BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

APPLICATION FOR LICENSE FOR A MINOR WATER POWER PROJECT

FRENCH PAPER COMPANY HYDROELECTRIC PROJECT
FERC PROJECT NO. 10624

INITIAL STATEMENT

18 CFR § 4.61 (b)

(1) French Paper Company (hereinafter "Applicant" or "Licensee") applies to the Federal Energy Regulatory Commission (hereinafter "FERC" or "Commission") for a License for the French Paper Company Hydroelectric Project ("Project"), an existing licensed minor project, as described hereinafter.

(2) The location of the Project is:

State:	Michigan
County:	Berrien County
Town:	City of Niles
Stream:	St. Joseph River

(3) The exact name, address, and telephone number of the Applicant is:

French Paper Company
P.O. Box 398
100 French Street
Niles, MI 49120
269-683-1100

(4) The exact name, address, and telephone number of each person authorized to act as agent for the Applicant in this application are:

Mr. Shane Fenske
President
French Paper Company
100 French Street
Niles, MI 49120
(269) 683-1100
fenske@frenchpaper.com

Copies of all correspondence should also be sent to the following:

Mr. Kevin J. Siedlecki, P.E.
Senior Civil Engineer
Lawson-Fisher Associates P.C.
525 West Washington Avenue
South Bend, IN 46601
574-234-3167
ksiedlecki@lawson-fisher.com

(5) The Applicant is domestic corporation organized under the laws of the State of Michigan and is not claiming preference under Section 7(a) of the Federal Power Act.

(6) Statutory and Regulatory Requirements:

(i) The statutory or regulatory requirements of the state(s) in which the Project would be located that affect the Project as proposed with respect to bed and banks and the appropriation, diversion, and use of water for power purposes, and with respect to the right to engage in the business of developing, transmitting, and distributing power and in any other business necessary to accomplish the purposes of the license under the Federal Power Act, are:

1. 1994 Public Act 451, Michigan, Natural Resources and Environmental Protection Act, as amended (NREPA).

2. Section 401 (a) of the Clean Water Act requires the Applicant to apply for and receive a water quality certification from the Michigan Department of Environmental Quality for the operation and maintenance of the hydropower facility.

(ii) The steps which the Applicant has taken or plans to take to comply with each of the laws cited above are:

The Licensee, French Paper Company, has complied with all applicable Michigan statutes and regulations with respect to bed and banks and to the appropriation, diversion and use of water for power purposes for the Project.

State regulation of dams is currently done pursuant to Part 307 and Part 315 of the NREPA, which exempts federally licensed dams such as the Project dam. (See MCL324.31506(2)(a).)

The Applicant has received a 401 Water Quality Certification from the Michigan Department of Environmental Quality. This is described further and included as part of Exhibit E.

(7) Brief Project Description:

The project consists of French Paper's Niles Reservoir, with a surface area of about 112 acres and a storage capacity of about 864 acre-feet at a water surface elevation of 653.75 feet mean sea level (m.s.l.); French Paper's Niles Dam, a concrete gravity overflow structure 321 feet long and 13 feet high, topped by 2.3 feet high flashboards; a headrace (intake channel) 100 feet wide and approximately 600 feet long that bypasses the dam on the west side; a powerhouse 115 feet long, 55 feet wide, and 56 feet high; four (4) turbine-generator units in two open flumes, with a total installed capacity of 1,300 kW and a total hydraulic capacity of 1,370 cubic feet per second (cfs); a reinforced-concrete fish passage ladder northwest of the left abutment of the dam that is 6 feet wide and approximately 220 feet long with 15 steps with a fish counting room; a 3-phase, 3-wire, 12-kV overhead line approximately 0.16 miles long. The line begins at the 12-kV terminals of a 480- to 12,000-volt step-up transformer, adjacent to the project powerhouse, and ties into Indiana and Michigan Power's power pole located adjacent to French Paper's property; and appurtenant facilities including one 1550-kVa, 3-phase, 0.48/12 kV transformer bank; all necessary line and powerhouse switchgear; all necessary control and protective apparatus and all installed instrumentation.

(i) Installed generating capacity is 1,300 kW.

(ii) The Project is located at an existing dam.

(8) Lands of the United States Affected: None

(i) National Forest: None

(ii) Indian Reservation: None

(iii) Public Lands under Other Agencies: None

(iv) Other: None

(v) Total U.S. Lands: None

(vi) Check appropriate selection:

X Surveyed land _ Unsurveyed land

(9) The Project is currently operating, and there is no new construction proposed as part of this application.

General Content Requirements of 18 CFR § 5.18(a)

(1) Identify every person, citizen, association of citizens, domestic corporation, municipality, or state that has or intend to obtain and will maintain any proprietary right necessary to construct, operate, or maintain the project:

French Paper Company holds and will continue to hold the proprietary rights necessary to operate and maintain the project.

Name and Address of the owner of existing Project Facilities:

French Paper Company
P.O. Box 398
100 French Street
Niles, MI 49120

(2) Names and mailing address of every county in which any part of the Project, and any Federal facilities that would be used by the Project, would be located:

(i) Every county in which any part of the project, and any Federal facilities that would be used by the project, would be located:

The Project is in Berrien County, Michigan.

County Name:	Berrien County (Berrien County Courthouse)
Address:	811 Port Street St. Joseph, MI 49085
County Name:	Berrien County (Berrien County Administration Center)
Address:	701 Main Street St. Joseph, MI 49085

(ii) Every city, town, or similar local political subdivision:

(A) In which any part of the project, and any Federal facilities that would be used by the project, would be located:

City/Town Name:	City of Niles
Address:	333 N. 2nd Street Niles, MI 49120

(B) That has a population of 5,000 or more people and is located within 15 miles of the project dam:

City/Town Name:	City of South Bend
Address:	227 West Jefferson Boulevard South Bend, IN 46601
City/Town Name:	City of Dowagiac
Address:	241 S. Front Street Dowagiac, MI 49047

City/Town Name: City of Mishawaka
Address: 600 E. 3rd Street
Mishawaka, IN 46544

(iii) Every irrigation district, drainage district, or similar special purpose political subdivision in which any part of the Project, and any Federal facilities that would be used by the Project, would be located, or that owns, operates, maintains, or uses any Project facilities or any Federal facilities that would be used by the Project:

Not Applicable

(iv) 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 application:

Political Subdivision Name: Niles Charter Township
Address: 320 Bell Road
Niles, MI 49120

(v) All Indian tribes that may be affected by the Project:

Native American Tribe Name: Pokagon Band of the Potawatomi
Marcia Glynn, Chairperson
Address: 58620 Sink Road
Dowagiac, MI 49047

Native American Tribe Name: Citizen Potawatomi Nation, Oklahoma
Attn: John "Rocky" Barrett, Chairman
Address: 1601 South Gordon Cooper Drive
Shawnee, OK 74801

Native American Tribe Name: Forest County Potawatomi Community, WI
Mr. Harold Frank, Chairman
Address: 5414 Everybody's Road
Crandon, WI 54520

Native American Tribe Name: Hannahville Indian Community, Michigan
Mr. Kenneth Meshigaud, Chairperson
Address: N14911 Hannahville B1 Road
Wilson, MI 49896-9728

Native American Tribe Name: Nottawaseppi Huron Band of the Potawatomi, Michigan
Mr. Homer A. Mandoka, Chairperson
Address: 1485 Mno-Bmadzewn Way
Fulton, MI 49052

Native American Tribe Name:	Prairie Band Potawatomi Nation Liana Onnen, Chairperson
Address:	16281 Q Road Mayetta, KS 66509
Native American Tribe Name:	The Muscogee (Creek) Nation Mr. James Floyd, Principal Chief
Address:	Highway 75 & Loop 56 Okumlgee, OK 74447
Native American Tribe Name:	Miami Tribe of Oklahoma Mr. Douglas G. Lankford, Chief
Address:	2025 Eight Tribe Trail Miami, OK 74354
Native American Tribe Name:	Citizen Potawatomi Nation Kelli Mosteller, THPO
Address:	1601 S. Gordon Cooper Drive Shawnee, OK 74801
Native American Tribe Name:	Forest County Potawatomi Community Michael LaRonge THPO
Address:	Cultural Center, Library & Museum 5414 Everybody's Road Crandon, WI 54520
Native American Tribe Name:	Nottawaseppi Huron Band of the Potawatomi Jeff Chivis, THPO
Address:	1485 Mno-Bmadzewen Way Fulton, MI 49052
Native American Tribe Name:	Pokagon Band of Potawatomi Indiana Marcus A. Winchester, THPO
Address:	58620 Sink Road Dowagiac, MI 49047
Native American Tribe Name:	Muscogee Creek Nation Emman Spain, THPO
Address:	Cultural Preservation Office Highway 75 & Loop 56 Ocmulgee, OK 74447
Native American Tribe Name:	Miami Tribe of Oklahoma Diane Hunter, Acting THPO
Address:	2025 Eight Tribe Trail Miami, OK 74354

Other interested agencies or stakeholders.

Public Member Name:	Fort St. Joseph Archaeological Project: Western Michigan University
Address:	1903 W. Michigan Avenue Kalamazoo, MI 49007-5295

(3)(i) For a license (other than a license under section 15 of the Federal Power Act) state that the applicant has made, either at the time of or before filing the application, a good faith effort to give notification by certified mail of the filing of the application to:

(A) Every property owner of record of any interest in the property within the bounds of the project, or in the case of a project without a specific project boundary, each such owner of property which would underlie or be adjacent to any project works including impoundments:

A Certificate of Service is attached to the transmittal letter for this application for new license.

(B) The entities identified in paragraph (a)(2) of this section as well as any other Federal, state, municipal or other local government agencies that there is reason to believe would likely be interested in or affected by such application.

A Certificate of Service is attached to the transmittal letter for this application for new license.

(ii) Such notification must contain the name, business address, and telephone number of the applicant and a copy of the Exhibit G contained in the application, and must state that a license application is being filed with the Commission.

This information has been included with each notification letter. The example text is shown below:

NOTIFICATION OF FILING

In accordance with Federal Energy Regulatory Commission (FERC) guidelines, French Paper Company, a Michigan company, hereby gives notice that an Application for License of a Minor Waterpower Project for the French Paper Company Hydroelectric Project, located in the City of Niles, Berrien County, State of Michigan, is being filed with the Federal Energy Regulatory Commission. The Exhibit G – Project Map is attached for your reference. The business address and telephone number of the Applicant are:

French Paper Company
P.O. Box 398
100 French Street
Niles, MI 49120
269-683-1100

In accordance with Section 5.18 of the Commission's regulations, the following Exhibits are attached to and made a part of this application:

Exhibit A – Project Description

Exhibit E – Environmental Report

Exhibit F – General Design Drawings

Exhibit G – Project Maps

Exhibit H – Project Management and Need for Project Power

SUBSCRIPTION AND VERIFICATION

This Application for the License for the French Paper Company Hydroelectric Project, FERC No. 10624 is executed in the

STATE OF MICHIGAN

SS:

COUNTY OF BERRIEN

Mr. Shane Fenske, President, French Paper Company, the Applicant for License, who, being duly sworn deposes and says that the contents of this application are true to the best of his knowledge or belief. The undersigned Applicant has signed the application this _____ day of _____, 2019.

French Paper Company

By_____
Shane Fenske
President
French Paper Company

Subscribed and sworn to before me, a Notary Public of the State of Michigan, this _____ day of February, 2019.

