Gile Flowage Storage Reservoir Project
FERC Project No. 15055

Exhibit A
Description of Project

Draft License Application

Prepared for

Northern States Power Company
a Wisconsin Corporation

Prepared by

Mead & Hunt
meadhunt.com

March 2023

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LIST OF ABBREVIATIONS

cfs.................................cubic feet per second
FERC............................Federal Energy Regulatory Commission
FLA................................Final License Application
NGVD............................National Geodetic Vertical Datum 1929
NSPW............................Northern States Power Company, a Wisconsin corporation
O&M ....Operation and management
Project ....Superior Falls Hydroelectric Project
USGS ....United States Geological Survey
WDNR ....Wisconsin Department of Natural Resources

1. Introduction

Northern States Power Company, a Wisconsin corporation (NSPW), is the owner and operator of the Gile Flowage Storage Reservoir Project (Gile Project or Project). The Project was constructed in 1940 to store water for downstream generation at NSPW's Saxon Falls (FERC No. 2610) and Superior Falls (FERC No. 2587) hydroelectric projects. The Gile Project is currently unlicensed.

The Gile Dam is located on the West Fork of the Montreal River approximately 8 river miles upstream of the confluence with the main branch of the Montreal River and approximately 20 miles upstream of the Saxon Falls Hydroelectric Project. The Project is located within the Towns of Pence and Carey, Iron County, Wisconsin and approximately 2.5 miles southwest of the neighboring Cities of Hurley, Wisconsin and Ironwood, Michigan and approximately 33 miles southeast of the City of Ashland, Wisconsin.

The watershed above the Gile Dam is approximately 70 square miles.[1] **Appendix A-1** of this application includes a map illustrating the general location of the Project. **Appendix A-2** includes an aerial photograph depicting the Project's primary structures and facilities.

The Project works consist of (1) a 32.5-foot-high[2] and 903-foot long earthen and concrete dam that includes a west earthen embankment, a concrete spillway section, an east earthen embankment; (2) a storage reservoir with a maximum surface area of 3,454 acres[3] and a maximum gross storage capacity of approximately 32,713 acre-feet[4] at an elevation of 1,490.0 National Geodetic Vertical Datum 1929 (NGVD)[5]; and (3) appurtenant facilities.

A detailed description of each structure is provided in the following paragraphs. The Project boundary is provided in Exhibit G of this application.

2. Description of Dam Structures

The multi-section dam has a total length of 903 feet, a maximum height of 32.5 feet[6] and a maximum cross-sectional width at the base of the concrete spillway section of 144 feet.[7] The different sections, from left to right looking downstream, consist of a west earthen embankment, a concrete spillway section, an east earthen embankment, and appurtenant facilities.

2.1 West Earthen Embankment

The west earthen embankment is approximately 300 feet long with a maximum height of 32.5 feet[8] and a crest elevation of 1,495 feet NGVD. It has a 10-foot-wide top with 3:1 side-slopes. The east side of the west embankment is connected to the concrete spillway section. The maximum cross-sectional width at the base along the west side of the concrete spillway section is approximately 144 feet.[9] Beginning at the

[1] Unless otherwise noted or cited, all description attributes are from the 2016 Consultant Safety Inspection Report for Gile Reservoir Dam-WDNR Field File No. 26.09 completed by Ayres Associates (Ayres Associates, 2016).
[2] From the top of the sheet piling support to the top of the operator's deck as shown in Exhibit F.
[3] The acreage was calculated using LiDAR information.
[4] Calculated by interpretation of the updated bathymetric map included as Figure 10 of the Aquatic and Terrestrial Invasive Species Study Report (GAI Consultants, 2022).
[5] NGVD is assumed to be the same datum as mean sea level.
[6] From the top of the sheet piling support to the top of the operator's deck as shown in Exhibit F.
[7] From the upstream face of the upstream wing wall to the downstream face of the downstream wing wall.
[8] From the top of the sheet piling support to the top of the operator's deck as shown in Exhibit F.
[9] From the upstream face of the upstream wing wall to the downstream face of the downstream wing wall.

west side of the concrete spillway, the earthen embankment contains a sheet pile cutoff wall that extends approximately 204 feet. The upstream side of the embankment is protected by riprap on filter fabric to elevation 1,493.0 feet. The downstream portion of the embankment near the tailwater is also protected with riprap. A drain system consisting of vitrified clay pipe spaced 14 feet wide on center extends from the sheet pile cutoff wall to the embankment toe. A seepage drainage ditch collects water from the drains and conveys it to the tailwater.

2.2 Concrete Spillway Section

The 27.5-foot-long[10] concrete spillway section, with a maximum height of 32.5 feet[11], is a reinforced concrete gravity structure with a left (east) abutment, a sluiceway bay (with slide gate), a radial gate bay, and a right (west) abutment. A steel sheet pile cutoff wall is located under the structure on the upstream side of the spillway. Much of the structure is founded on wood piles. A concrete operator's bridge spans the structure.

The sluiceway bay normally acts as a minimum flow release structure; however, it also serves to pass water downstream during periods of high flow or during winter conditions. The sluiceway features a trash rack and 6-foot-wide by 5-foot-high vertical slide gate with an invert elevation of 1,465.5 feet NGVD. The trash rack is comprised of 0.375-inch bars spaced 3 inches on center with a clear spacing of 2.575 inches.[12] The vertical height of the trashracks, as measured along the incline, is 18 feet and the width is 6 feet. The sluiceway has the ability to pass a maximum flow of approximately 1,000 cfs.[13]

The radial gate bay is a hollow structure with foundation drains and a crest elevation of 1,478.0 feet NGVD. The steel radial gate is 16 feet wide and 12 feet high and is operated with an electric hoist located inside the gatehouse.

A concrete slab supports the rollway and downstream walls and forms the bottom of the stilling basin. The upstream wing walls and downstream wing walls are constructed at a 15-degree skew and 12-degree skew, respectively, to the centerline of the water flow. The wing walls vary in height to match the embankment cross-section. Buttresses are located on the outside of the wing walls and concrete strut beams brace the downstream walls. Weep holes are located at various locations through the wing walls.

Constructed on the operator's deck of the concrete spillway section is a 27.5-foot-wide and 11.5-foot-high gate house constructed of brick extending approximately 10.5 feet downstream of the operator bridge.[14] The gate house provides security and protection for the two electric gate hoists. The gate house measurements are obtained from the Exhibit F Drawings.

