTk6NGFkYWM0NWQzMDI0NDk3YjM3MDQ0ZmE2MjM2ZWZmYTZlOWQxY2E1ZTc1ZmQxZjNiNDMxMmY2ZmY5ZjIxOTY5Nzp0OkY6Tg

[1] The PAD Questionnaire can be accessed at: https://protect.checkpoint.com/v2/r01/___https://survey123.arcgis.com/share/30d2e2f5e5de4068b3533e3c7bc015a9___.YzJ1OnN0YXRlb2ZpbmRpYW5hOmM6bzpiMzMyOTY5Y2NhNDkwZWE4YmZjY2I3ZmM5MTRlZGQ1MDo3OmYzYzY6ZTQ0NmZhYmRmMDQ0NDUyMTczZjk0YjgwNGI1MjU1MzFlZWJjNjE3YWE4MDcyNWNiYjU3MTcwYmZhYWQ3MzEwNDp0OkY6Tg

Outlook

[EXTERNAL] Re: Request for PAD Questionnaire Link – Elkhart County & St. Joseph River

From Brooklynn Sibley <bsibley@rjlsolutions.com>
Date Wed 8/13/2025 5:50 AM
To jmmagalski <jmmagalski@aep.com>

1 attachment (1 MB)
Outlook-yk3h3tkh;

Jon,
Thank you so much for getting back to me! I appreciate your assistance!

Thank you,
Brooklynn

Brooklynn Sibley
Director of Communications
812.241.8016
bsibley@rjlsolutions.com
www.rjlsolutions.com
Indianapolis • Terre Haute • Evansville

From: Jonathan M Magalski <jmmagalski@aep.com>
Sent: Wednesday, August 13, 2025 7:33 AM
To: Brooklynn Sibley <bsibley@rjlsolutions.com>
Subject: RE: Request for PAD Questionnaire Link – Elkhart County & St. Joseph River

Good morning Brooklynn,

Thank you for reaching out. Attached is the email correspondence distributing the questionnaire to identified stakeholders. Within the email is a link to the questionnaire. Please let me know if you have any issues with the link or have questions.

Thanks again.

Jon

AMERICAN ELECTRIC POWER
JONATHAN M MAGALSKI | ENVIRONMENTAL MGR
JMMAGALSKI@AEP.COM | D:614.716.2240
1 RIVERSIDE PLAZA, COLUMBUS, OH 43215

From: Brooklynn Sibley <bsibley@rjlsolutions.com>
Sent: Tuesday, August 12, 2025 3:14 PM
To: Jonathan M Magalski <jmmagalski@aep.com>
Subject: [EXTERNAL] Request for PAD Questionnaire Link – Elkhart County & St. Joseph River

Hi Jon,

I hope you're doing well. My name is Brooklynn Sibley, and I'm with RJL Solutions. We are currently assisting with efforts related to the Elkhart County and St. Joseph River project.

We understand there is a PAD Questionnaire available that allows community stakeholders to provide input, and we would like to include this in our marketing materials to help encourage participation. However, we have been unable to locate the link to the questionnaire.

Would you be able to provide that link so we can share it with our networks? We appreciate the opportunity to work together to ensure the community has the chance to contribute their perspectives.

Thank you for your time and assistance, and I look forward to hearing from you.

Best,
Brooklynn

Elkhart Hydroelectric PAD Questionnaire

Submitted by: Anonymous user

Submitted time: Aug 25, 2025, 1:56:49 PM

1. Name of person completing form:

Name & Title

Cindy Ostrom

Organization

ECCVB

Address

3421 Cassopolis Street, Suite 100
Elkhart, IN 46514

Phone

2742628161

Email Address

cindy@eccvb.org

o

Same as the response in Question 1

Name

cynthia e ostrom

Address

3421 cassopolis street, suite 100
PO Box 2948

Phone

5745750537

Email Address

cindy@eccvb.org

4. Do you or your organization know of existing, relevant and reasonably available information that describes the existing Elkhart Hydroelectric Project's environment (i.e., information regarding the St. Joseph River in or close to the Elkhart Hydroelectric Project)?

No

Subject: I&M Elkhart Hydroelectric Project (FERC No. 2651) - Relicensing Pre-Application Document Questionnaire
Sent: 8/25/2025, 1:35:48 PM
From: Jonathan M Magalski<jmmagalski@aep.com>
Bcc: darian.rhodd@potawatomi.org; PaulineWendzel@house.mi.gov; jeffbeachy@bristol.in.gov; cindy@eccvb.org; Salazar, Maggie

---

Dear Stakeholder,

Indiana Michigan Power Company (I&M) is the Licensee and operator of the Elkhart Hydroelectric Project (FERC No. 2651) (Project) located on the St. Joseph River in Elkhart County, Indiana. The Project is licensed by the Federal Energy Regulatory Commission (FERC) and the existing license for the Project expires on December 31, 2030. The Licensee intends to pursue a new license for the Project and is preparing the Pre-Application Document (PAD) required by FERC's integrated licensing process (ILP). I&M plans to produce a comprehensive PAD to be filed with FERC in October 2025.

The objective of the PAD is to provide FERC and other entities with existing, relevant, and reasonably available information pertaining to the Project to help identify related information needs, develop resource study requests, and prepare documents analyzing potential Project effects. To prepare the PAD, I&M will use existing Project information and information obtained from stakeholders. Therefore, on behalf of I&M, American Electric Power Service Corporation is sending this letter to (1) notify governmental agencies, non-governmental organizations, Indian Tribes, and interested individuals of the upcoming relicensing proceeding and (2) request stakeholder assistance in identifying existing, relevant, and reasonably available information related to the existing Project -and known impacts and/or benefits of the Project.

I&M requests your help in identifying relevant available information by completing the PAD Questionnaire[1]. The PAD Questionnaire also offers an option to opt out of participating in the relicensing process or provide supplemental or additional stakeholder contact information. We respectfully request that you fill out the survey by September 14, 2025. If we do not receive a response from you before this date, this will indicate you are not aware of existing, relevant, and reasonably available information related to the Project or known potential impacts of the Project.

Thank you in advance for helping to identify information for inclusion in the PAD. We appreciate your assistance and look forward to working with you during the relicensing process. If you have questions regarding this request or would like additional information, please contact me at jmmagalski@aep.com or via phone at (614) 716-2240.

Sincerely,

Jonathan M. Magalski
Environmental Manager
American Electric Power Service Corporation, Environmental Services

AMERICAN ELECTRIC POWER

JONATHAN M MAGALSKI | ENVIRONMENTAL MGR
JMMAGALSKI@AEP.COM | D:614.716.2240
1 RIVERSIDE PLAZA, COLUMBUS, OH 43215

[1] The PAD Questionnaire can be accessed at: https://survey123.arcgis.com/share/30d2e2f5e5de4068b3533e3c7bc015a9

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[1] The PAD Questionnaire can be accessed at: https://survey123.arcgis.com/share/30d2e2f5e5de4068b3533e3c7bc015a9