_____
Notary Public

(My commission expires _____)/seal

FRENCH PAPER COMPANY HYDROELECTRIC PROJECT
(FERC PROJECT NO. 10624)

APPLICATION FOR LICENSE FOR A
MINOR WATER POWER PROJECT – EXISTING DAM

EXHIBIT A
PROJECT DESCRIPTION

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FRENCH PAPER COMPANY HYDROELECTRIC PROJECT
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1. Project Description

The existing French Paper Company Hydroelectric Project (Project), operated by the current licensee, French Paper Company (Applicant, or Licensee), is assigned Federal Energy Regulatory Commission (FERC) Project Number 10624 (formerly FERC Project UL-87-4). The existing license expires on February 28th, 2021. The Project is located along the St. Joseph River in the City of Niles, Michigan. A map of the Project and facilities is included in this application as Exhibit G. The project has four (4) turbine-generator units with a combined nameplate generating capacity of 1,300 kW. No new construction or modification is proposed by the Applicant, nor are there any provisions for future generating units. No changes to the Project boundary are proposed by the Applicant. A description of the project facilities in tabular format per 18 CFR § 4.61 (c) (1) is included below in Table A-1.

Table A-1 Description of Facilities

General Information	
Owner	French Paper Company
FERC Project Number	10624
County	Berrien County
Nearest City	City of Niles
French Paper Company Hydroelectric Project	
General	
Waterbody	St. Joseph River
Reservoir Surface Area	112 Acres
Reservoir Storage Capacity	864 Acre-feet
Reservoir Normal Surface Elevation/ Normal Pool Elevation	653.75 feet mean sea level (m.s.l.)
Total Maximum Hydraulic Capacity	1,370 cfs

Structures			
Hydraulic Turbines -Existing (There are no provisions for future units)	Unit 1	Generator Rating: 300 kW	
		Turbine Rating: 367 hp	
		Max. Hydraulic Capacity: 316 cfs	
		Generator: Westinghouse Turbine: Allis Chalmers Propeller	
	Unit 2	Generator Rating: 400 kW	
		Turbine Rating: 490 hp	
		Max. Hydraulic Capacity: 421 cfs	
		Generator: Allis Chalmers Turbine: Allis Chalmers Propeller	
	Unit 3	Generator Rating: 400 kW	
		Turbine Rating: 490 hp	
		Max. Hydraulic Capacity: 421cfs	
		Generator: Westinghouse Turbine: Leffel Propeller	
	Unit 4	Generator Rating: 200 kW	
		Turbine Rating: 245 hp	
		Max. Hydraulic Capacity: 212 cfs	
		Generator: General Electric Turbine: Francis	
Stream Flow Gages	USGS Gage (No. 04101500) St. Joseph River, Niles, MI) located approximately 0.9 miles downstream of the Project dam.		
Dam	Ogee shaped with a concrete spillway structure that is 321 feet long, 13 feet high, and is topped by 2.3- foot high flashboards.		
Trash Rack	Trash Rack 1	27.9’ wide x 14.2’ high	
	Trash Rack 2	22’ wide x 14.8’ high	
	Floating Debris Boom	185’ wide x 3’ high	

Fish Ladder	Vertical fish ladder (constructed of reinforced concrete) is 6 feet wide and approximately 220 feet long consisting of 15 steps with a fish counting room.
Powerhouse	Powerhouse is 115 feet long, 55 feet wide, and 56 feet high.
Headrace	Headrace (intake channel) is 100 feet wide and approximately 600 feet long.
Transmission Lines	Primary overhead electric transmission line is approximately 0.16 miles long and has a capacity of 12-kV.

i. Plant Operation

The French Paper Project is operated as a run-of-river project, with inflow equal to outflow, except for the 72-hour shut down for fish passage, for emergencies, flow conditions outside of its control. The timing of this 72-hour shutdown is annually beginning at 6:00 am on the second Friday of May. This is to allow for the safe downstream passage of Chinook salmon and steelhead smolts released by the upstream Richard Clay Bodine Indiana State Fish Hatchery. (Per attached letter from MDNR dated January 6, 2004 in Appendix A-2).

French Paper has the ability to manually control flows within the operating range of the hydroelectric plant (maximum capacity equal to 1,370 cfs). However, higher flows are passed over the existing 321 foot spillway. The total hydraulic capacity of the power plant is 1,370 cfs. In addition, the Licensee diverts a minimum of 120 cfs, in accordance with existing License Article 401, for operation of the fish ladder. Flashboards are not collapsed, except by heavy debris loading.

Impoundment headwater elevations are monitored through a water level sensor, but are not automatically electronically logged; readings are recorded manually based on the sensor output once per day, typically between 7 a.m to 9 a.m. During times of high flows and extreme cold-weather events, elevations are monitored by French Paper staff 24- hours per day. Twenty-four hour per day staffing allows the monitoring of equipment and operational conditions to ensure proper precautions are taken to avoid an emergency. The maximum dam capacity (excluding freeboard) is estimated to be 31,000 cfs, which is greater than the 100-year flood discharge (22,500 cfs) (FPC 1988).

The turbine-generator equipment is operated with a manual switchgear. Excess power output is sold to Indiana and Michigan Power (I&M) and is transmitted through their privately-owned conductors, power lines, and ancillary equipment. Appurtenant facilities include a 1,550-kVa, 3-phase, 0.48/12 kV transformer bank, switchgear, protective apparatus, and installed instrumentation.

The Project maintains, year-round, a continuous flow of at least 120 cfs for the operation of the fish ladder. The existing plant hydraulics and reservoir normal pool elevation ensure that a minimum flow of 120 cfs is maintained. A flow of less than 120 cfs is beyond the control of French Paper. The MDNR is responsible for operating and maintaining the fish ladder. There are no known incidents of the minimum flow not being achieved.

All debris at the plant's trash racks is removed by manual raking as necessary based on visual inspection of buildup at the racks. The debris is sorted and any plastics, trash, or garbage is properly disposed. Any leaves, wood, or biological mass is collected and passed to the river downstream of the dam and north of the power house. Operation personnel monitor the project every day of the year and are on call 24 hours a day, every day of the year to respond to problems at the project. The operator checks the plant twice per day and maintains Plant Operation Logs. For larger debris that can get caught on the spillway, French Paper clears debris when flows are low enough to not put crews in danger. A subcontractor is hired occasionally when maintenance is beyond French Paper's capabilities.

ii. Average Annual Production

The average annual power production is 8,442,800 kilowatt-hours (kWh) or 8442.8 megawatt-hours (MWh). The estimated dependable capacity per year is 10,165,000 kWh. The dependable capacity is estimated based on 1,300 kW generation for 362 days per year, that excludes the 72-hour shutdown performed by French Paper annually in May. Additionally, a factor of 90% is taken into account based on the flow duration curves, which show that flow is available to generate electricity approximately 90% of the year.

iii. Average Head

Average head at the Plant is 14 feet.

iv. Reservoir Characteristics

French Paper's Reservoir has a surface area of about 112 acres and a storage capacity of about 864 acre-feet at a water surface elevation of 653.75 m.s.l. (the normal pool elevation of the reservoir corresponding to the top of the flashboards).

v. Hydraulic Capacity

The estimated hydraulic capacity of the powerhouse is 1,370 cfs, not including the minimum 120 cfs devoted to the operation of the fish ladder. The estimated average flow of the waterbody at the plant or point of diversion is 3,500 cfs, based on the average of the 50% exceedance values from the monthly flow duration curves described in more detail below.

a. Stream Flow Gages

There is a USGS Gage (No. 04101500, St. Joseph River, Niles, MI) located approximately 0.9 miles downstream of the Dam. The gage has a streamflow period of record of 1930 to present. Since 1991, the French Paper Company, has shared in the cost for USGS to operate and maintain the gage. In 1991, the gage was only used to calculate streamflow, but in 2011, additional instrumentation was added to measure temperature, specific conductivity, dissolved oxygen, pH, and turbidity. Currently, French Paper contributes $4,670 annually (to Gage No. 04101501 that works in tandem with Gage No. 04101500 to accurately measure streamflow) and the USGS Groundwater and Streamflow Information Program contributes $15,700. (See correspondence in Appendix A-2). There are currently no other contributors to the operation and maintenance of the gage. French Paper proposes to continue the same level of funding ($4,670 annually) for USGS Gage No. 04101501, so that the USGS Gage No. 04101500 can accurately measure streamflow. Monthly flow duration curves, derived from USGS Gage 04101500 data, are included in Appendix A-1. The period of record is October 6, 1930 to present.

b. Available Flow Data

Monthly Flow Duration Curves are displayed in Appendix A-1. The period of record for the curves shown is 1930-January 31, 2016.

c. Upstream Drainage Area

The Project is located at River Mile 44.5 on the St. Joseph River, with a drainage area of approximately 3,666 square miles at the Project site. The St. Joseph River Basin occupies approximately 3,000 square miles of the southwest corner of Michigan, approximately 1,685 square miles of northern Indiana, and is the third largest watershed draining to Lake Michigan (FERC 1991a). The basin area contributing to the Project is 3,666 square miles (FPC 1988). The floodplain is less than a half mile wide (FERC 1991a). St. Joseph River begins at the source in Hillsdale County, Michigan and crosses the Michigan and Indiana border twice.

vi. Project Structures

a. Dam

French Paper's Niles Dam is an ogee shaped, concrete gravity overflow structure that is 321 feet long and 13 feet high, topped by 2.3-foot-high flashboards.

b. Trash Rack Structures

French Paper Company's Project utilizes a floating debris boom located at the entrance to the headrace and trash racks at the intakes of the generating units at the powerhouse to capture debris.

The floating debris boom is approximately 185 feet long along the entrance to the headrace. It contains deflectors that extend approximately 3-feet below the water surface that has large holes in them to deflect floating and partially suspended debris. Survey performed in 2007 by Lawson-Fisher Associates measured headloss across the debris boom to be 0.03-feet. This amount of headloss is negligible and should not affect fish entrainment since the deflector only extends 3-feet below the surface.

Units No. 1 and No. 2 share the same trashrack system and the same flume conveys water to the turbines. The trashrack for these units consists of 104, ¼-inch vertical steel bars with 3-inch spacing. The racks are placed at a 14-degree angle to the vertical for cleaning purposes. There are four (4) rows of horizontal spacers that consist of 2½-inch diameter pipes.

The properties of the trash racks located at the entrance to the flume for Units 1 and 2 (South Racks) are as follows:

- Total Area (A_t) ..... 396.2-ft^2
- Open Area (A_o) ..... 343.9-ft^2
- Blocked Area (A_b) ..... 52.3-ft^2
- Thickness of Rack Bars (t)..... ¼-in
- Clear Spacing Between Bars (b)..... 3-in
- Angle (From Horiz.) of Bar Inclination (a)..... 76°

Based on the maximum flow through Units 1 and 2 (737 cfs) and open area of the trash racks, the velocity was calculated to be 2.1 feet per second, based on the flow continuity equation.

Units No. 3 and No. 4 are located adjacent to one another. These two units share the same trashrack system; however, there is a concrete divider wall between them. The trashracks for these units consist of 82, ¼-inch vertical steel bars with 3-inch spacing. The racks are placed at a 15-degree angle to the vertical for cleaning purposes. There are seven (7) rows of horizontal spacers that consist of 2½-inch diameter pipes.