2.3 East Earthen Embankment

The east earthen embankment is approximately 575 feet long, with a maximum height of 32.5 feet[15], and a crest elevation of 1,495 feet NGVD. It has a 10-foot-wide top with 3:1 side-slopes. The west side of the

[10] As shown in Exhibit F.
[11] From the top of the sheet piling support to the top of the operator's deck as shown in Exhibit F.
[12] Specifications for the bars and spacings as shown on the 1940 design drawing (NSP Drawing No. NH-238101-16).
[13] NSPW Proposed Study Plan Clarifications eFiled with the Commission on May 3, 2021 (NSPW, 2021a; NSPW, 2021b).
[14] Deck elevation is 1495.0 feet NGVD.
[15] From the top of the sheet piling support to the top of the operator's deck as shown in Exhibit F.

east embankment is connected to the concrete spillway section. The maximum cross-sectional width at the base along the west side of the concrete spillway section is approximately 144 feet.[16] Beginning at the east side of the concrete spillway, earthen embankment contains a sheet pile cutoff wall that extends approximately 323 feet. The upstream side of the embankment is protected by riprap on filter fabric to elevation 1,493.0 feet. The downstream portion of the embankment near the tailrace is also protected with riprap. A drain system consisting of vitrified clay pipe, spaced 14 feet wide on center, extends from the sheet pile cutoff wall to the embankment toe. A seepage drainage ditch collects water from the drains and conveys it to the tailrace.

3. Description of Storage Reservoir

The Gile Flowage Storage Reservoir was constructed in 1940 to store water for use in downstream hydroelectric generation. It has a surface area of approximately 3,454 acres[17] with a gross storage capacity of 32,713 acre-feet at an elevation of 1,490 feet NGVD. It has a maximum depth of 25 feet[18] and an average depth of 9.47 feet.[19] The reservoir has a usable storage capacity of 32,031 acre-feet under the current operating range of 1,490 to 1,475 feet NVGD.

4. Description of Conveyance System

Water is released from the Project directly downstream into the West Fork of the Montreal River. There is no water conveyance system.

5. Description of Powerhouse

There is no powerhouse or generating equipment associated with the Project.

6. Tailwater

The tailwater downstream of the dam has a maximum depth of six feet, a maximum width of approximately 135 feet, and extends downstream from the concrete apron of the dam for approximately 60 feet.[20]

7. Transmission Equipment

The Project is a storage reservoir and there is no transmission equipment associated with the Project.

8. Appurtenant Equipment

Appurtenant facilities at the Project include, but are not limited to, gate hoists and monitoring equipment.

9. Project Operation

The Project reservoir is operated with a maximum elevation of 1,490 feet NGVD and a minimum elevation of 1,475 feet NGVD. A minimum flow of 10 cfs is released year-round. NSPW conserves water at the Project by regulating releases from the Gile Dam such that the water released, combined with the flow in

[16] From the upstream face of the upstream wing wall to the downstream face of the downstream wing wall.
[17] The acreage was calculated using most-current LiDAR information.
[18] Maximum depth from WDNR Find a Lake webpage (WI Department of Natural Resources, n.d.).
[19] 32,713 acre-feet of volume divided by 3,454 acres of area.
[20] Length and width of tailwater measured via Google Earth.

the main branch of the Montreal River, allows the downstream hydroelectric projects to operate efficiently without passing additional water (i.e., flows in excess of the hydraulic capacity of the powerhouses) over the spillway or through the radial gates.

If the volume of water released from the Gile Dam, when combined with the flow in the main branch of the Montreal River, exceeds the maximum hydraulic capacities of Saxon and Superior Falls powerhouses, this excess water must be passed by the spillways or through the radial gates and is considered "over releasing". Over releases that do not serve a Project purpose can have an adverse impact upon recreational and environmental resources at the Gile Flowage. Therefore, NSPW avoids "over releasing" through closely regulating discharge from the Gile Dam.

Water stored at the Gile Flowage is reserved for project purposes.[21] NSPW will restrict the typical drawdown of the reservoir to approximately 0.1 feet per day, but no more than 0.2 feet per day, to balance the needs of generation with the needs of recreation and the aquatic environment.[22] To determine inflow into Gile Flowage, NSPW monitors changes in reservoir elevation with discharges from the dam according to gate opening and storage reservoir elevation curves. This information is used to determine inflows from stage storage curves and correlation tables. NSPW then calculates the amount of discharge necessary for the most efficient and maximum generation downstream and adjusts the flows accordingly.

The annual summer drawdown begins around May 1 and the annual winter drawdown typically begins around December 1 as shown in **Figure A-1**. A review of elevation data at the Gile Project from 1994 to 2016 showed that summer drawdowns ranged from 4.2 to 7.6 feet in years with normal precipitation, 4.7 feet to 10 feet during dry years and 1.6 feet to 7.4 feet during wet years. Winter drawdowns ranged from 4.6 feet to 8 feet during years with normal precipitation, 5.8 feet to 9.5 feet during dry years, and 2.8 feet to 9.4 feet during wet years. **Figures A-2** and **A-3** show the updated storage curve and the updated storage area curve for the Gile Flowage.

[21] Project purposes include power generation and environmental mitigation or enhancement measures proposed in Exhibit E.
[22] Except for scheduled whitewater releases and emergencies beyond Applicant's control, which includes preemptive drawdowns for expected large inflow events due to precipitation or snow melt to reduce flooding and increased reservoir elevations at the downstream hydroelectric projects.