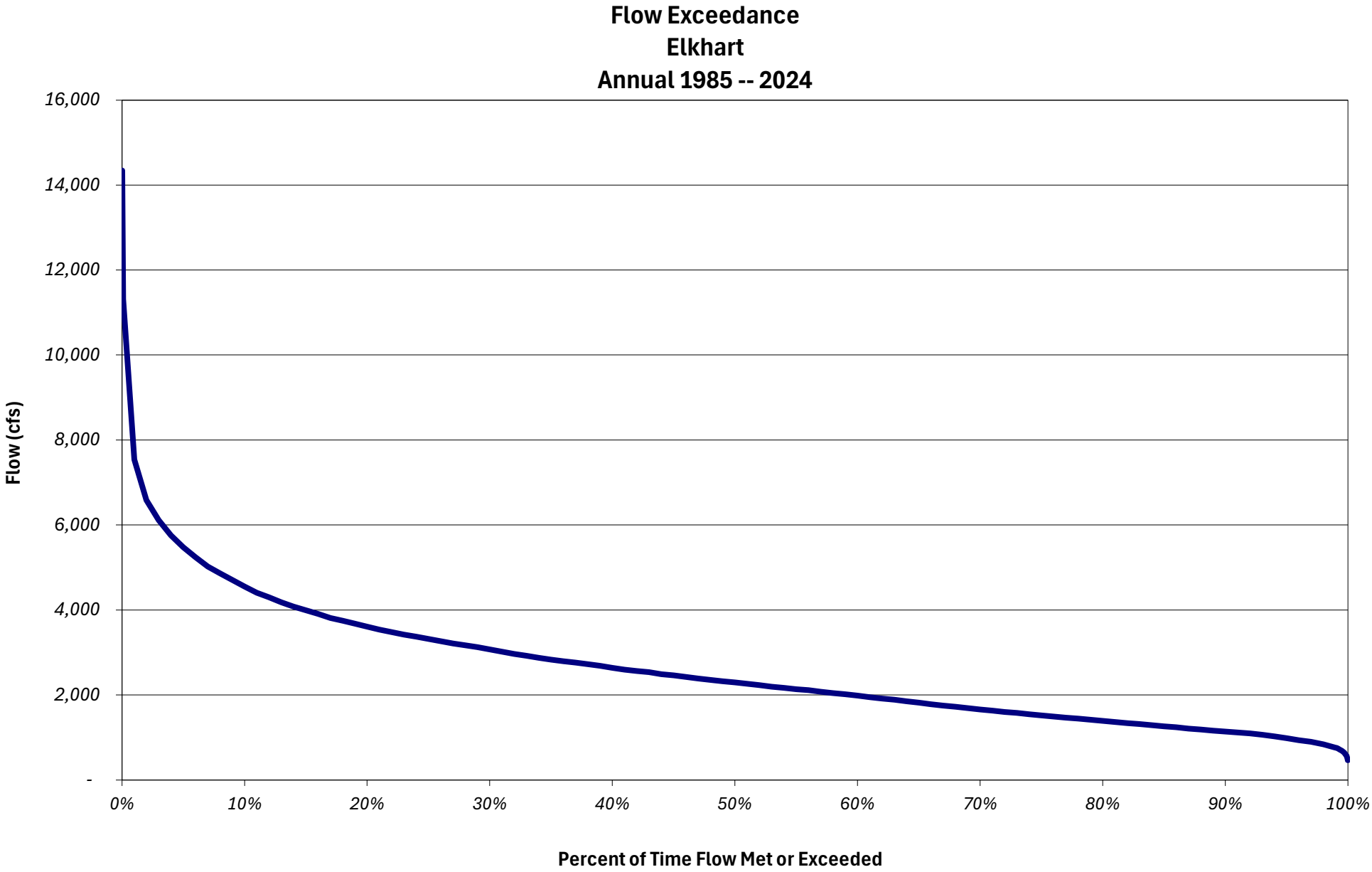
B

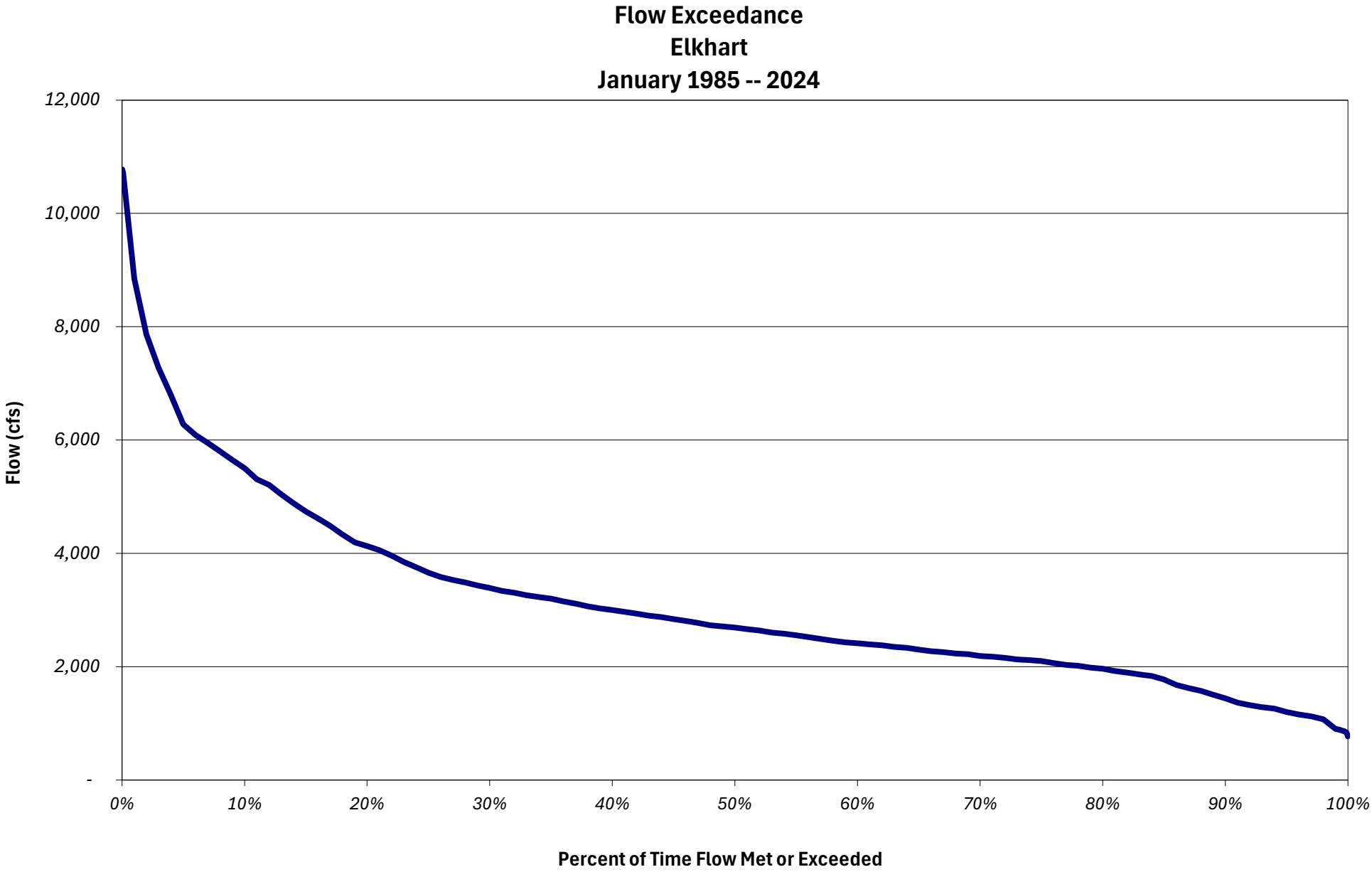
Appendix B – Single Line Electrical Diagram