The properties of the trash racks located at the entrance to the flume for Units 3 and 4 (North Racks) are as follows:

- Total Area (A_t) ..... 325.6-ft^2
- Open Area (A_o) ..... 270.8-ft^2
- Blocked Area (A_b) ..... 54.8-ft^2
- Thickness of Rack Bars (t)..... ¼-in
- Clear Spacing Between Bars (b)..... 3-in
- Angle (From Horiz.) of Bar Inclination (a)..... 75°

Based on the maximum flow through Units 3 and 4 (633 cfs) and the open area of the trash rack, the velocity was calculated to be 2.3 feet per second based on the flow continuity equation.

c. Fish Ladder

The fish ladder was constructed by the Michigan Department of Natural Resources as part of the St. Joseph River Interstate Cooperative Salmonid Management Plan. The fish ladder is a reinforced concrete fish passage ladder and is northwest of the left abutment of the dam. The vertical fish ladder is 6 feet wide, approximately 220 feet long, and consists of 15 steps with a fish counting room. The fish ladder entrance is approximately 95 feet downstream of the spillway crest, while the exit to the fish ladder is located approximately 75 feet upstream of the spillway crest. The fish ladder has a minimum hydraulic capacity of 120 cfs.

The fish ladder and headrace contain an auxiliary water system which conveys water from the headrace through twin 30-inch ductile iron pipes which connect to a diffusion chamber on each side of the fish way. This water system provides the velocity jet to attract fish during migration (FERC 1991a). During periods of low flow, priority is given to the 120 cubic feet per second (cfs) flow required for operation of the fish ladder.

The fish ladder is associated with a fish counting room facility, which permits MDNR fisheries personnel to record the passage of fish (FPC 1988). The Richard Clay Bodine Indiana State Fish Hatchery raises juvenile chinook salmon and juvenile steelhead trout and releases these smolts annually in the spring. The chinook smolts reach the Project approximately 48 hours after release from the hatchery in Mishawaka, IN, while the steelhead trout smolts reach the Project over a one month period after release from the hatchery.

The frequency, timing, and duration during which the fish ladder is operated is continuously, with a minimum flow of 120 cfs required for fish attraction. Annually, the Project has 72-hour controlled shutdown. The timing of this 72-hour shutdown is beginning at 6:00 am on the second Friday of May. (Per attached letter from MDNR dated January 6, 2004 in Appendix A-2).

MDNR staff are responsible for its operation and maintenance to ensure that minimum flows are being achieved.

The MDNR and IDNR are the operators of the counting room. The viewing room is accessible by MDNR and IDNR staff, but does not have a normal operations schedule, nor is it typically open to the public.

According to an email from Michigan DNR – Fisheries Division, fish passage has not been monitored at French Paper Dam since spring 2009. See correspondence in Appendix A-2.

Constraints (e.g., low flows) associated with operating the fish ladder are are beyond the control of French Paper due to the hydraulic configuration of the plant. There have been no known incidents whereby operation of the fish ladder was constrained due to environmental conditions or other reasons.

d. Powerhouse

French Paper Company's Powerhouse is 115 feet long, 55 feet wide, and 56 feet high with three (3) vertical shaft propeller turbine (generator) units and one (1) francis turbine. There is a vertical slide gate across the entire flume for units 1 and 2. There are also vertical slide gates on the flume to units 3 and 4 that can be operated independently of one another. Additionally, there are wicket gates on each of the turbines that operate independently. They are typically left open 100% unless a repair is needed that requires flow to the unit be stopped.The total installed capacity of the units is 1,300 kW, with a total hydraulic capacity of 1,370 cubic feet per second.

e. Headrace

French Paper Company's Headrace (intake channel) is 100 feet wide and approximately 600 feet long. The Headrace bypasses the dam on the west side approximately 375 feet upstream of the dam.

f. Transmission Lines

Primary overhead electric transmission line lies within the project boundary. Power generated by the hydroelectric dam is used to provide a portion of the electric power needs of French Paper's Paper Mill. Excess power generated by French Paper (generally during plant shut down) is sold to Indiana and Michigan Power (FERC 1991a). This sold power is transmitted through conductors, power lines, and ancillary equipment owned by I&M. The I&M facilities include a 3-phase, 3-wire, 12-kV overhead line approximately 0.25 miles long. The line begins at the 12-kV terminals of a 480- to 12,000-volt step-up transformer, adjacent to the project powerhouse, and ties into Indiana and Michigan Power's power pole located adjacent to French Paper's property.

vii. Estimated Capital Costs and Annual Operation and Maintenance Expense of Each Proposed Environmental Measure

French Paper Company proposes the following measures to protect, mitigate adverse impacts to, or enhance environmental resources at the French Paper Hydroelectric Project. These were developed in conjunction with MDEQ as part of the 401 Water Quality Certification and are described in further detail in the Environmental Document Exhibit E included with this application.

- Maintain the level of the French Paper Impoundment at minimum elevation of 653.75 ft mean sea level (m.s.l) and any fluctuation shall not exceed – (minus) 0.25 ft on an annual basis, except during events beyond the control of the FPC, including naturally low flows. No annualized costs are associated with this item. Confirmation of the elevation and datum will be performed by a professional land surveyor. This survey is a one-time cost of approximately $2,500.

- Continue to operate the project in run-of-river mode except for the 72-hour shut down for downstream fish passage, as described below. Run-of-river means the instantaneous flow downstream of the FPC Powerhouse shall approximately equal instantaneous inflow to the French Paper Impoundment. No capital or annual costs are associated with this item.

- Install a calibrated staff gauge referenced to confirmed and surveyed datum in the French Paper Impoundment at a location approved by MDEQ clearly visible to the public. The staff gauge will be accompanied by a sign that shows the required operating levels. The levels shall be recorded at least hourly with a level transducer and data logger, with an annual summary report of all levels to be submitted by March 31st each year. The initial capital expense is approximately $5,000, and the annual expense is approximately $3,500.

- Continue to allow MDNR to operate and maintain the fish ladder at the project for potadramous fish species (e.g., steelhead, Chinook salmon, coho salmon, brown trout, and lake trout). There is no capital cost and minimum annualized cost associated with this item.

- Continue to maintain a flow of 120 cfs for the operation of the fish ladder. There are no capital or annualized costs associated with this item. The lost generation due to the operation of the fish ladder is approximately 450,000 kWh. This is based on 93% flow availability of the hydraulic capacity of the plant (1,370 cfs without the fish ladder), versus 89% flow availability of the plant and fish ladder (1,490 cfs) based on the flow duration curves. With this power having to be replaced with power purchased from I&M at 2018's rate of $0.1238/kWh, the cost associated with maintaining flow to the fish ladder is approximately $55,710.

- Continue to annually shut down the project for a period of 72 hours beginning at 6:00 am on the second Friday of May to allow for the safe downstream passage of Chinook salmon and steelhead smolts released by the upstream Richard Clay Bodine Indiana State Fish Hatchery. (Per attached letter from MDNR dated January 6, 2004 in Appendix A-2) There is no capital costs associated with this item. The annualized cost is associated with lost generation and having to purchase power from I&M, Assuming that the four units could have been operating at full capacity during the shutdown, the lost generation is approximately 93,600 kWh, which would have to be replaced with power purchased from I&M. At 2018's rate of $0.1238/kWh for power purchased, the cost associated with the shutdown is approximately $11,600.

- Continue to provide the current annual level of funding for the United States Geological Survey (USGS) Gauge No. 04101500, located 0.9 miles downstream of the project, in accordance with requirements set forth in the Project's 401 Water Quality Certification. There is no capital expense associated with this item. Current annual expense to maintain the USGS gage by French Paper Company is $4,670.

- Develop a streamflow monitoring plan to monitor the flow of the St. Joseph River downstream of the FPC Hydroelectric Project on an hourly basis. The USGS Gauge (04101500) shall be used as a compliance point for streamflow monitoring. There is no capital expense associated with this item. The initial O&M expense is approximately $3,000 to develop the plan.

- A three-year test period beginning after the flow monitoring plan above is implemented shall be used to determine FPC's ability to comply with the 401 certification conditions. Within 90 days after the end of the three-year test period, the FPC shall submit a report to the MDEQ that documents the FPC's ability to comply with the Certification requirements. If the MDEQ concludes that the FPC is not able to comply with all the requirements, then the FPC shall, within one year, in cooperation with the MDEQ and MDNR, develop a corrective action plan and implementation schedule to meet those requirements. The FPC shall implement the corrective action plan upon approval by the MDEQ and any other agency specified in the FERC license. There is no capital expense associated with this item. Annual costs associated with the three-year test period is approximately $3,500.

- Monitor the temperature and dissolved oxygen of the St. Joseph River hourly from June 1st through September 30th at the compliance point downstream of the Project, and at a representative location upstream of the facility, beginning the first year after the monitoring plan is approved by the MDEQ. The capital expense associated with this item (and the temperature and dissolved oxygen profile monitoring listed below) is approximately $5,000 for the purchase of monitoring equipment. There is also an initial expense of $3,500 for the development of the plan. Annual costs associated with the operation and maintenance is approximately $25,000.

- Temperature and dissolved oxygen profile monitoring shall also be conducted in the deepest part of the impoundment every two weeks from June 1st through September 30th. Measurements shall be made at 0.5-meter increments or less. Secchi disc depth measurements shall be made at the same time and location as the profiling. Capital costs are included with the continuous monitoring described above. Annual cost is approximately $5,000.

- After one year of monitoring, the FPC may send a written request to the MDEQ to change the frequency of the temperature and dissolved oxygen monitoring, based on results that meet and are consistent with the dissolved oxygen and temperature monitoring at the downstream USGS

gauge. Alternative monitoring frequencies may be implemented by the FPC upon written approval from the MDEQ. There are no capital or annualized expenses associated with this item.

- Ten years after the issuance of the FERC license and every ten years thereafter, the FPC shall analyze the sediments in the Impoundment for the parameters noted in their 401 Water Quality Certification with MDEQ. Other sediment data of adequate quality less than three years old from the FPC Hydroelectric Project Impoundment may be substituted upon approval of the MDEQ. There are no capital expenses for this item. Annual costs are approximately $10,000 for years when the analysis takes place.

- Beginning one year after the issuance of the FERC license and every ten years thereafter, the FPC shall monitor the edible portion of fish from the FPC impoundment for total mercury and PCBs. The sample shall consist of ten legal size resident predator fish of one species, and ten bottom feeder fish of one species that are representative of the sizes normally consumed by anglers. Fish shall be individually analyzed. Other fish tissue data of adequate quality less than five years old from the Impoundment may be substituted upon approval of the MDEQ. There is no capital expense associated with this item. Annual costs are approximately $20,000 for years when the fish tissue monitoring takes place.

- Within one year of the FERC license issuance, the FPC shall submit and implement a plan to MDEQ for a periodic (ever five years) inspection program to promptly identify any new erosion caused by the FPC Hydroelectric Project. There is an initial expense of approximately $500 to develop the plan. Annual costs to perform this are approximately $1,000 or $5,000 per monitoring/report cycle.

- Within one year of the FERC license issuance, the FPC shall develop and submit for approval by the MDEQ , a plan to pass natural debris (logs, stumps, sticks, limbs, leaves) collected on the trash racks and log booms over the Dam. The FPC shall remove and properly dispose of all other materials collected in the trash racks and spill gates including aquatic plants. The plan shall include appropriate safety provisions and a schedule for implementation. There is is a minimal initial expense of $500 to develop the plan. Annual costs are approximately $5,000.