Figure A-1 Storage Reservoir Elevations for the Years 1994 to 2021

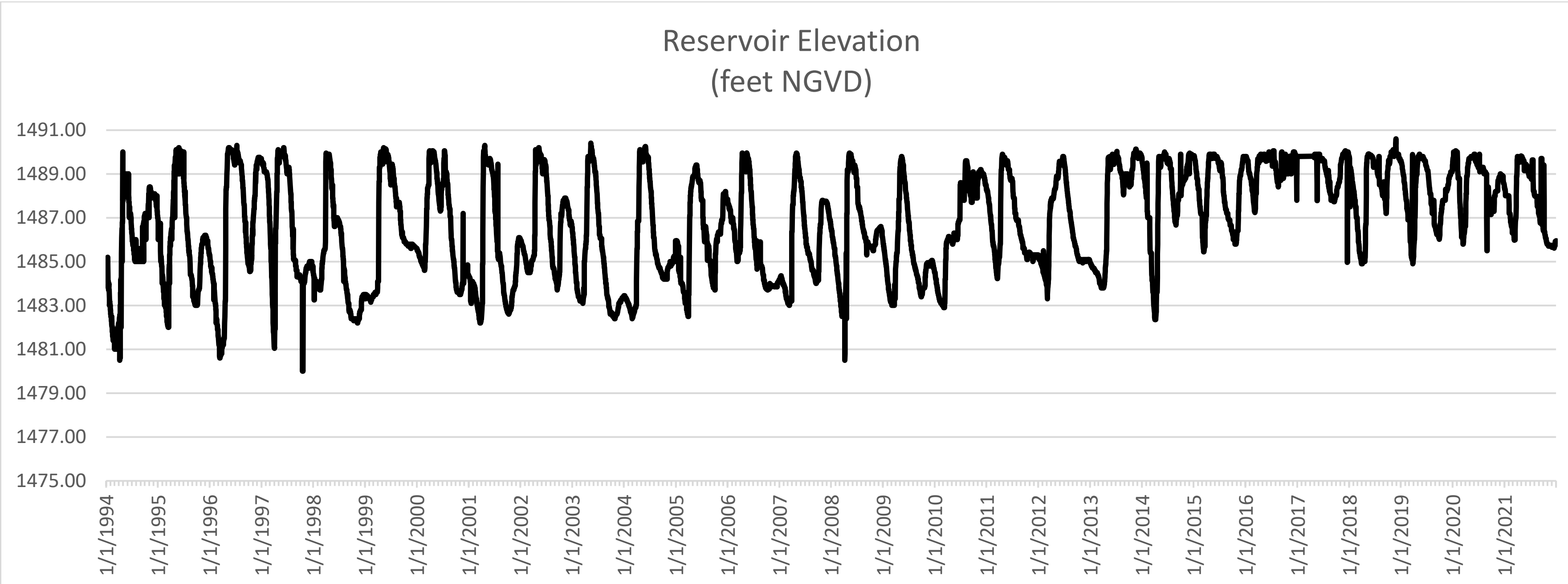


Figure A-2 Stage-Storage Curve for the Gile Flowage Storage Reservoir

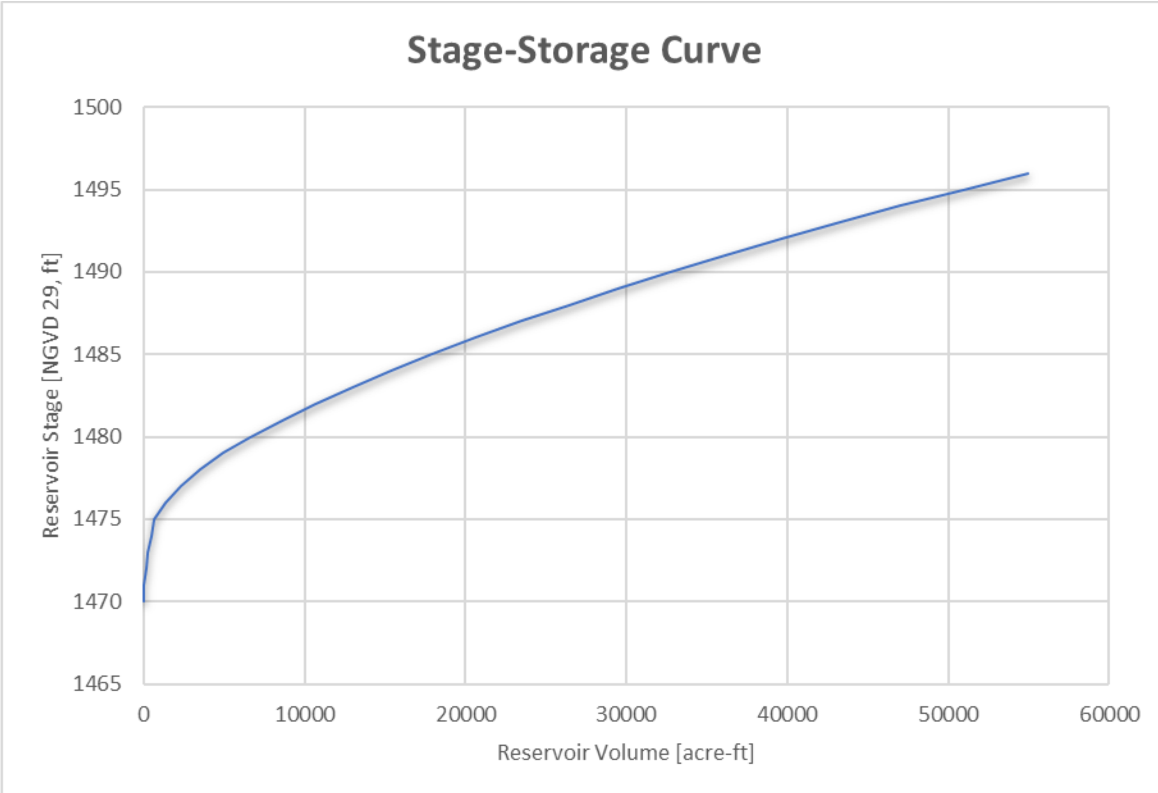
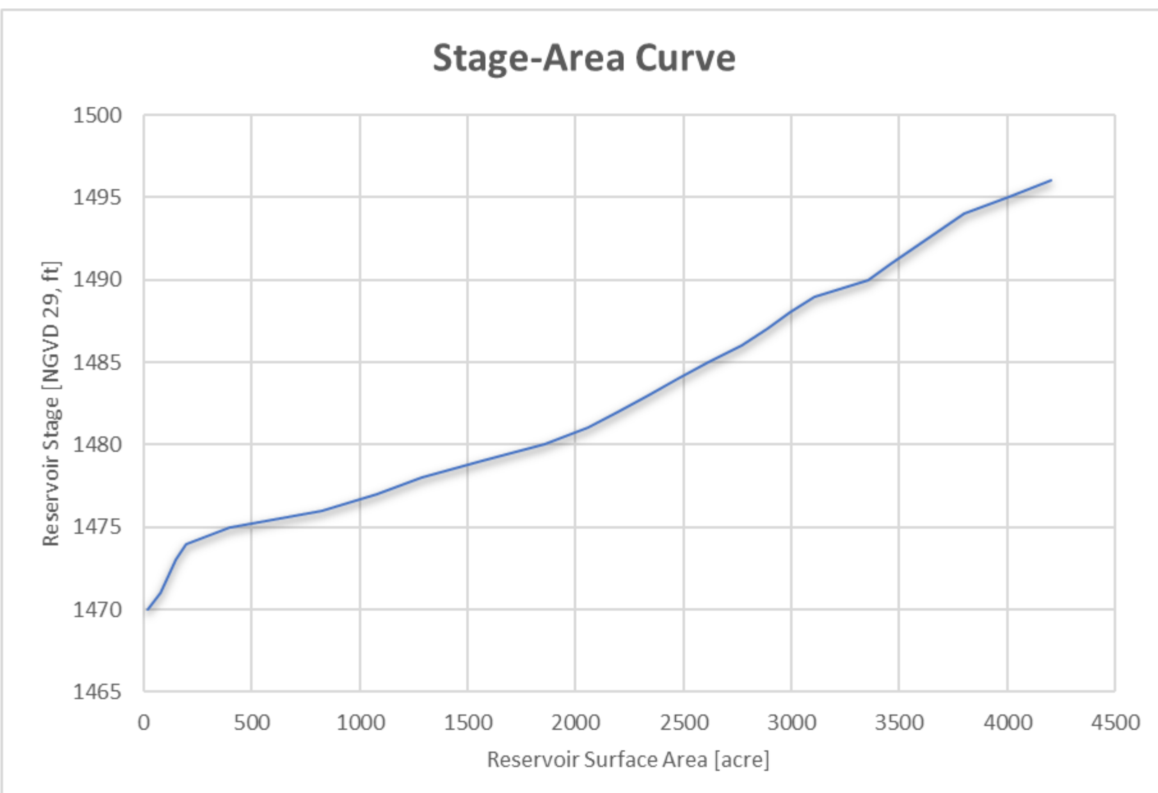