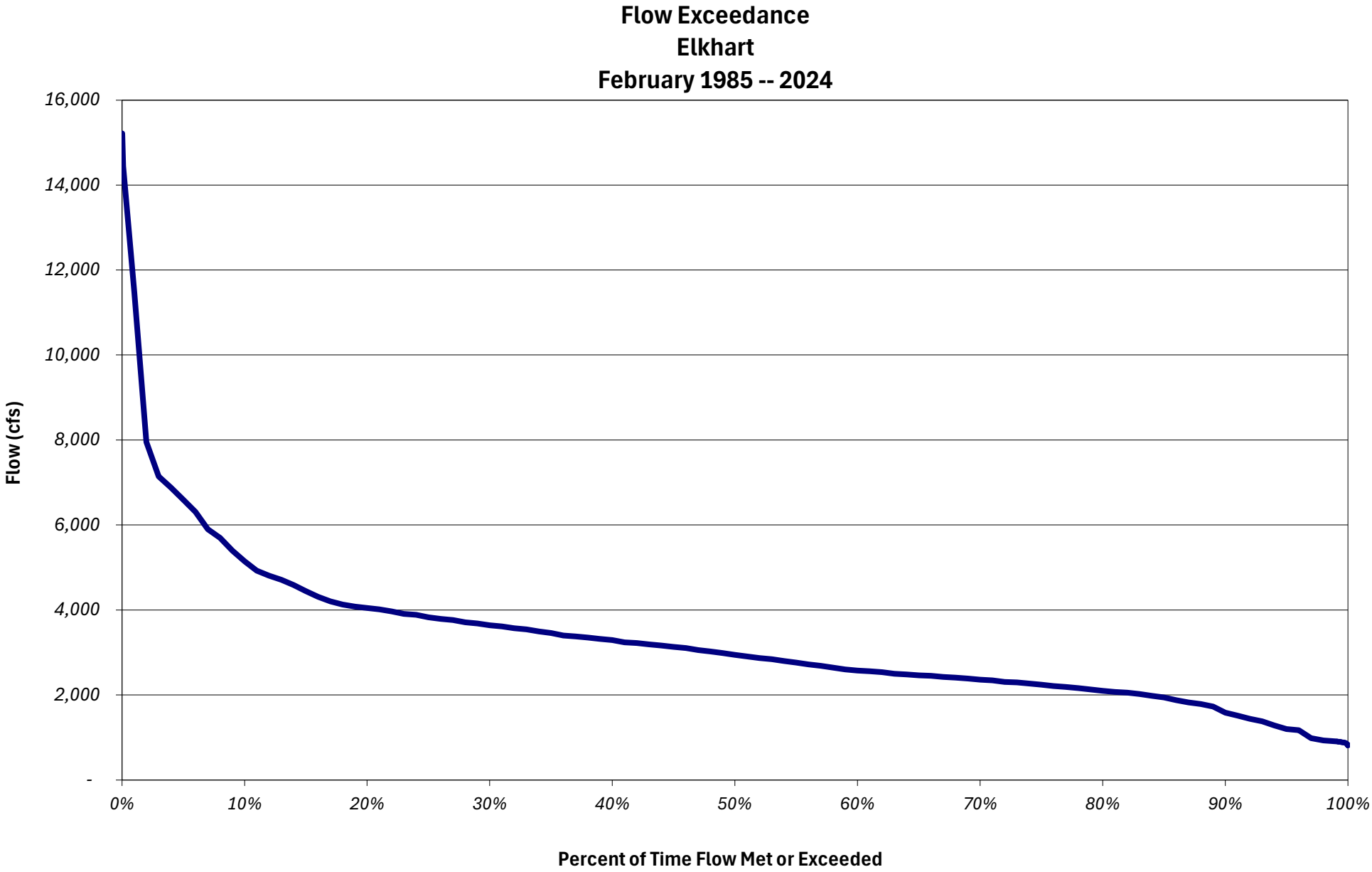
(non-public Critical Electric/Energy Infrastructure Information)