2. Project Purpose

The purpose of the Project is to internally fulfill the electrical power demands of French Paper Company's factory by utilizing a locally available and renewable, nonpolluting energy source. A positive byproduct of the Project is the ability for French Paper Company to sell excess power to Indiana and Michigan Power (I&M).

3. Cost to Develop License Application

The estimated cost to develop the license application is approximately $200,000.

4. On-Peak and Off-Peak Values of Project Power

Not applicable since operation is run-of-river.

5. Estimated Increase or Decrease in Project Generation or Project Power

Not applicable since no material changes to the existing license are proposed.

6. Undepreciated Net Investment (Book Value) of the Project

The book value of the Project is approximately $1,836,553.00.

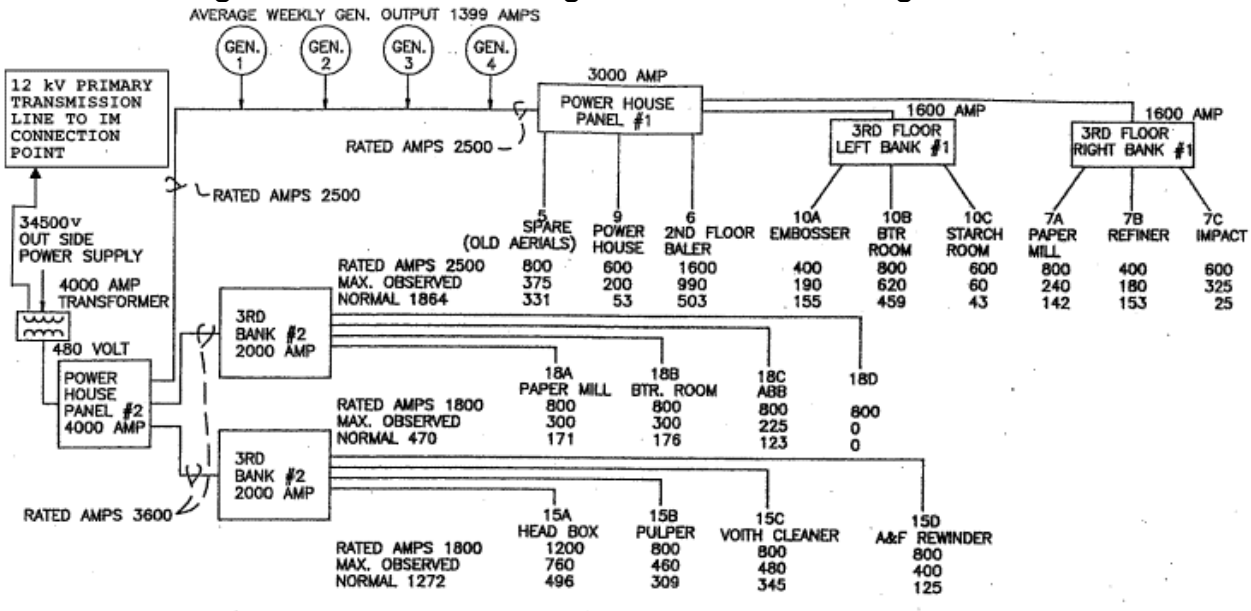
7. Annual Operation and Maintenance Expenses

The annual operation and maintenance expenses, including insurance, administrative, and general costs is approximately $51,390.54.

8. Detailed Single Line Electrical Diagram

A detailed single-line electrical diagram is included below as Figure A-1.

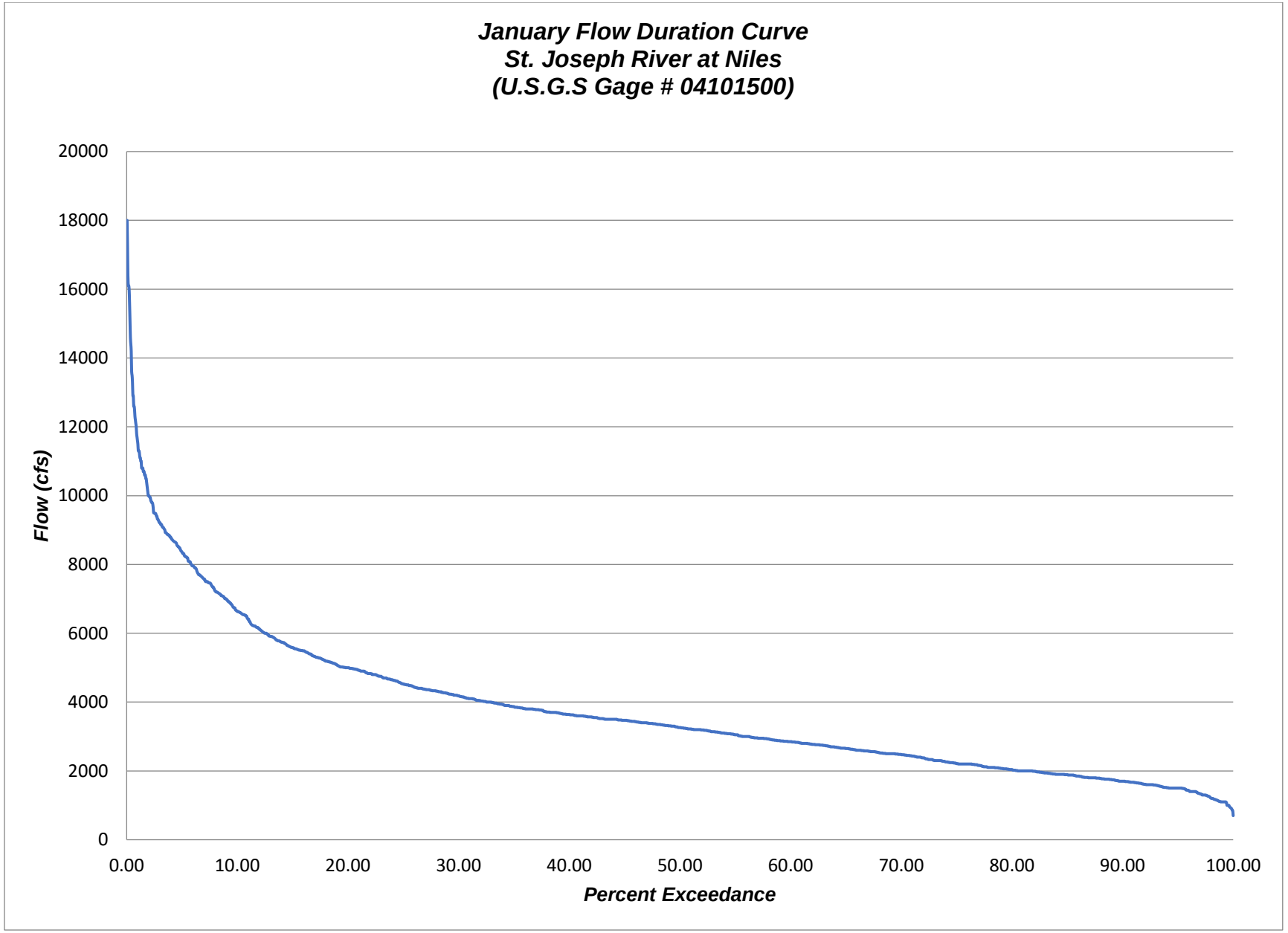
Figure A-1 – Detailed Single-Line Electrical Diagram