Figure A-3 Stage-Area Curve for the Gile Flowage Storage Reservoir



Two operators are assigned to oversee the daily operation and routine maintenance of the Project. An operator for the facility is available 24 hours per day, seven days per week. The plant is manually operated.

NSPW is not proposing any changes to Project operations.

10. Safe Management, Operation, and Maintenance

NSPW has a robust Owners Dam Safety Program that incorporates all inspection, monitoring, and reporting requirements for a dam with this hazard classification. It also ensures that adequate resources are allocated for the fulfillment of FERC dam safety requirements. The current Owners Dam Safety Program was revised and submitted to FERC on January 12, 2022.

NSPW developed a public safety plan (PSP) in 2022 and submitted it for FERC review and comment. The FERC determined that the PSP was satisfactory in their July 25, 2022 letter; however, it directed NSPW to evaluate the need for a boat restraining barrier, and if barrier is warranted, to submit a revised PSP to reflect the change. The PSP is reviewed on an annual basis to determine if any changes are necessary.

11. Average Annual Generation

According to the existing storage benefits report for the Gile Flowage developed for NSPW in 2019, and eFiled with the Commission on February 21, 2020,[23] the current operation of the Project provides a 21% increase in generation for the downstream Saxon Falls and Superior Falls hydroelectric projects. This calculates to 2,103.2 MWh for Saxon Falls and 2,401.6 MWh for Superior Falls for the five-year period ending in 2021.

12. River Flow Characteristics

As outlined in the Proposed Study Plan clarification letter dated July 14, 2021[24], NSPW utilized daily outflow and storage reservoir elevation for the period 1994 to 2021 to calculate inflows to the Project and create flow duration curves. The drainage basin for the Project is 70 square miles. Based on streamflow data for the period of January 1994 to December 2021, the 50% exceedance flow at the Project was 57 cfs; the 90% exceedance flow maximum was 303 cfs; and the 10% exceedance flow was 10 cfs.

Streamflow duration data shows the percentage of time a given flow is equaled or exceeded. Monthly flow duration curves and the annual exceedance table are based on data collected for the period of record from January 1994 to December 2021 and are included in **Appendix A-3**.

13. Estimated Project Cost

The net book value (net investment) of the existing facility and the gross book value will be provided in the Final License Application (FLA). These figures will include land and land rights, structures and improvements, waterway improvements, generating equipment, accessories, and miscellaneous equipment.

[23] Accession No. 20200221-5033 (NSPW, 2020).
[24] Accession No. 20210715-5011. (NSPW, 2021b)

14. Estimated Costs of Proposed Environmental Measures

The additional estimated capital and estimated annual Operation and Management (O&M) costs for proposed environmental measures are outlined in **Table A-1**.

Table A-1 Estimated Capital and O&M Costs for Proposed Environmental Measures[25]

Item	Capital Cost	Annual O&M Cost
Maintain a minimum flow of 10 cfs into the West Fork for enhancement of downstream aquatic habitat.	$0	$0[26]
Restrict the typical daily drawdown of the reservoir to approximately 0.1 feet per day, but no more than 0.2 feet per day, to balance the needs of generation with the needs of recreation and the aquatic environment.	$0	$0[27]
Develop Aquatic and Terrestrial Species Plan and conduct biennial invasive species surveys.	$40,000	$35,000*
Complete shoreline erosion survey every 5 years.	$0	$15,000*
Develop Historic Resources Management Plan and revisit shoreline surveys every 5 years.	$20,000	$15,000*
Develop an Operations Monitoring Plan.	$25,000	$0
Comply with operations deviation reporting and consultation.	$0	$10,000
Provide flow release and storage reservoir elevation information via the internet.	$50,000	$1,000
Maintain and improve signage of canoe portage (additional take-out sign and Part 8 sign).	$5,000	$750
Develop Whitewater Recreation Plan that also includes the Saxon Falls Hydroelectric Project.	$15,000	$0
Provide releases for downstream whitewater boating.	$0	$1,000[28]
Provide additional water downstream for increased aesthetic flow in Saxon Falls bypass reach.	$0	$0[29]
Implement the Cave Bat and Wood Turtle Measures.	$0	$2,000
Implement Bald Eagle Measures.	$0	$2,000
Total Cost	**$155,500**	**$81,750**

*cost per survey event

[25] All costs are estimated in 2023 dollars.
[26] No cost is included for the minimum flow releases because the proposed operating range is expected to provide adequate storage reserves such that the downstream generation will not be adversely, impacted by the proposed environmental mitigation and enhancement measures.
[27] No cost is included for the typical daily drawdown of approximately 0.1 foot per day, but no more than 0.2 feet per day, restriction because the proposed operating range is expected to provide adequate storage reserves such that the downstream generation will not be adversely impacted by the proposed environmental mitigation and enhancement measures.
[28] The annual cost for whitewater flow releases is $1,000 for the operators to be dispatched on a weekend to adjust the flows. The lost generation for it does not include any cost for lost generation due to lost storage because the proposed operating range is expected to provide adequate storage reserves such that the downstream generation will not be adversely impacted by the proposed environmental mitigation and enhancement measures.
[29] No cost is included for the additional aesthetic flows that could result in lost generation downstream because the proposed operating range is expected to provide adequate storage reserves such that the downstream generation will not be adversely impacted by the proposed environmental mitigation and enhancement measures.