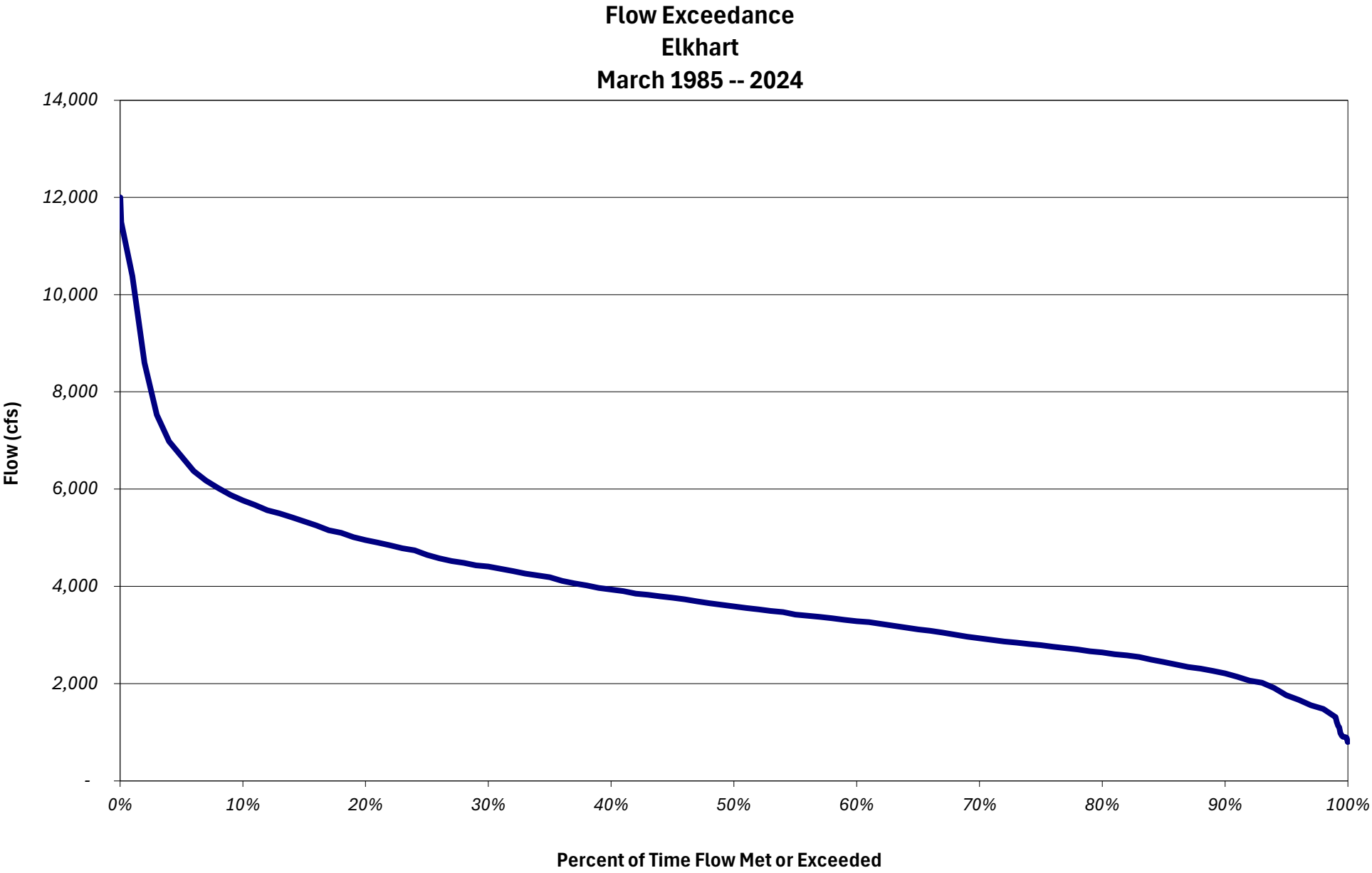
C

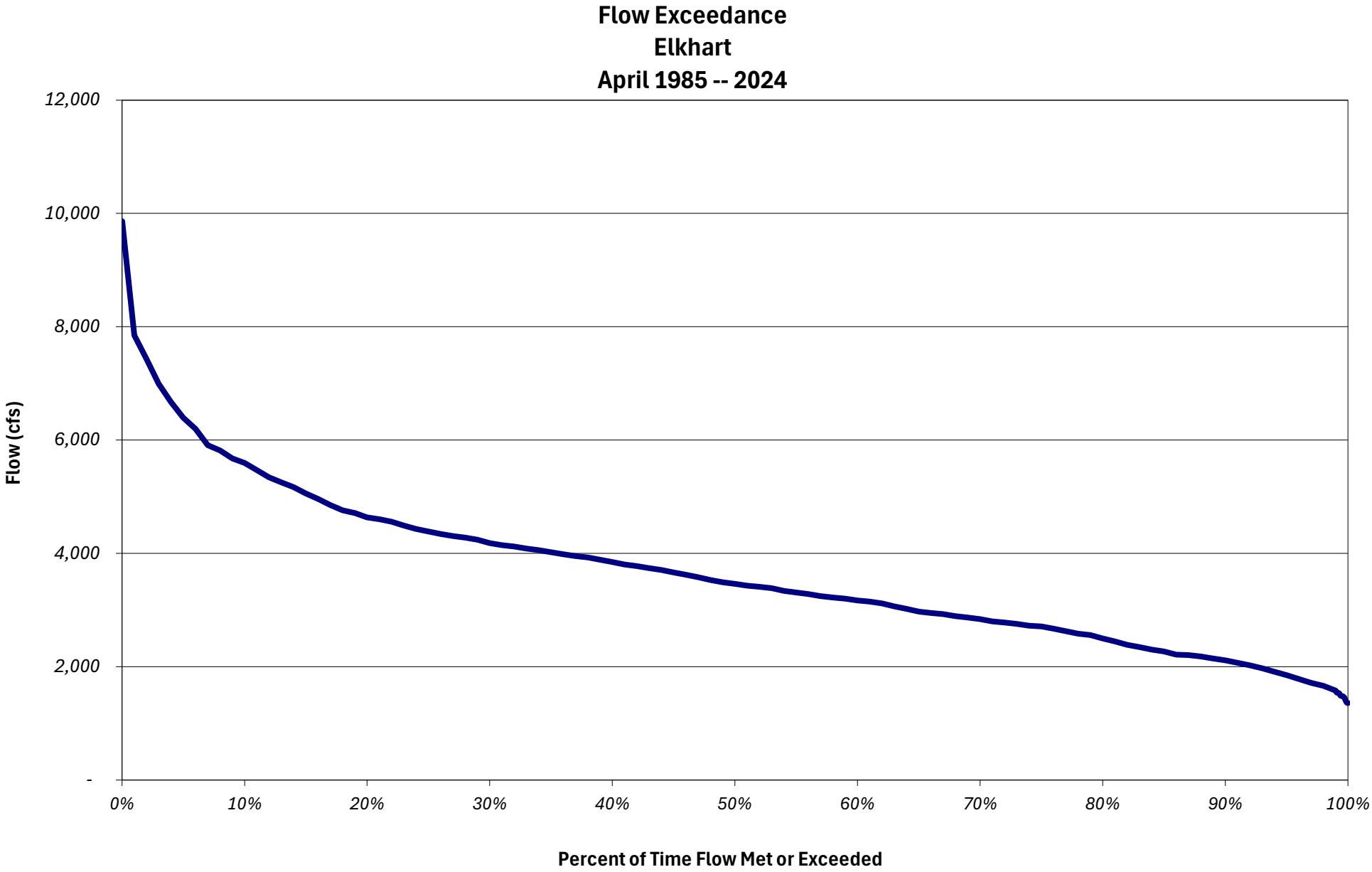
Appendix C – Flow Duration Curves

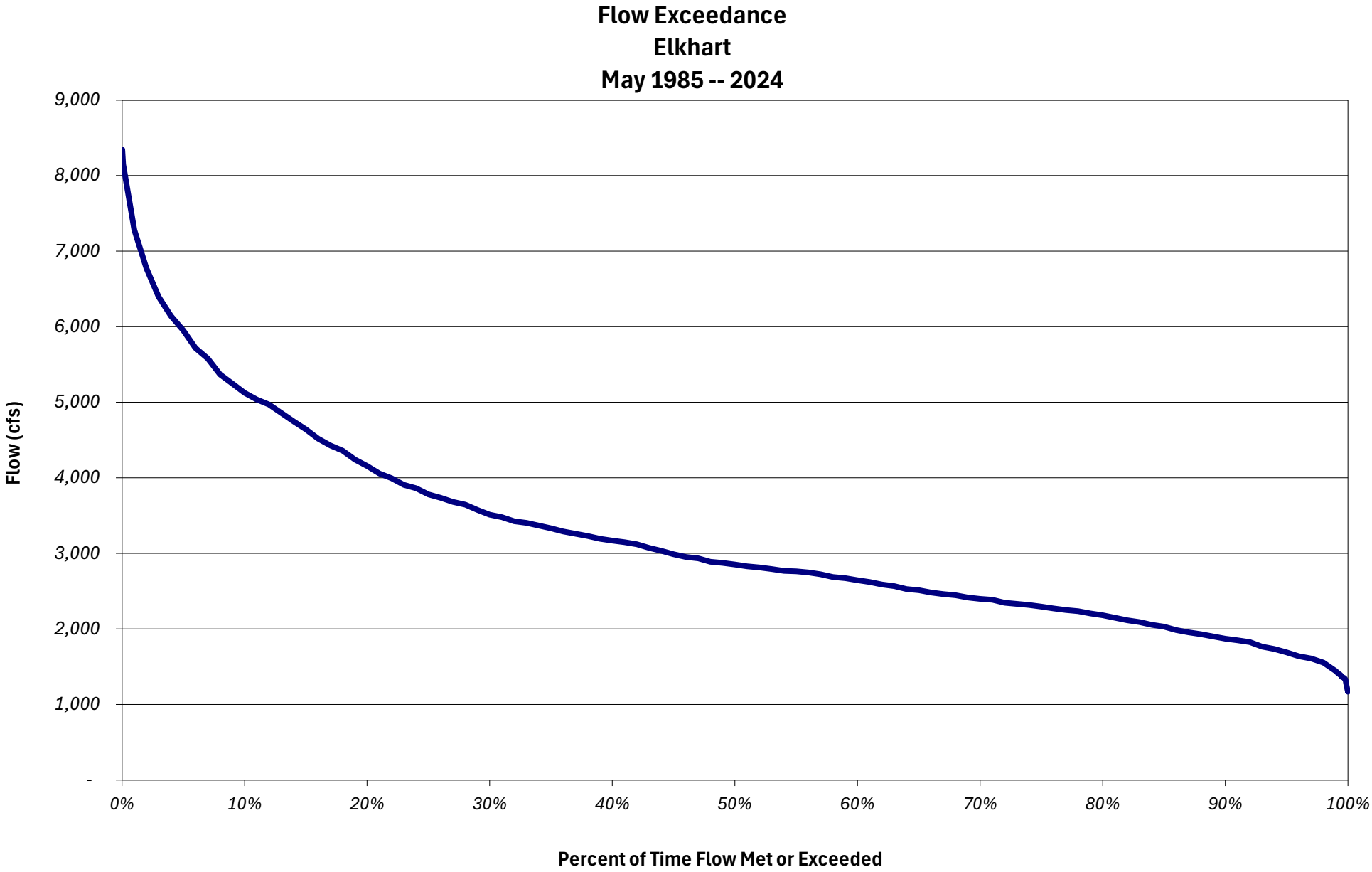

Flow Exceedance
Elkhart
Annual 1985 -- 2024
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
-
Flow (cfs)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time Flow Met or Exceeded