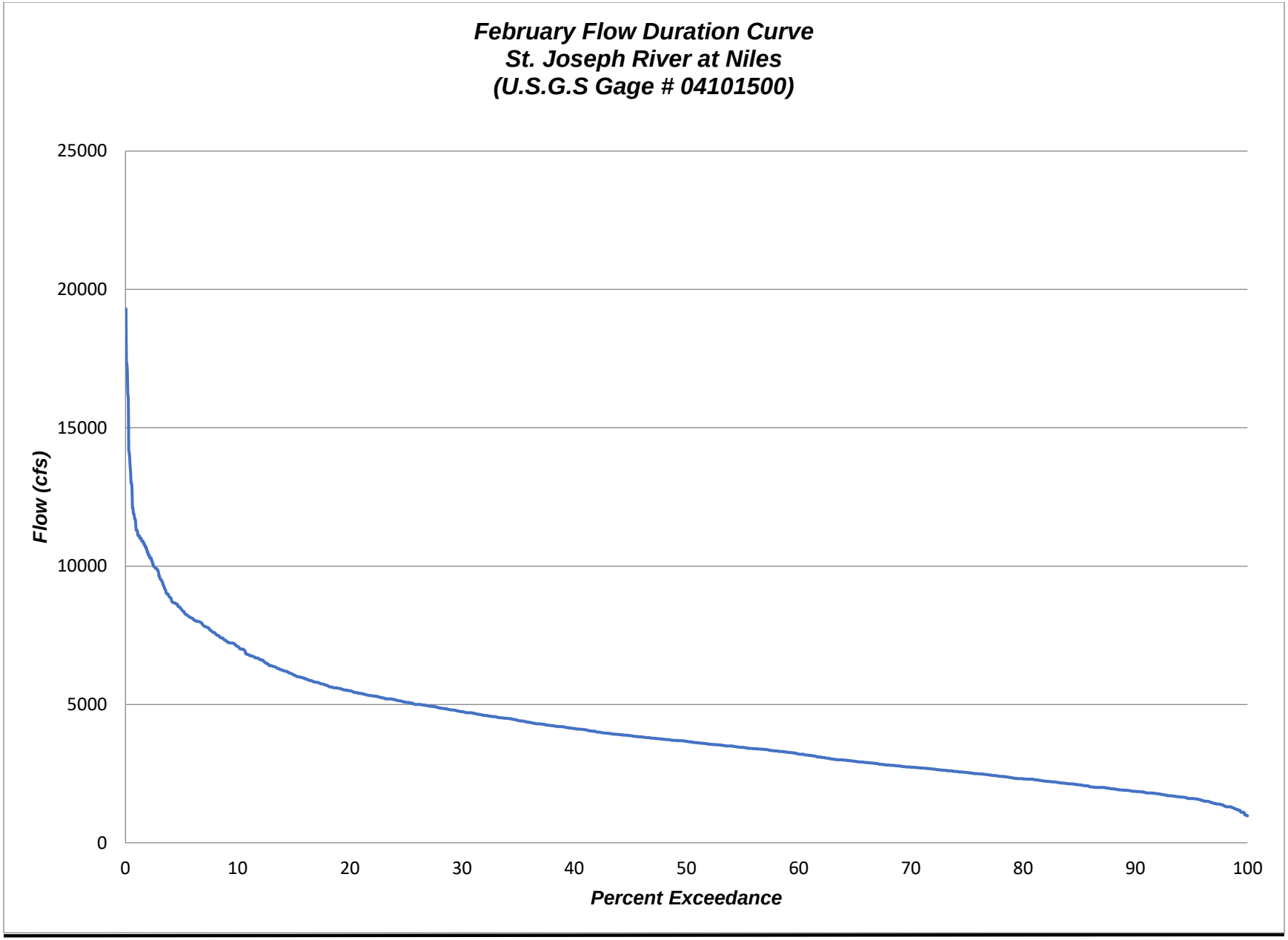


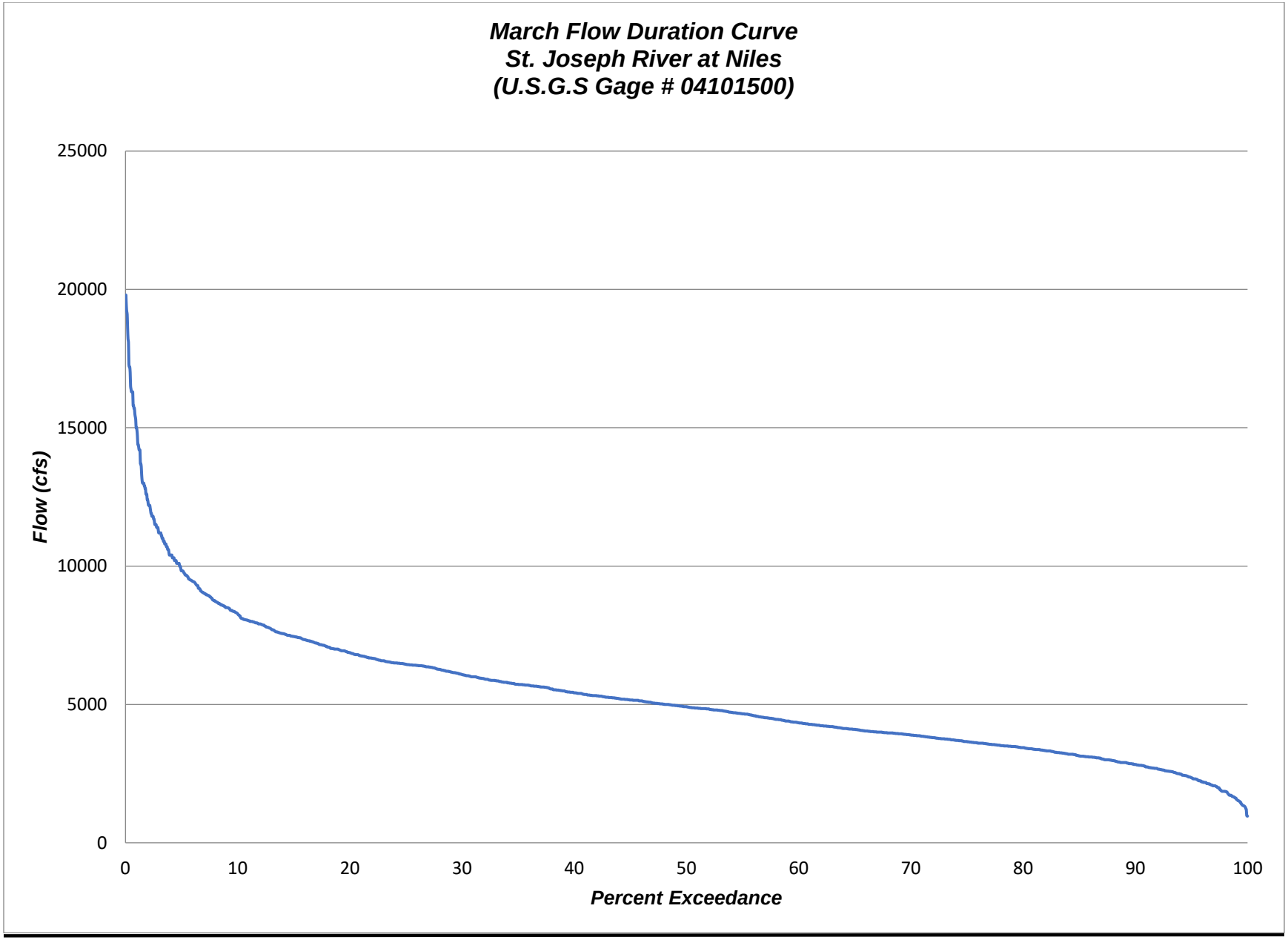
9. Safety Statement

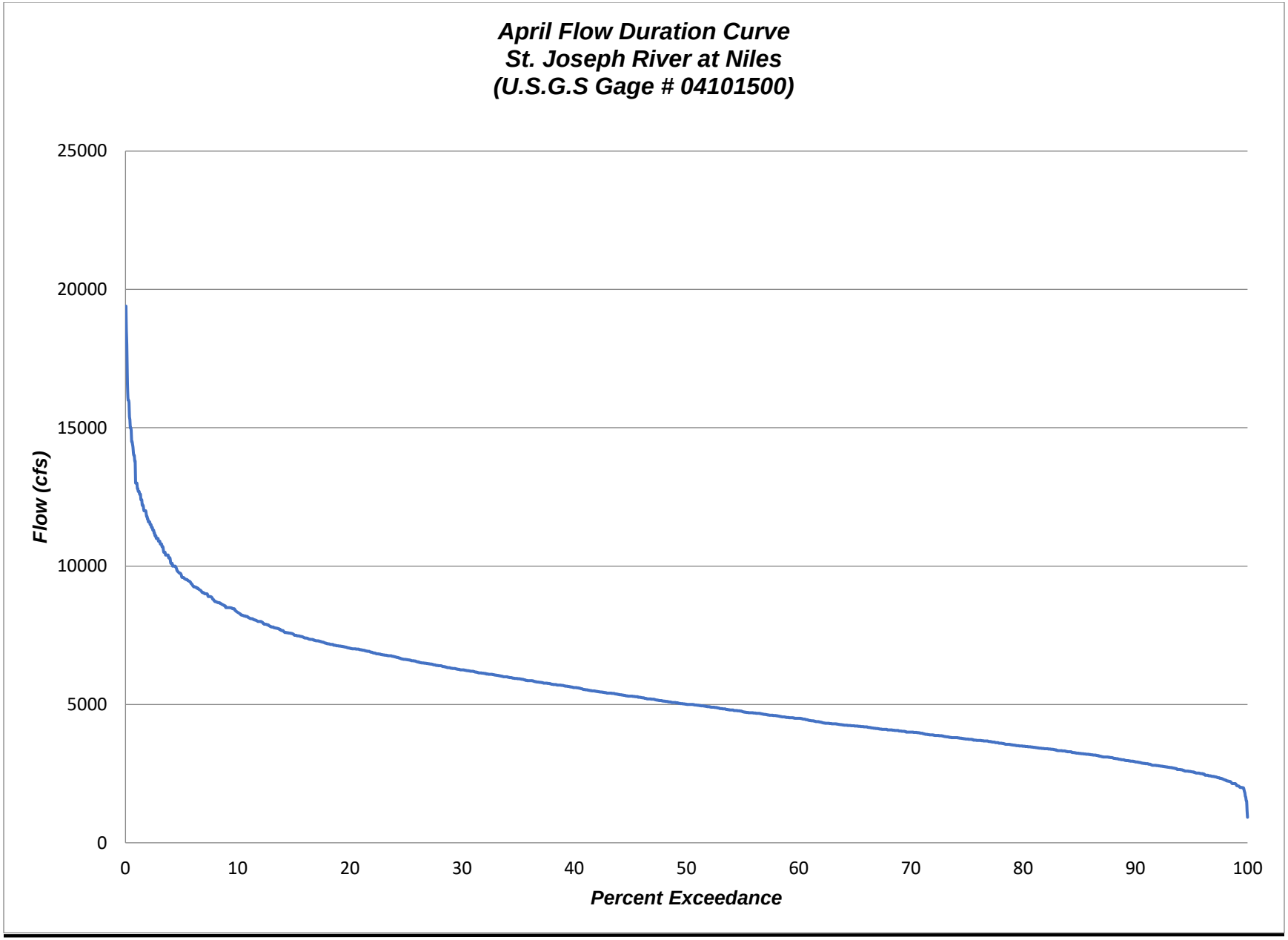
The safe management, operation, and maintenance of the Project is upheld through several programs. It is French Paper Company's goal to continue safe operation at the Project while also optimizing energy production and minimizing adverse environmental and social impacts. French Paper Company provides continual safety and preventative maintenance training programs. All employees, and persons involved with the Project, are expected to familiarize themselves with, and adhere to, the Project's policies.