15. Purpose of the Project

The purpose of the Project is to provide headwater storage for seasonally uniform hydroelectric generation at NSPW's downstream Saxon Falls (FERC Project No. 2610) and Superior Falls (FERC Project No. 2587) hydroelectric projects.

16. License Application Development Costs

The costs for NSPW to relicense under the Integrated Licensing Process through the filing of the FLA will be provided in the FLA.

17. Estimated Value of On-Peak Power and Off-Peak Power

Although the project operates as a storage reservoir, and has no generating facilities, it does provide downstream benefits to the Saxon Falls and Superior Falls hydroelectric projects. Based upon an average energy value of $27.32 per MWh, the average annual gross revenue from 2017 to 2021 was $284,322 for the Saxon Falls Project and $312,442 for the Superior Falls Project with $125,320 (21%) attributed to the operation of the Gile Project.[30,31]

18. Average Annual Increase or Decrease in Project Generation and Value of Power Due to Changes in Project Operations

NSPW is not proposing any changes that will affect power generation at the two downstream hydroelectric Projects. The proposed operating range is expected to provide adequate storage reserves such that the downstream generation will not be adversely impacted by the proposed environmental mitigation and enhancement measures.

19. Remaining Undepreciated Net Investment, or Book Value of the Project

The undepreciated net investment of the Project will be provided in the FLA.

20. Annual Operation and Maintenance Costs

The average annual cost to operate and maintain the Gile Project for the period 2017-2021 will be provided in the FLA. These costs will be outlined in **Table A-2** and include general O&M expenses, insurance, taxes, and depreciation. A breakdown of the individual components of the general O&M expense category is shown in **Table A-3**.

[30] Calculated from the ratio of authorized capacity at the Superior Falls Project (1.65 MW) versus the Saxon Falls Project (1.5 MW). Saxon Falls has 0.91 the capacity of Superior Falls

[31] Calculated from replacement power value and the average annual generation figure from the FLA for the Saxon Falls and Superior Falls Hydroelectric Project Exhibit H, Accession No. 20221230-5395.

Table A-2 Annual Operation and Management Costs

Item	Cost
General O&M Expenses (5-year average)	
Insurance	
2021 Property Taxes	
2021 Depreciation	
Average Annual O&M Cost	

Table A-3 Cost Breakdown of General O&M Expense Category[32] (2017 to 2021)

Cost	2017	2018	2019	2020	2021	2017-2021 Mean
Employee Expenses						
Labor						
Materials & Commodities						
IT Costs						
Miscellaneous						
Outside Services						
Total General O&M Costs						

21. One-Line Diagram of Electric Circuits

The Project has no generating facilities or electric circuits associated with it, therefore, there is no one-line diagram.

22. Lands of the United States

There are no federally owned lands within the Project boundary.

23. Public Utilities Regulatory Policy Act

The Licensee reserves any future rights it may have under the Public Utility Regulatory Policies Act (PURPA) as it pertains to the Project.

24. Statement of Notification by Certification

NSPW has made a good-faith effort to give notification of this application, via certified mail, to all owners of record with property interests located within the proposed Project boundary, any Federal, state, municipal, or local government agencies that would likely be interested in, or affected by, the application, and property owners of any additional land to be encompassed within the proposed Project boundary.

[32] Includes administrative costs.

25. Supporting Design Report

The supporting design report is considered Critical Energy Infrastructure Information and will be filed as such as a separate document in the final license application.

26. Works Cited

Ayres Associates. (2016). *2016 Consultant Safety Inspection Report for the Gile Reservoir Dam-WDNR Field File No 26.09.*

GAI Consultants. (2022). *Aquatic and Terrestrial Insvasive Species Report.* September, 2022.

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NSPW. (2020). *Response to Additional Information Request Regarding Reservoir Storage Benefits, Gile Flowage (UL20-1), FERC Accession No. 20200220-5032.* February 21, 2020.

NSPW. (2021a). *Proposed Study Plan Clarifications, FERC Accession No. 20210503-5256.* May 3, 2021.

NSPW. (2021b). *PSP Clarification Letter, FERC Accession No. 20210715-5011.* July 15, 2021.

WI Department of Natural Resources. (n.d.). *Gile Flowage*. Retrieved March 4, 2023, from WDNR Find a Lake: https://dnr.wi.gov/lakes/lakepages/LakeDetail.aspx?wbic=2942300