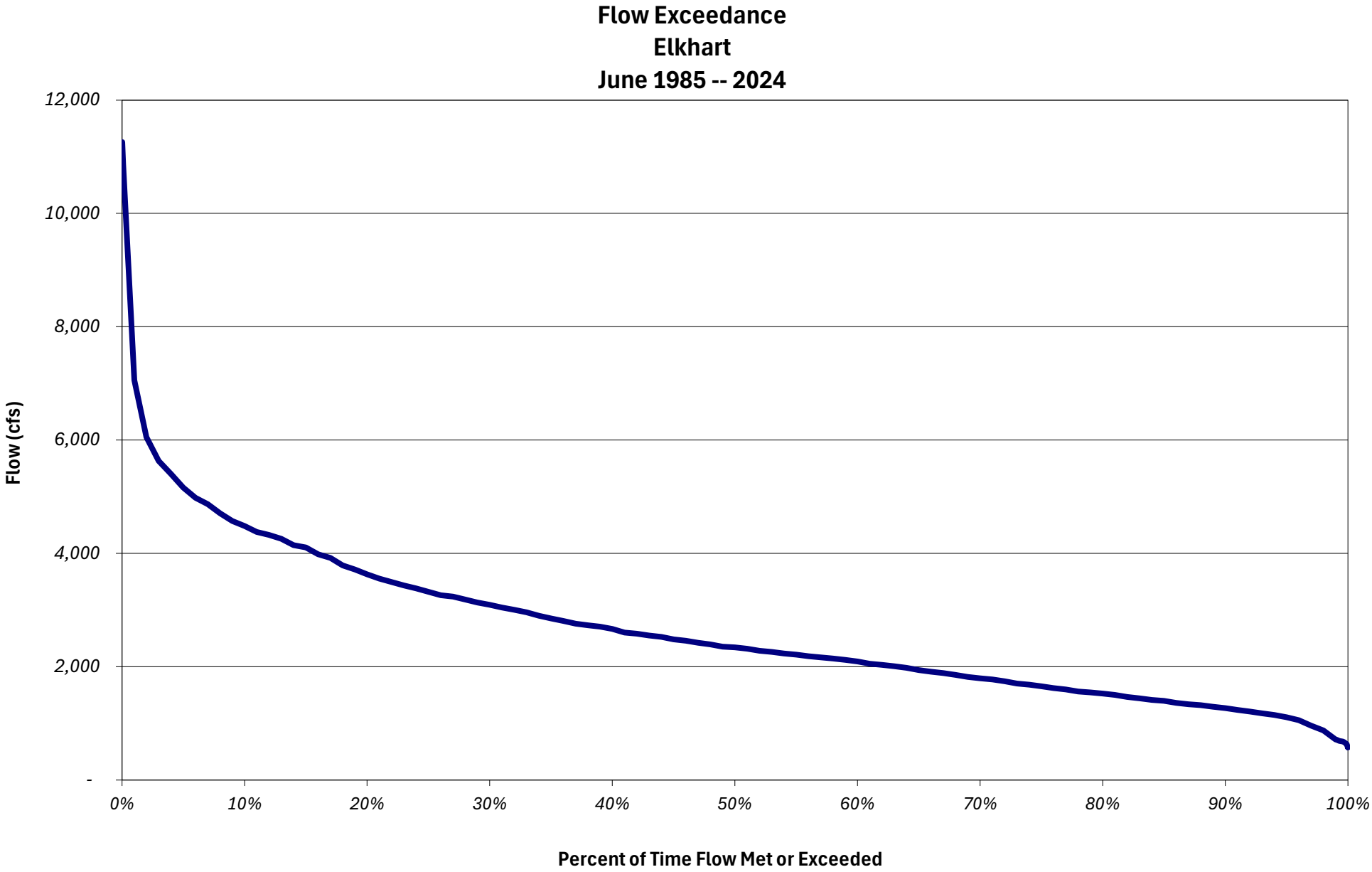

Flow Exceedance
Elkhart
January 1985 -- 2024
12,000
10,000
8,000
6,000
4,000
2,000
-
Flow (cfs)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time Flow Met or Exceeded