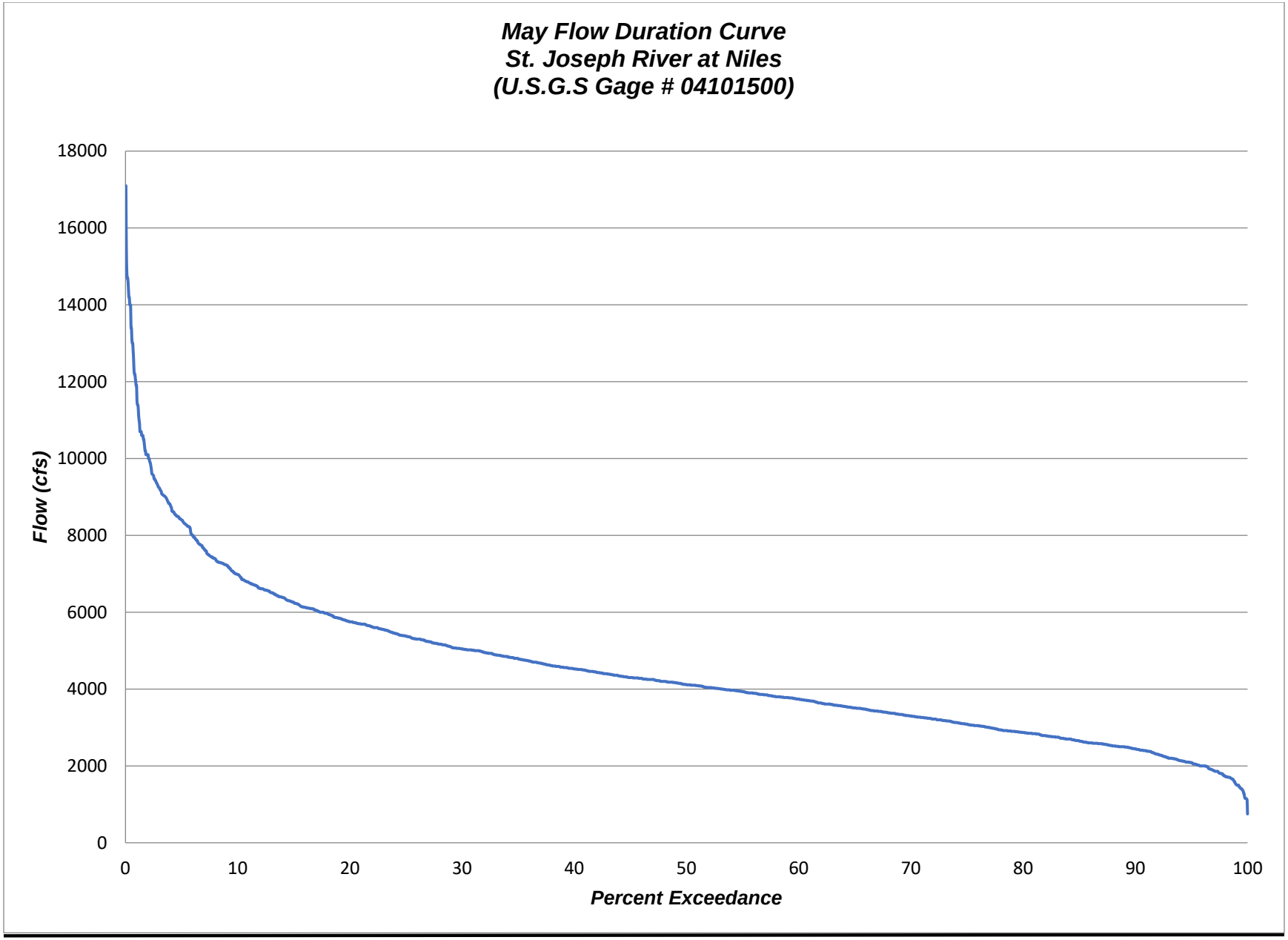
APPENDIX A-1
Flow Duration Curve

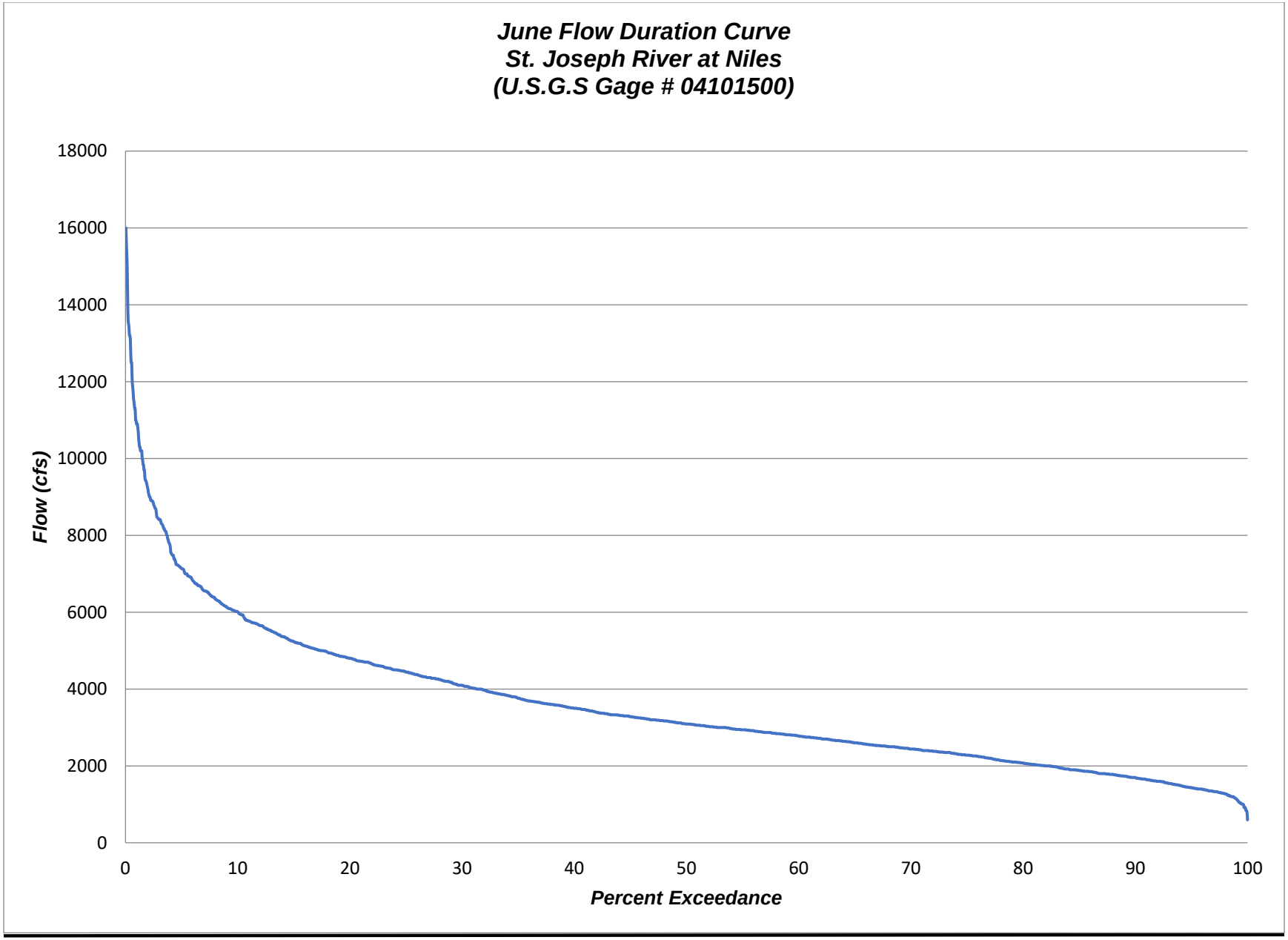

January Flow Duration Curve
St. Joseph River at Niles
(U.S.G.S Gage # 04101500)
Flow (cfs)
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0.00
10.00
20.00
30.00
40.00
50.00
60.00
70.00
80.00
90.00
100.00
Percent Exceedance

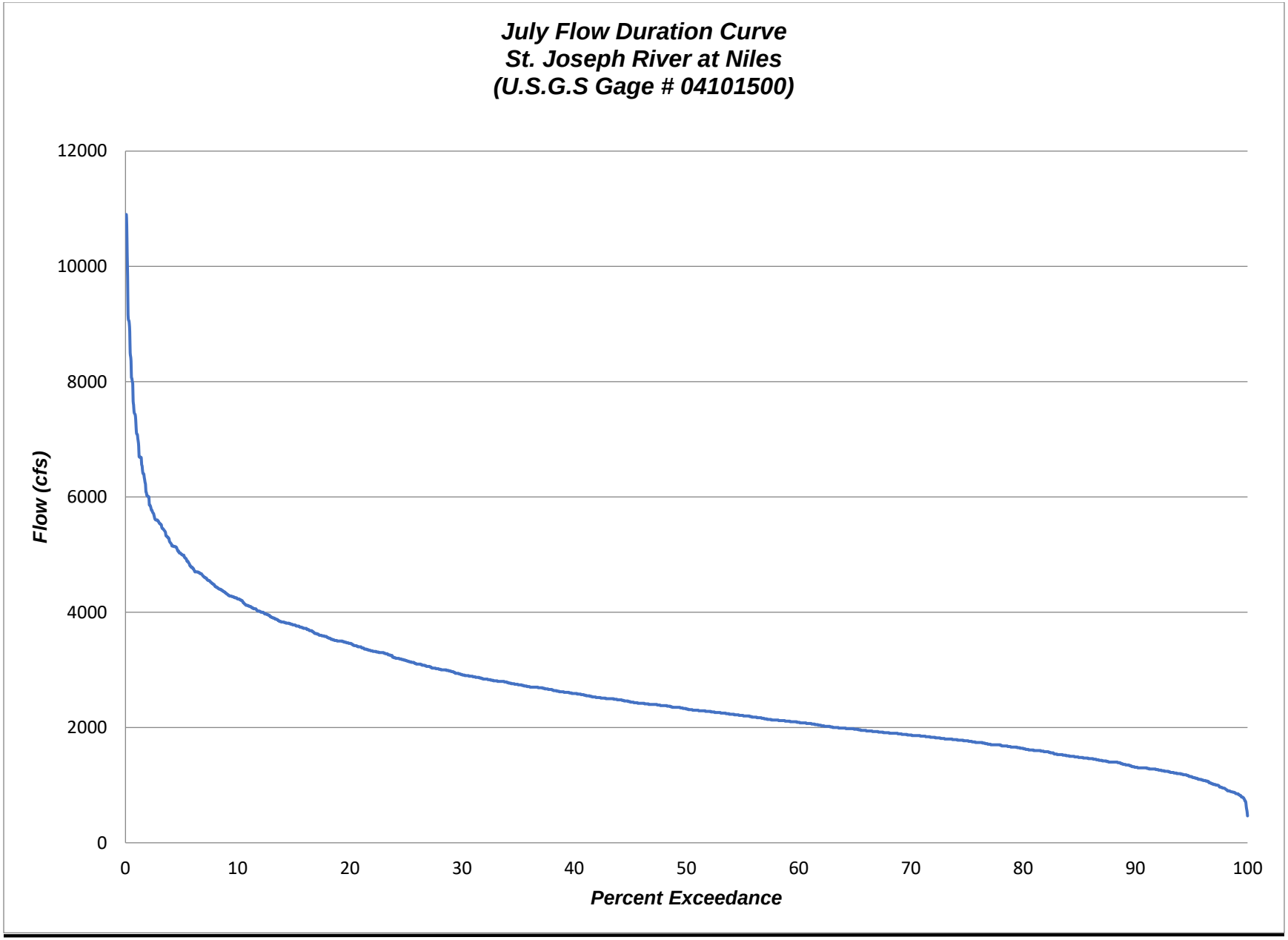

February Flow Duration Curve
St. Joseph River at Niles
(U.S.G.S Gage # 04101500)
25000
20000
15000
10000
5000
0
Flow (cfs)
0
10
20
30
40
50
60
70
80
90
100
Percent Exceedance

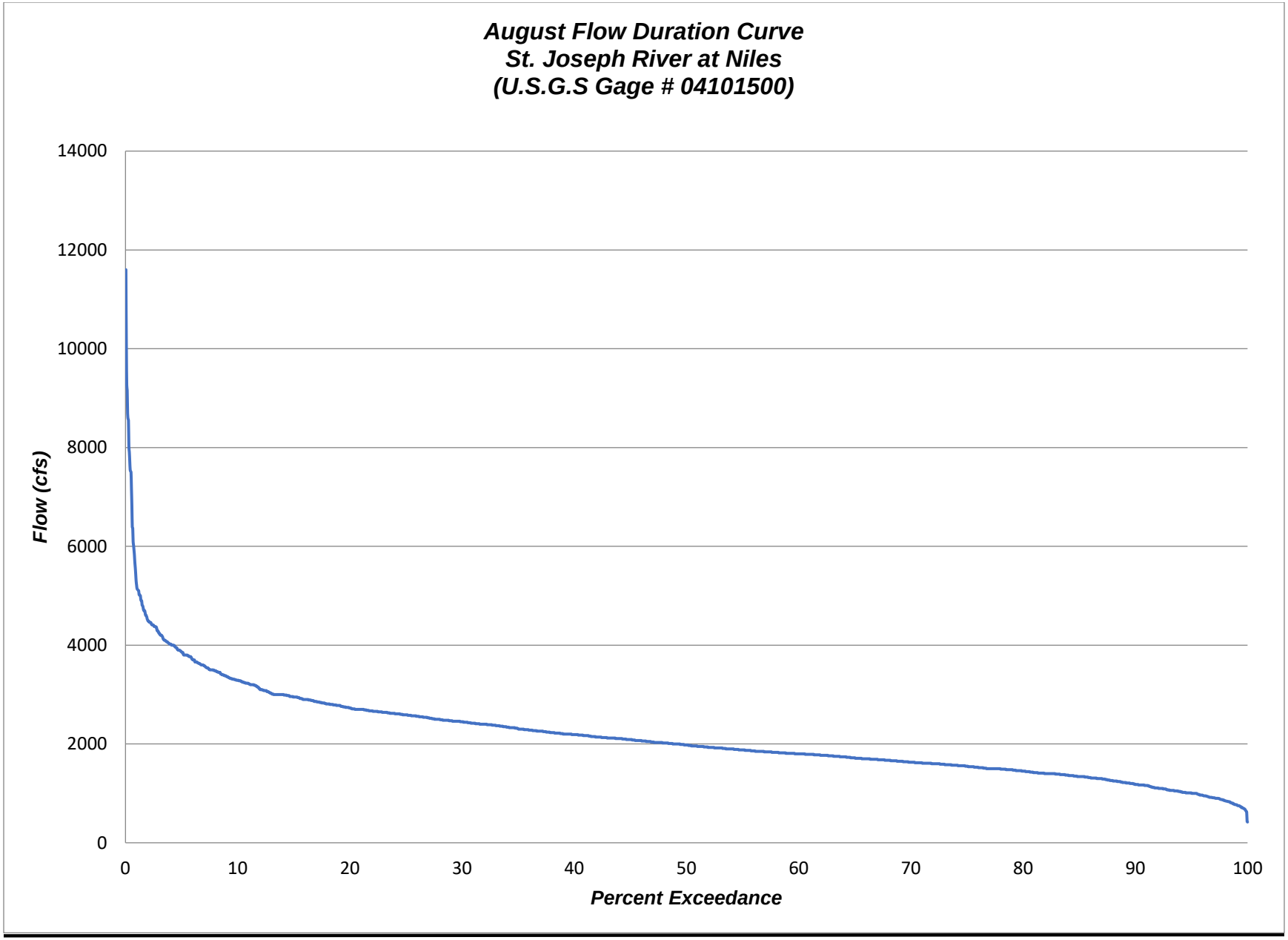

March Flow Duration Curve
St. Joseph River at Niles
(U.S.G.S Gage # 04101500)
25000
20000
15000
10000
5000
0
Flow (cfs)
0
10
20
30
40
50
60
70
80
90
100
Percent Exceedance