APPENDIX A-1 Gile Flowage Storage Reservoir Project Location

Xcel Energy®

Mead & Hunt

Project Location
State Boundary
County Boundary
Waterbody
River/Stream

N

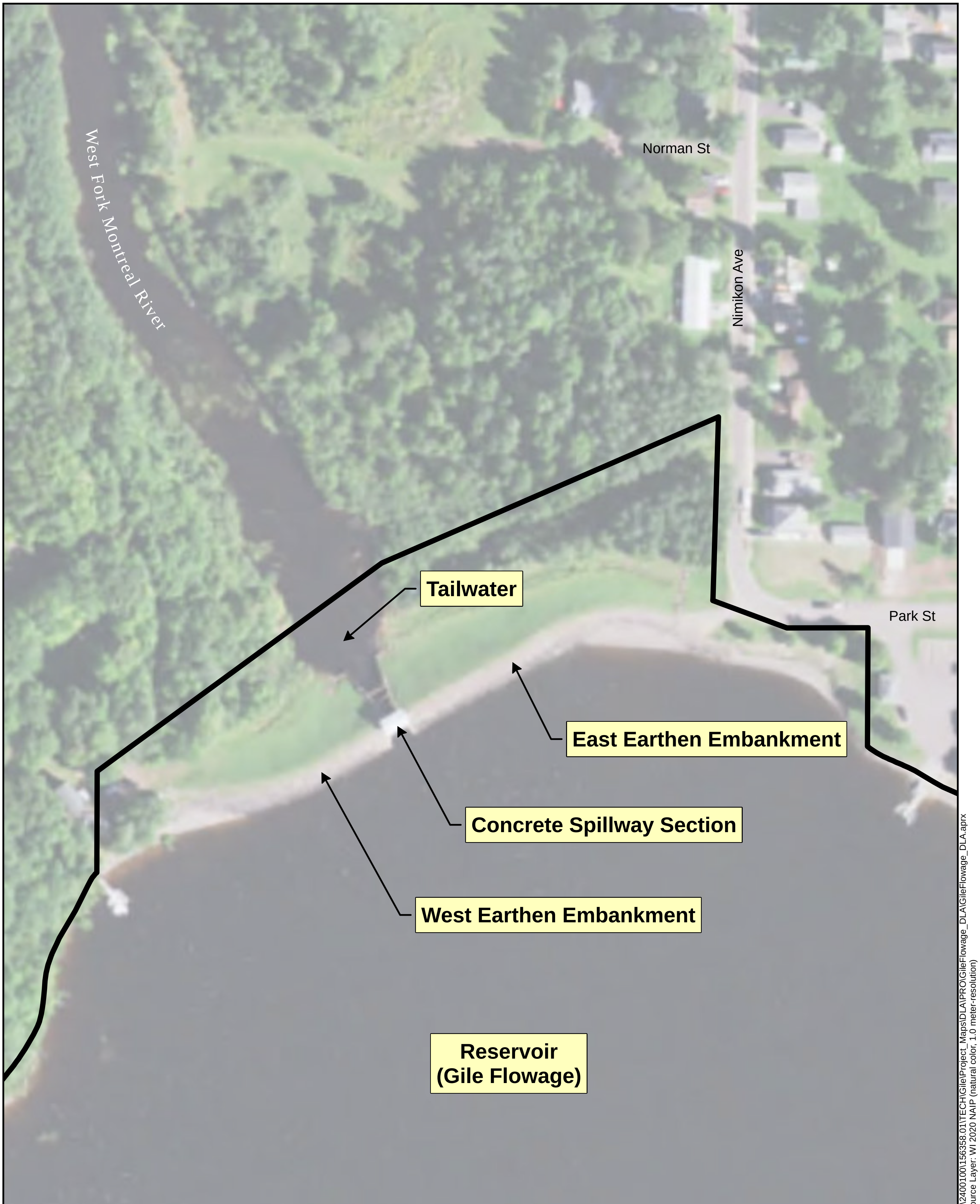
0 10 20 Miles

Gile Flowage Storage Reservoir
Project Location

FERC No. 15055

X:\2400100\156358.01\TECH\Gile\Project_Maps\DLA\Gile_Project_Location.mxd
Source Layer: ESRI; Iron County, WI; Wisconsin DNR; Michigan GIS Open Data

APPENDIX A-2 Gile Flowage Storage Reservoir Project Facilities



Xcel Energy®

Mead & Hunt

Proposed Project Boundary

0 100 200 Feet

Gile Flowage Storage Reservoir
Project Facilities

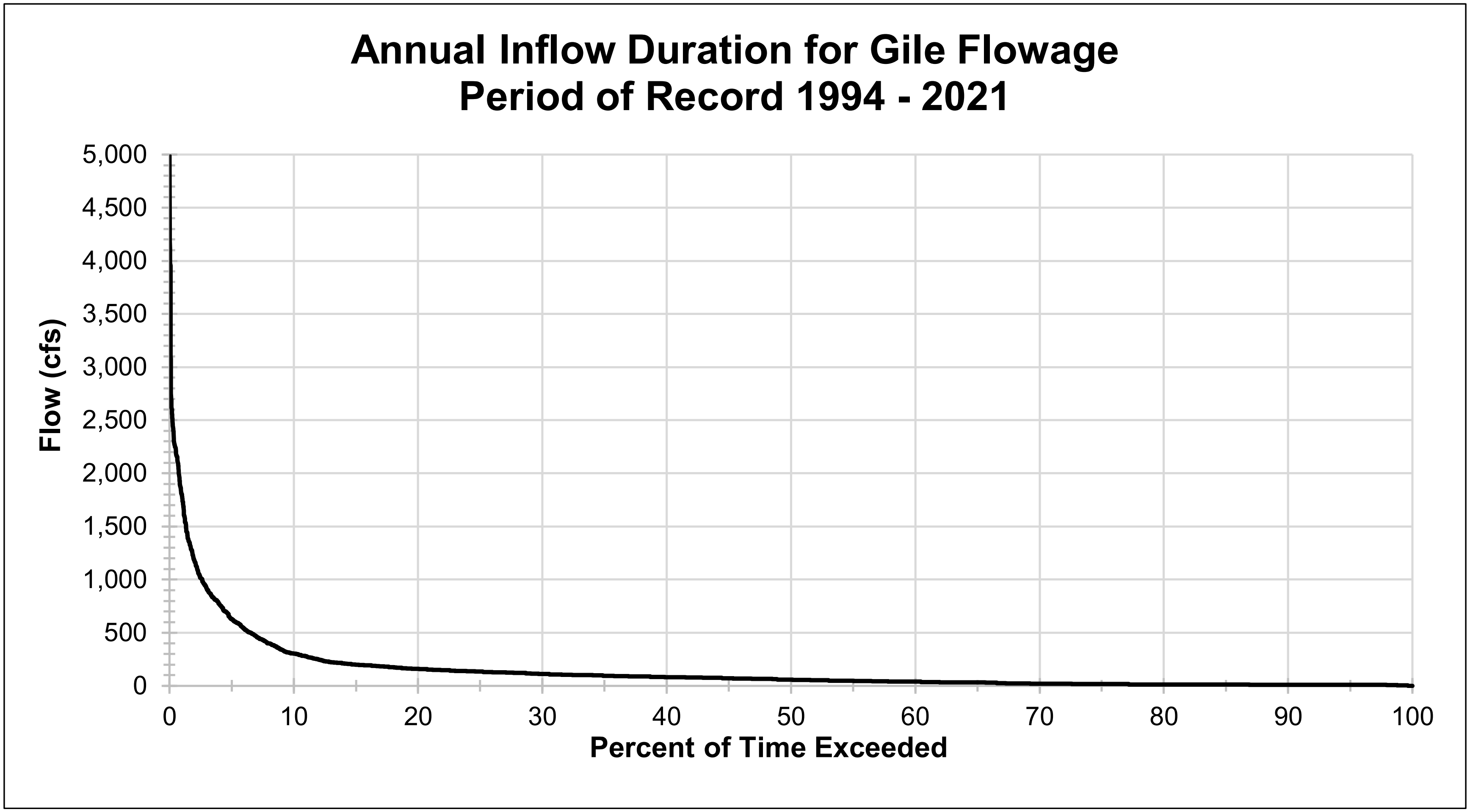
FERC No. 15055

Note: the impounded Proposed Project Boundary is established at elevation 1490.0 feet NGVD.