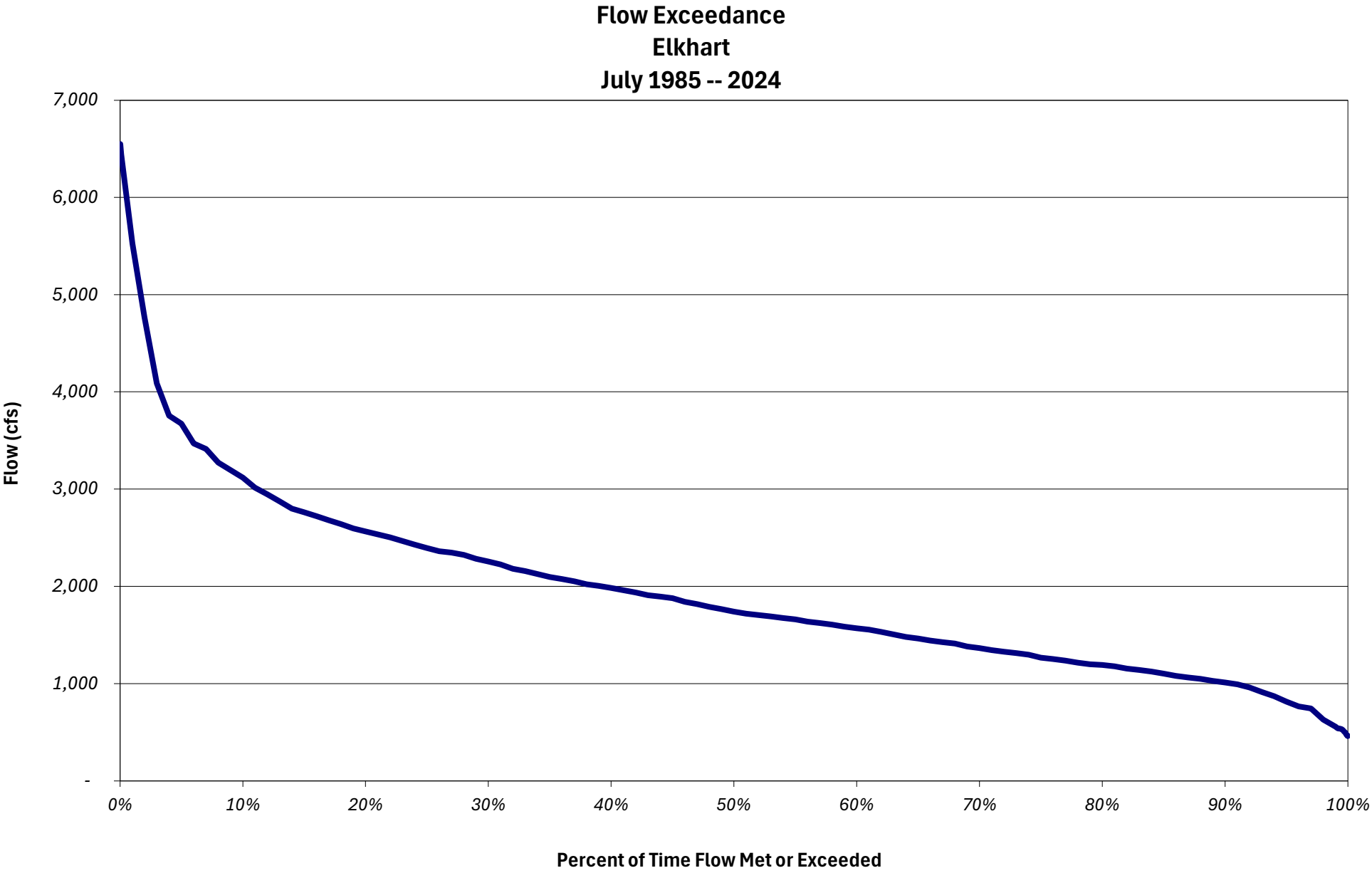

Flow Exceedance
Elkhart
February 1985 -- 2024
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
-
Flow (cfs)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time Flow Met or Exceeded

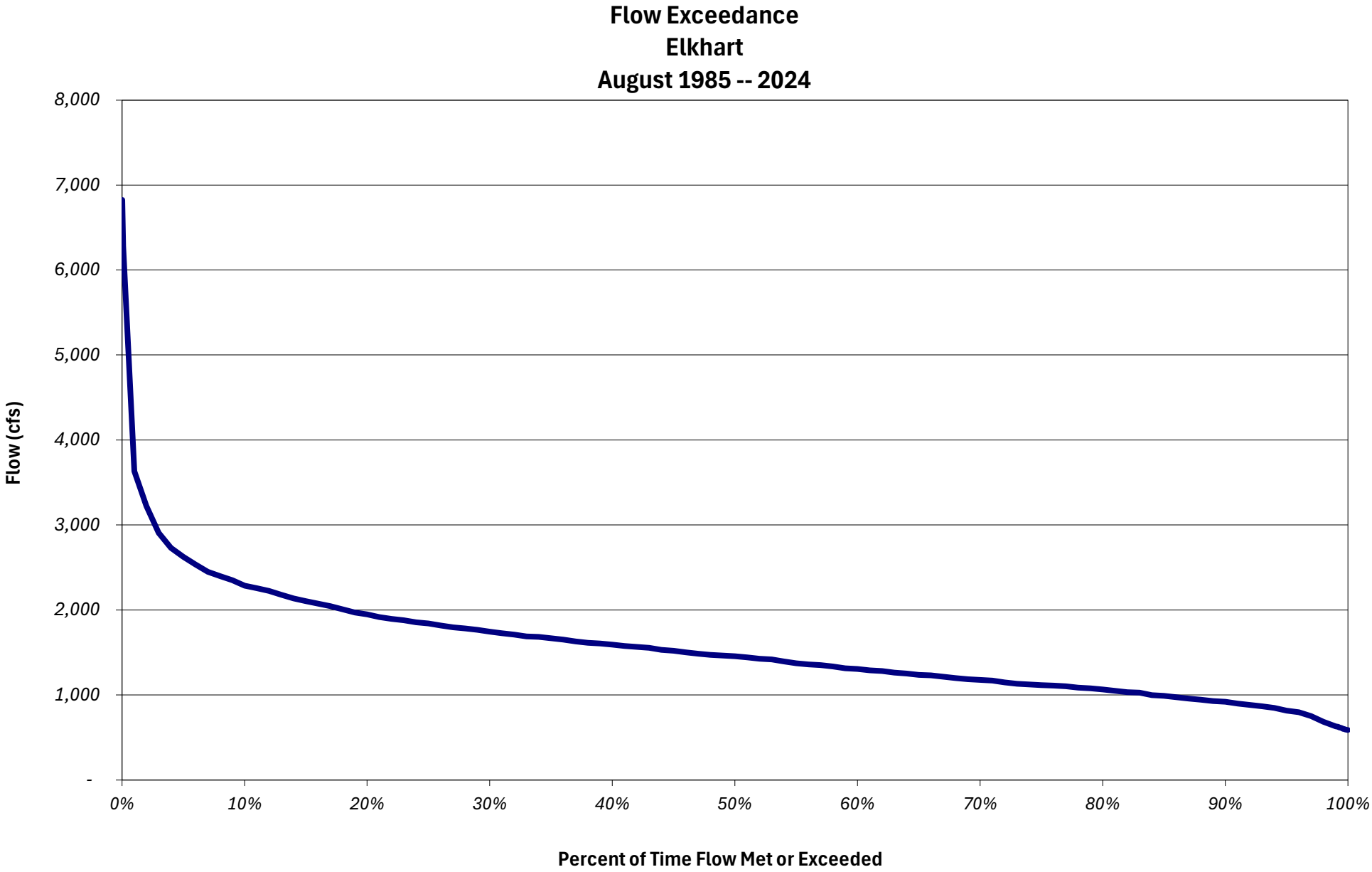

Flow Exceedance
Elkhart
March 1985 -- 2024
14,000
12,000
10,000
8,000
6,000
4,000
2,000
-
Flow (cfs)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time Flow Met or Exceeded