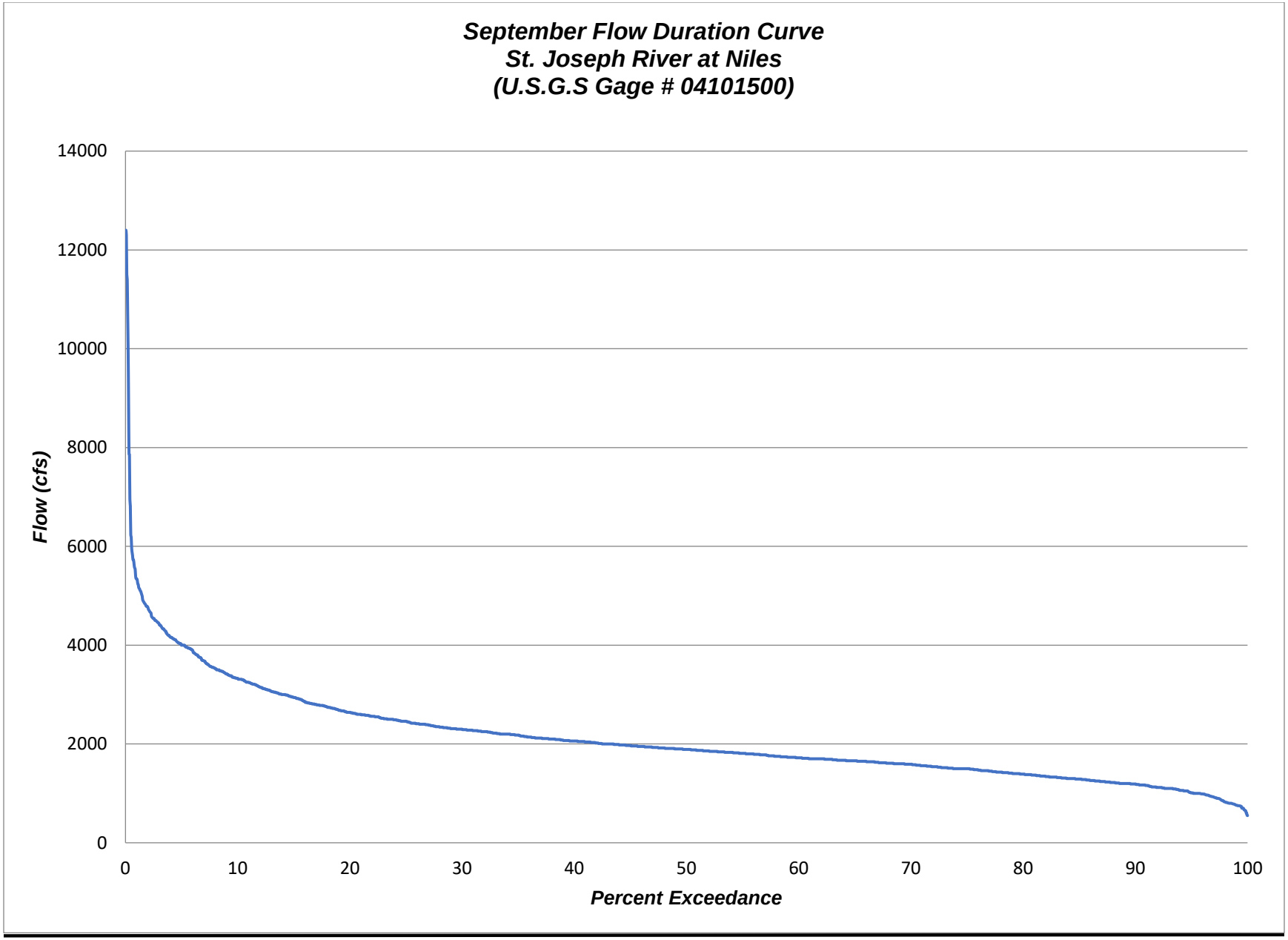

April Flow Duration Curve
St. Joseph River at Niles
(U.S.G.S Gage # 04101500)
25000
20000
15000
10000
5000
0
Flow (cfs)
0
10
20
30
40
50
60
70
80
90
100
Percent Exceedance

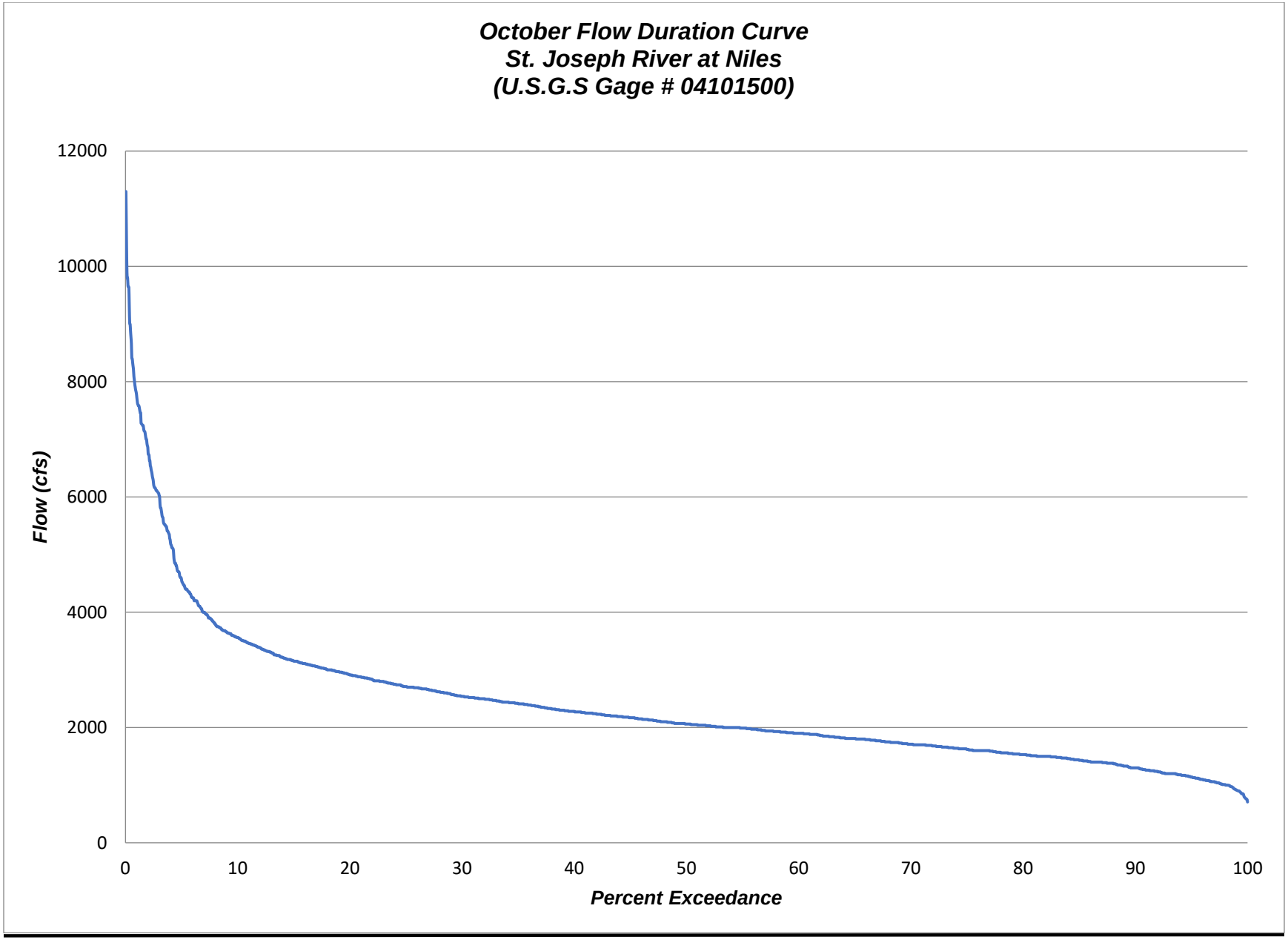

May Flow Duration Curve
St. Joseph River at Niles
(U.S.G.S Gage # 04101500)
Flow (cfs)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
10
20
30
40
50
60
70
80
90
100
Percent Exceedance