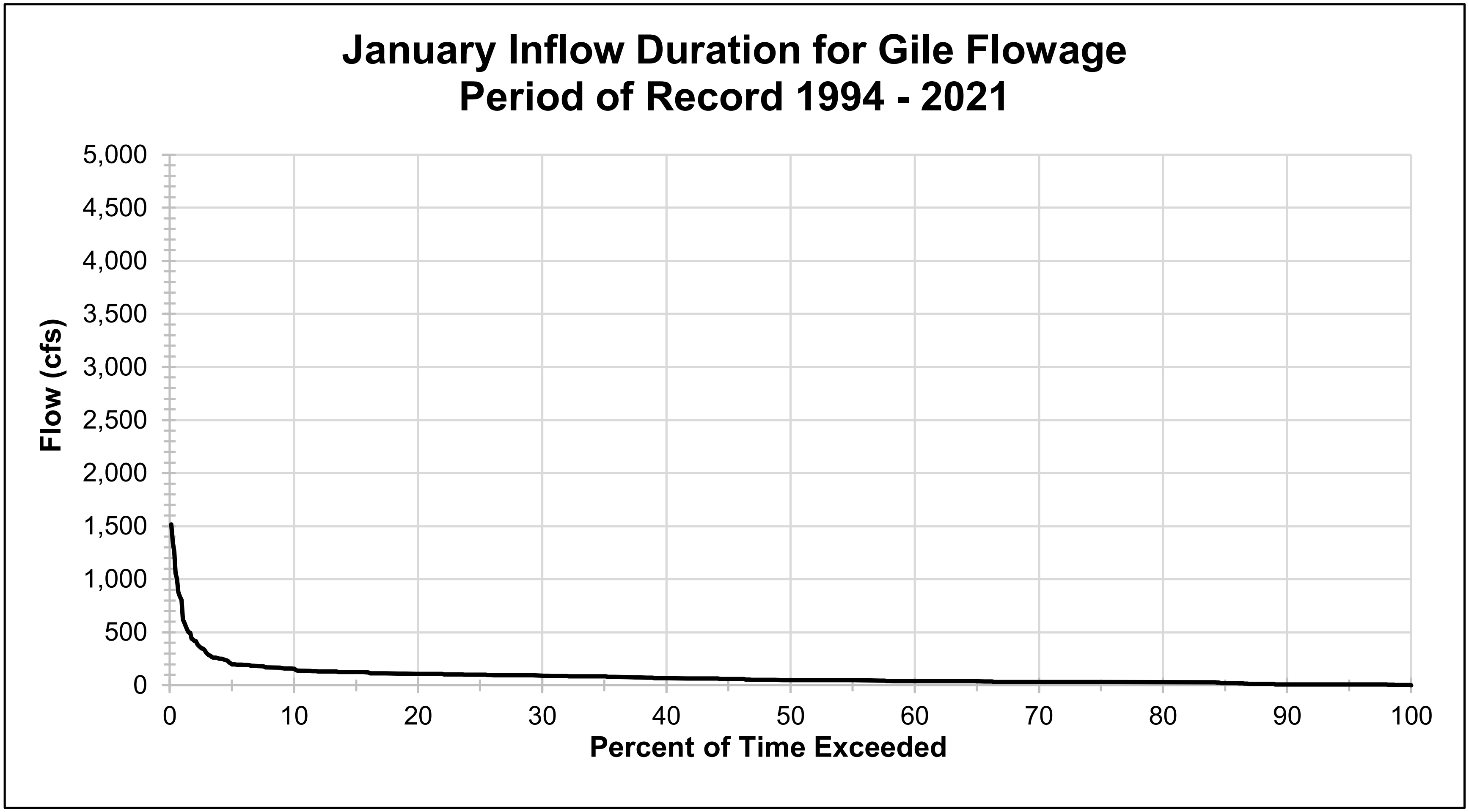
APPENDIX A-3 Gile Flowage Storage Reservoir Flow Duration Curves

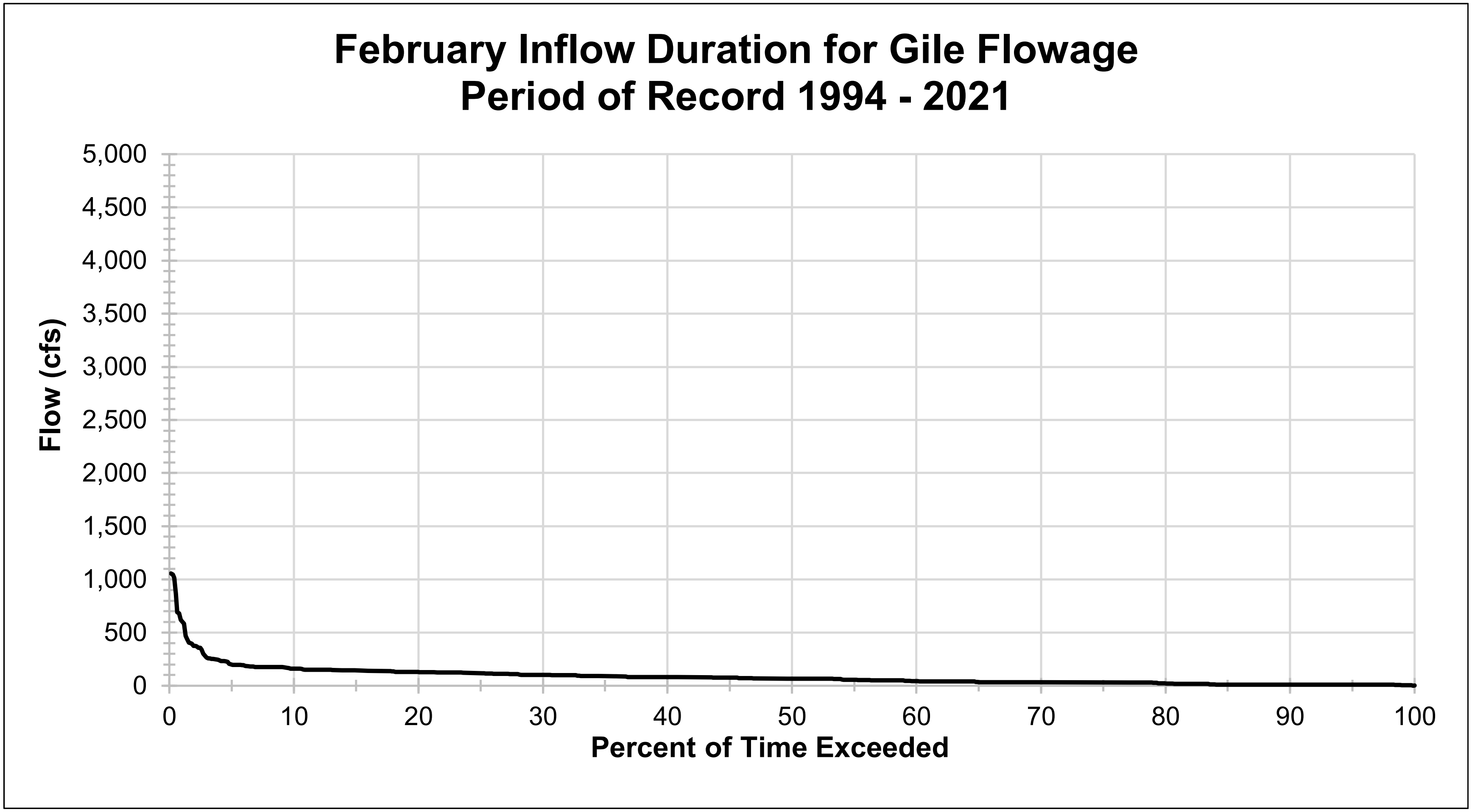
Inflow Duration for Gile Flowage (Period of Record 1994 - 2021)