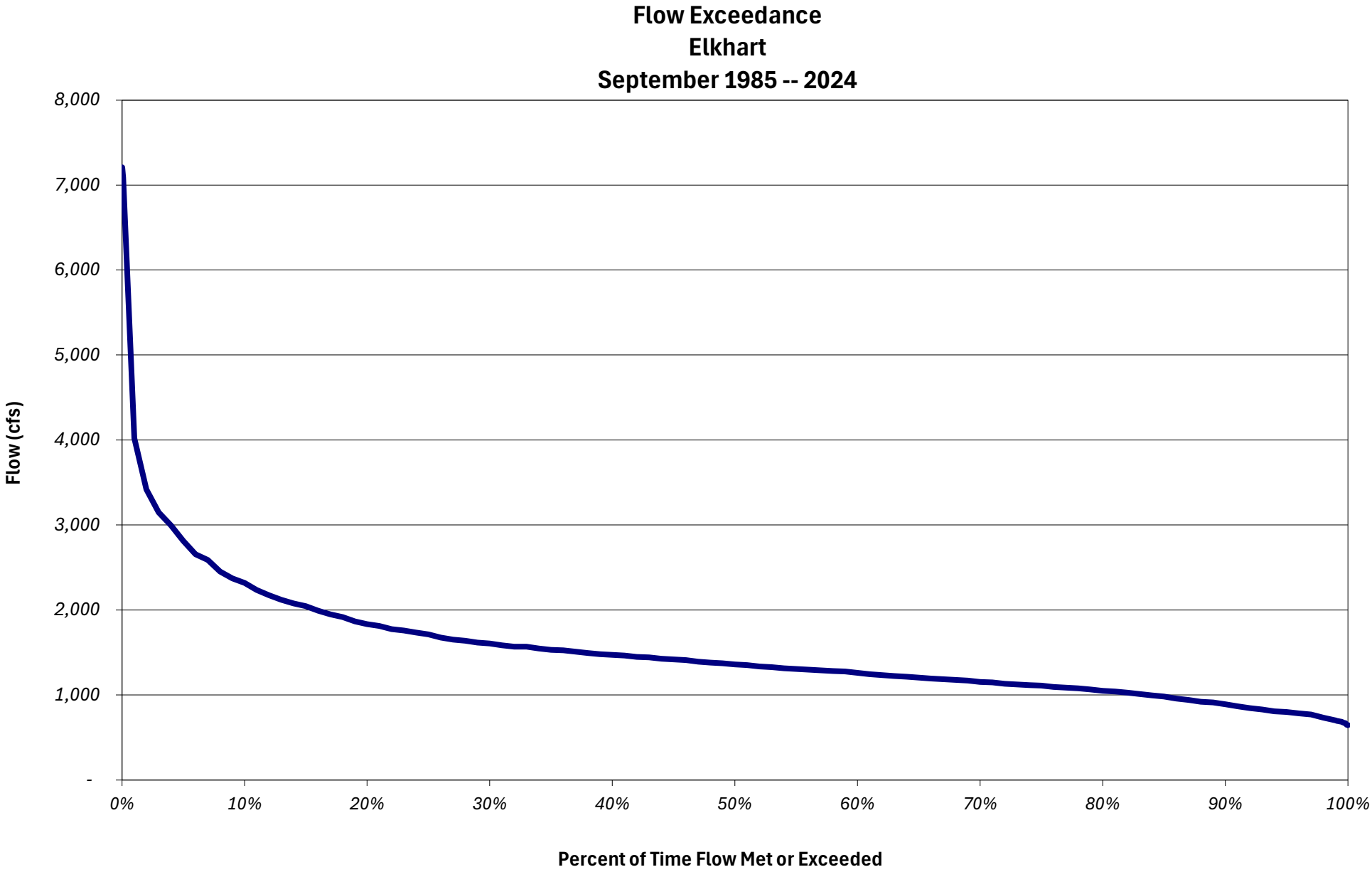

Flow Exceedance
Elkhart
April 1985 -- 2024
12,000
10,000
8,000
6,000
4,000
2,000
-
Flow (cfs)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time Flow Met or Exceeded

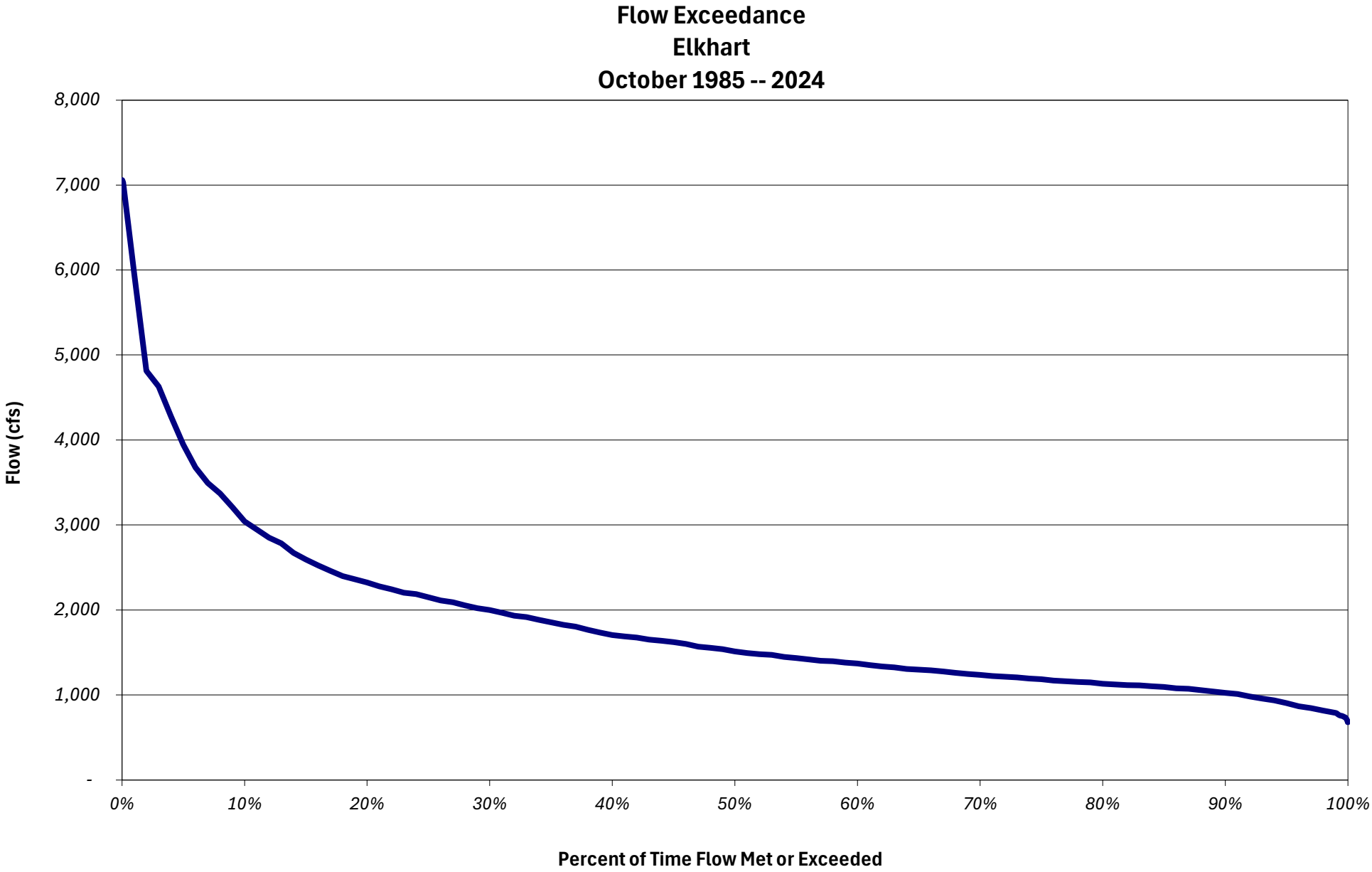

Flow Exceedance
Elkhart
May 1985 -- 2024
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-
Flow (cfs)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time Flow Met or Exceeded