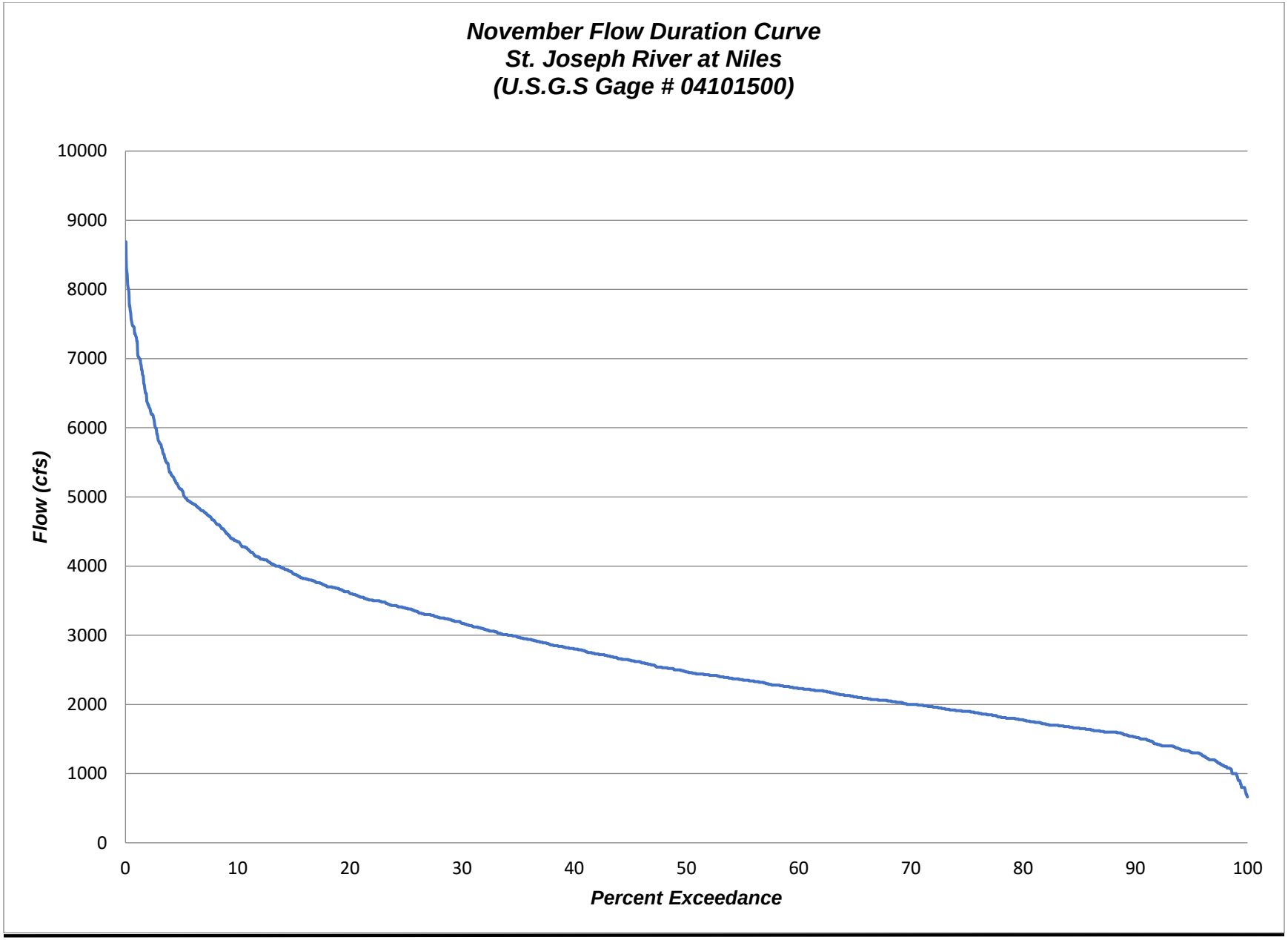

June Flow Duration Curve
St. Joseph River at Niles
(U.S.G.S Gage # 04101500)
Flow (cfs)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
10
20
30
40
50
60
70
80
90
100
Percent Exceedance

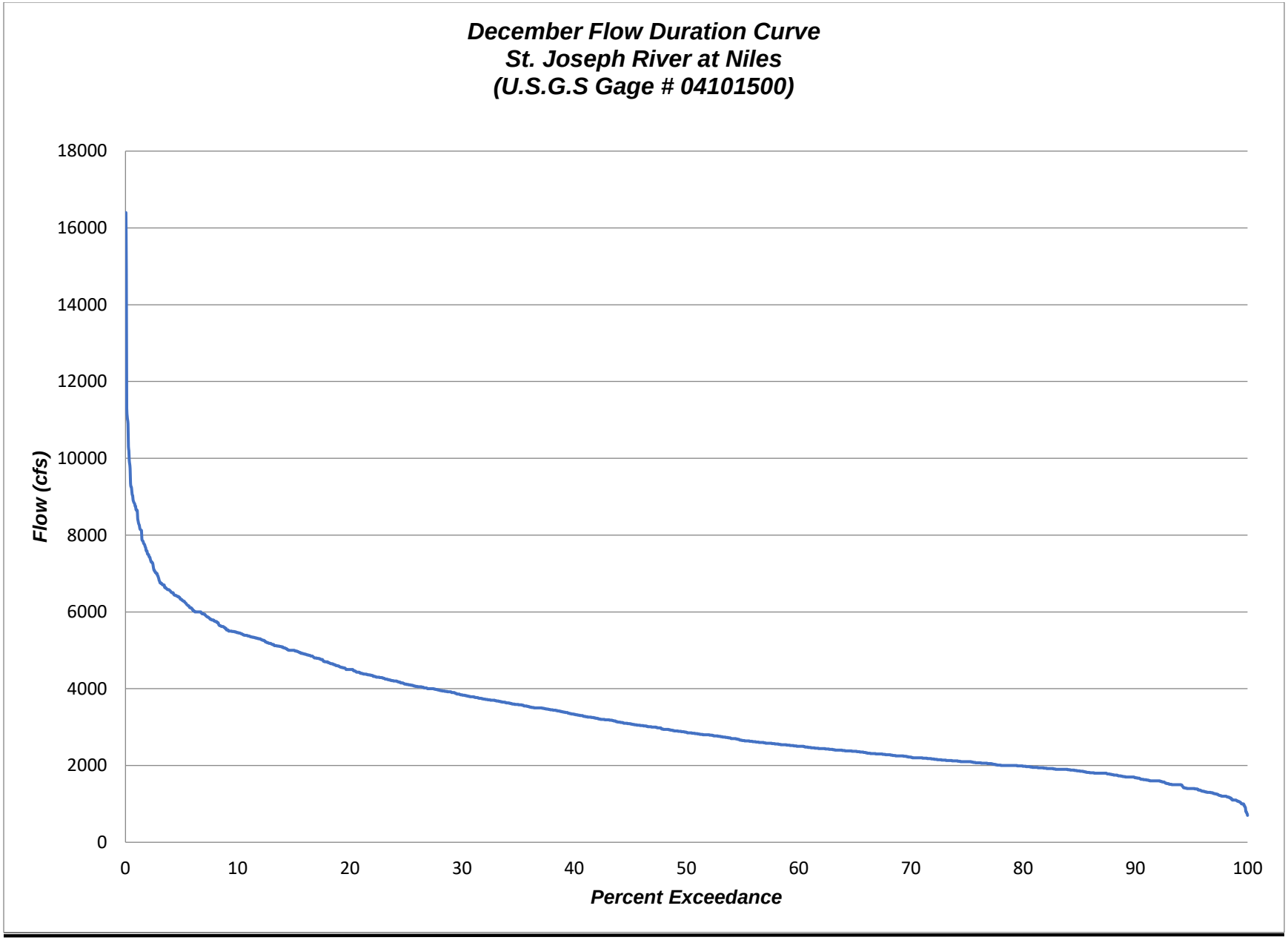

July Flow Duration Curve
St. Joseph River at Niles
(U.S.G.S Gage # 04101500)
12000
10000
8000
6000
4000
2000
0
Flow (cfs)
0
10
20
30
40
50
60
70
80
90
100
Percent Exceedance


August Flow Duration Curve
St. Joseph River at Niles
(U.S.G.S Gage # 04101500)
Flow (cfs)
14000
12000
10000
8000
6000
4000
2000
0
0
10
20
30
40
50
60
70
80
90
100
Percent Exceedance


September Flow Duration Curve
St. Joseph River at Niles
(U.S.G.S Gage # 04101500)
Flow (cfs)
14000
12000
10000
8000
6000
4000
2000
0
0
10
20
30
40
50
60
70
80
90
100
Percent Exceedance


October Flow Duration Curve
St. Joseph River at Niles
(U.S.G.S Gage # 04101500)
Flow (cfs)
12000
10000
8000
6000
4000
2000
0
0
10
20
30
40
50
60
70
80
90
100
Percent Exceedance


November Flow Duration Curve
St. Joseph River at Niles
(U.S.G.S Gage # 04101500)
Flow (cfs)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
0
10
20
30
40
50
60
70
80
90
100
Percent Exceedance


December Flow Duration Curve
St. Joseph River at Niles
(U.S.G.S Gage # 04101500)
Flow (cfs)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
0
10
20
30
40
50
60
70
80
90
100
Percent Exceedance

APPENDIX A-2
CORRESPONDENCE

WT

Weaver, Thomas <tlweaver@usgs.gov> | Kevin Siedlecki; Derrick Hubbell; Haefner, Ralph | 12/7/2017

Fwd: Site Number 04101500

You replied to this message on 12/7/2017 10:52 AM.

Kevin,

The gage French Paper Co. pays for is actually a stage-only gage (04101501) downstream from the main stage and discharge gage (04101500). The St Joseph River in Niles is a bit complex, in that it has variable backwater conditions and requires a slope rating to calculate streamflow. Both gages work in tandem and measure river slope so that discharge can be correctly calculated.

French Paper Co. pays $4,670 and USGS Groundwater and Streamflow Information Program pays $15,700.

Please contact me directly if there is any more information that you need.

Sincerely, Tom Weaver

Chief, Hydrologic Data-East
U.S. Geological Survey Upper Midwest Water Science Center
6520 Mercantile Way, Suite 5
Lansing, MI 48911
phone: 517-887-8923
cell: 517-285-5908
fax: 517-887-8937

Hi Rick,

Back in July 2016 you provided some information to Sue Ellen Doudrick from our office regarding the USGS gaging station in Niles, Michigan (04101500). We are working on behalf of French Paper Company for their FERC re-licensing, and we were wondering if you could provide us more information regarding the operational costs of the gage and who else is contributing to the cost sharing. If you do not have this information, could you please put me into contact with someone at USGS who may be able to help?

Thanks

Kevin Siedlecki, P.E.

Senior Civil Engineer

Jerry,
FYI
Too

STATE OF MICHIGAN

JENNIFER M. GRANHOLM
GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
LANSING

K. L. COOL
DIRECTOR

Refer to: 4202.2.46c

January 6, 2004

Mr. Ted Krichowski, Plant Engineer
French Paper Company
PO Box 398
Niles, MI 49120

Dear Mr. Krichowski:

Subject: French Paper Company Hydroelectric Project (FERC No. 10624)
Annual Project Shut Down to Protect Out-migrating Smolts

With this letter, Fisheries Division of the Department of Natural Resources is in agreement to the proposed changes to the 72-hour shut down. Starting in 2004, the 72-hour shut down will commence at 6:00 am on the second Friday of May each year.

If you have any questions, please contact me.

Sincerely,

Chris Freiburger

Chris Freiburger
FERC Program Supervisor
FISHERIES DIVISION
517-373-6644

Cc: Mr. Jay Wesley, LMBC
Mr. Scott Hanshue, SLMMU

Sue Ellen Doudrick

From:	Gunderman, Brian (DNR) <GundermanB@michigan.gov>
Sent:	Monday, February 29, 2016 11:02 AM
To:	Ertel, Patrick (DNR); Sue Ellen Doudrick
Cc:	Piper Tittle; Wesley, Jay (DNR)
Subject:	RE: French Paper Dam (Niles, MI) FERC Relicensing - MDNR Request for Information
Attachments:	MS11_001_author_page_proof.pdf; MS14_001_author_page_proof.pdf; Saint Joseph River 2010 Creel Report.pdf
Follow Up Flag:	Follow up
Flag Status:	Completed

I have attached a few reports that may be of interest. The first two reports are in the final phases of the publishing process and still require review and approval by our Research Section Manager. We stopped monitoring fish passage at the French Paper Dam in spring 2009. We continue to monitor fish passage at the Berrien Springs fish ladder. We lost our fish ladder assistant in 2009 and are several years behind in reviewing files. When our assistant left, we still had French Paper files from 2006-spring 2009 to review. We are nearly finished with these files and will post the count data on the following website when counts are finalized. The Berrien Springs counts are finished through 2010. We recently started a partnership with Northern Michigan University in which students review the Berrien Springs fish ladder files as part of their training. We hope that this will help us to catch up with our ladder files.

http://www.michigan.gov/documents/dnr/Fish-Cam-fish-passage-summary-1992-2005_172832_7.pdf

Brian Gunderman
Acting Southern Lake Michigan Unit Supervisor
Michigan Department of Natural Resources – Fisheries Division
621 N. 10th Street
Plainwell, MI 49080
Phone: (269)685-6851 EXT 145
Fax: (269)685-1362

Want more information on fisheries management and fishing opportunities in Michigan? Click the red envelope to receive DNR emails!