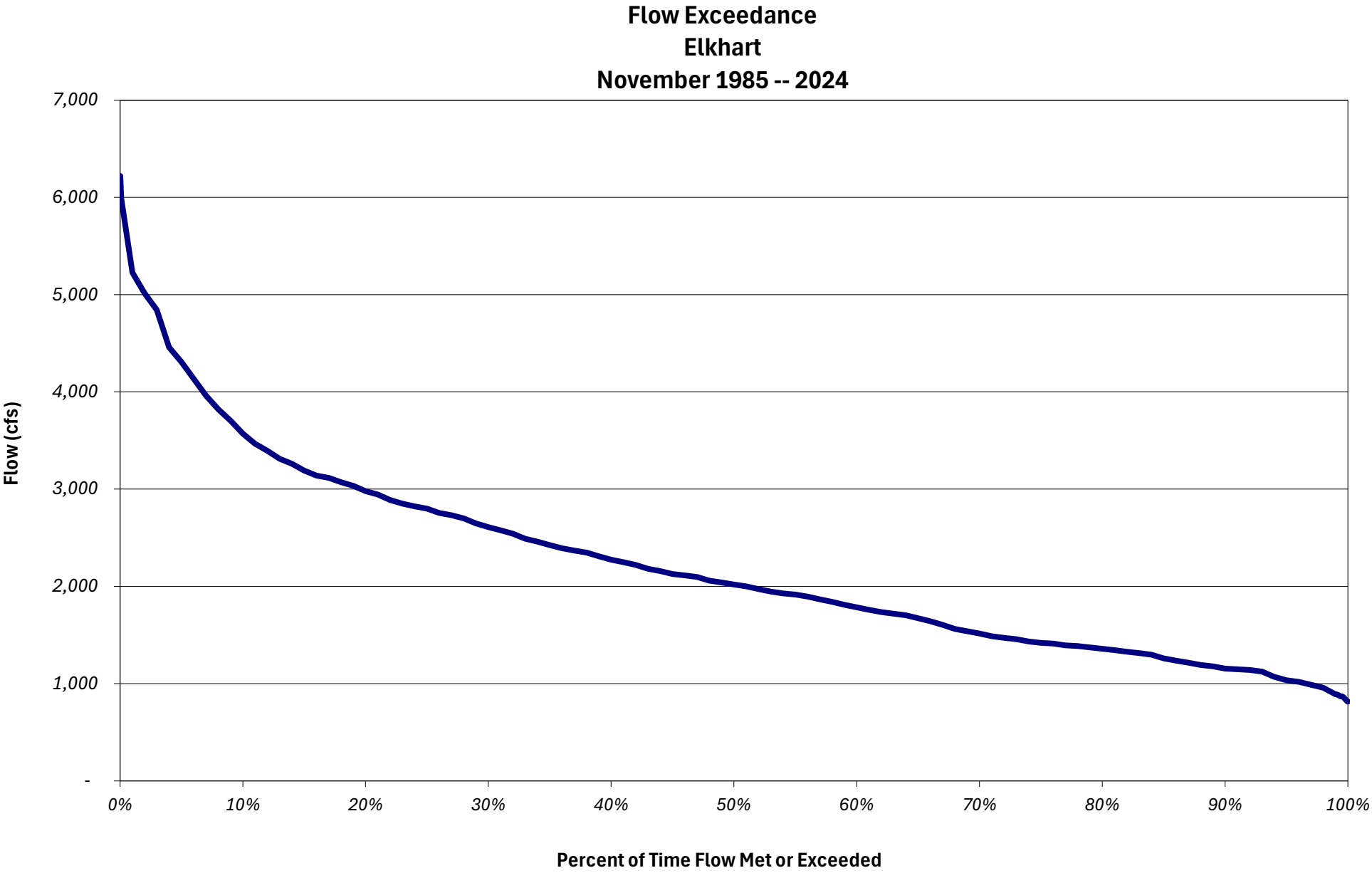

Flow Exceedance
Elkhart
June 1985 -- 2024
12,000
10,000
8,000
6,000
4,000
2,000
-
Flow (cfs)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time Flow Met or Exceeded

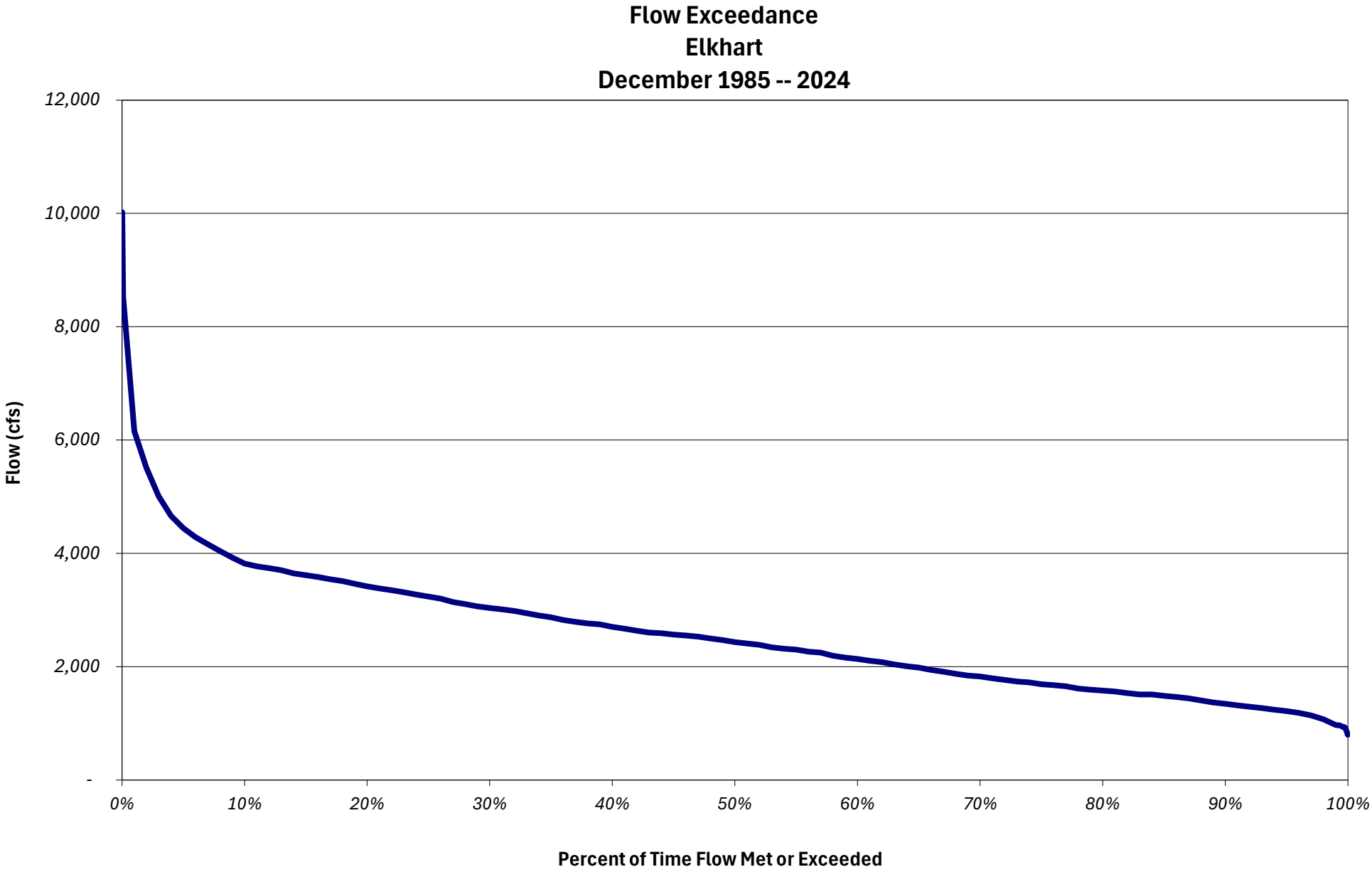

Flow Exceedance
Elkhart
July 1985 -- 2024
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-
Flow (cfs)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time Flow Met or Exceeded


Flow Exceedance
Elkhart
August 1985 -- 2024
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-
Flow (cfs)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time Flow Met or Exceeded


Flow Exceedance
Elkhart
September 1985 -- 2024
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-
Flow (cfs)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time Flow Met or Exceeded


Flow Exceedance
Elkhart
October 1985 -- 2024
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-
Flow (cfs)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time Flow Met or Exceeded


Flow Exceedance
Elkhart
November 1985 -- 2024
7,000
6,000
5,000
4,000
3,000
2,000
1,000
-
Flow (cfs)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time Flow Met or Exceeded


Flow Exceedance
Elkhart
December 1985 -- 2024
12,000
10,000
8,000
6,000
4,000
2,000
-
Flow (cfs)
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Percent of Time Flow Met or Exceeded