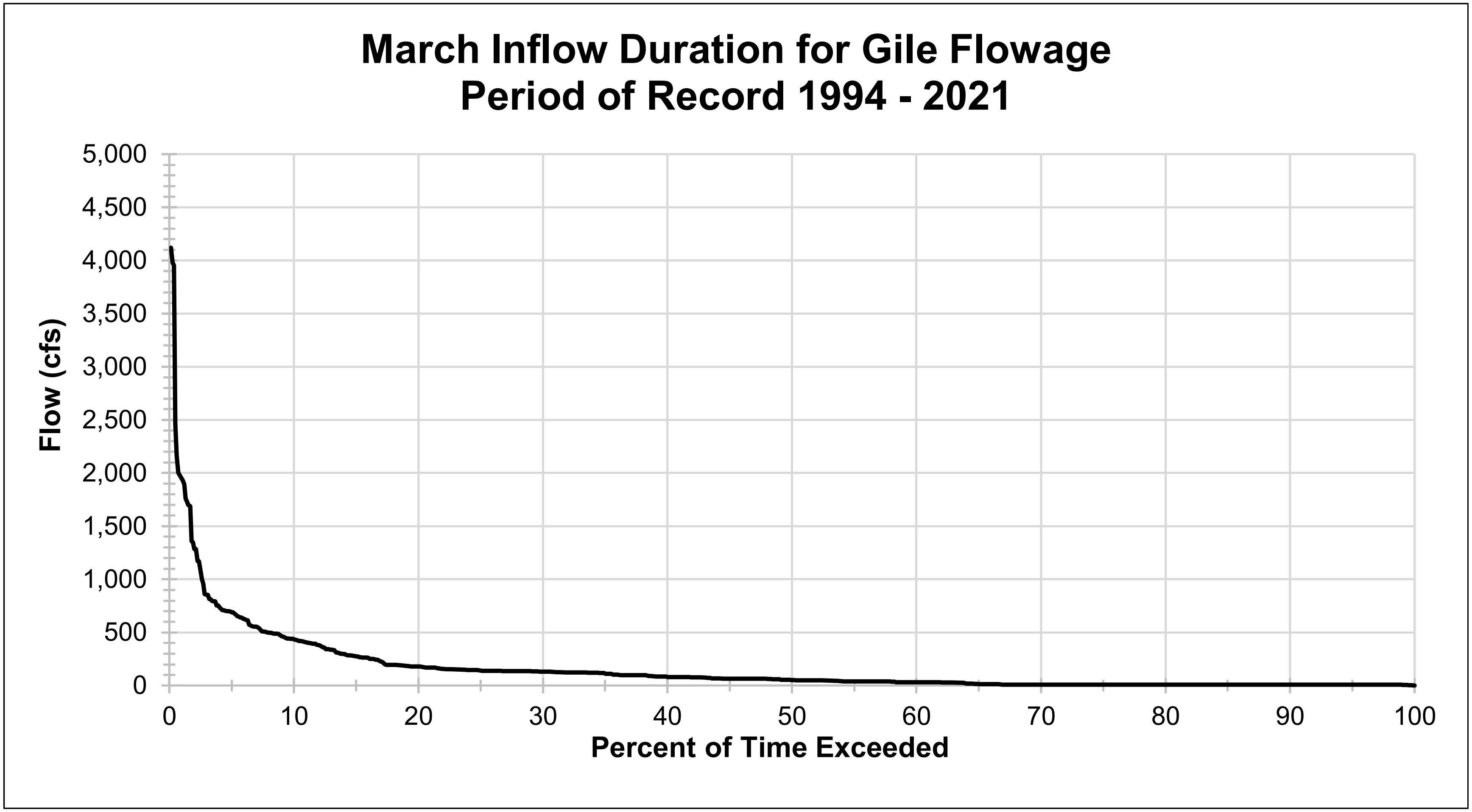
Percent of Time	January	February	March	April	May	June	July	August	September	October	November	December	Annual
95	10	10	10	11	16	16	15	14	14	12	10	10	10
90	11	10	10	11	17	20	21	18	15	12	10	10	10
85	22	11	10	12	19	23	24	18	15	12	10	10	12
80	32	21	10	12	34	23	39	19	15	12	10	11	12
75	32	32	10	12	45	32	45	20	16	12	10	11	16
70	33	32	10	14	62	48	47	21	17	12	10	12	20
65	38	34	12	42	67	66	57	39	18	12	11	23	32
60	40	43	32	76	84	84	70	42	18	12	11	33	38
55	48	55	40	91	99	88	78	46	30	13	11	40	48
50	50	65	51	126	102	101	82	57	35	13	12	50	58
45	60	75	65	177	122	103	90	64	37	14	12	58	71
40	67	82	83	218	148	119	106	74	40	14	36	67	83
35	85	90	116	302	165	126	125	76	53	27	51	74	95
30	93	102	131	401	188	140	141	92	79	54	58	83	110
25	100	122	142	522	229	155	156	104	90	80	81	89	133
20	107	129	179	654	327	164	182	119	128	111	124	98	159
15	128	142	278	874	511	192	205	154	163	147	150	110	200
10	157	161	439	1,182	807	271	223	194	210	226	228	146	305

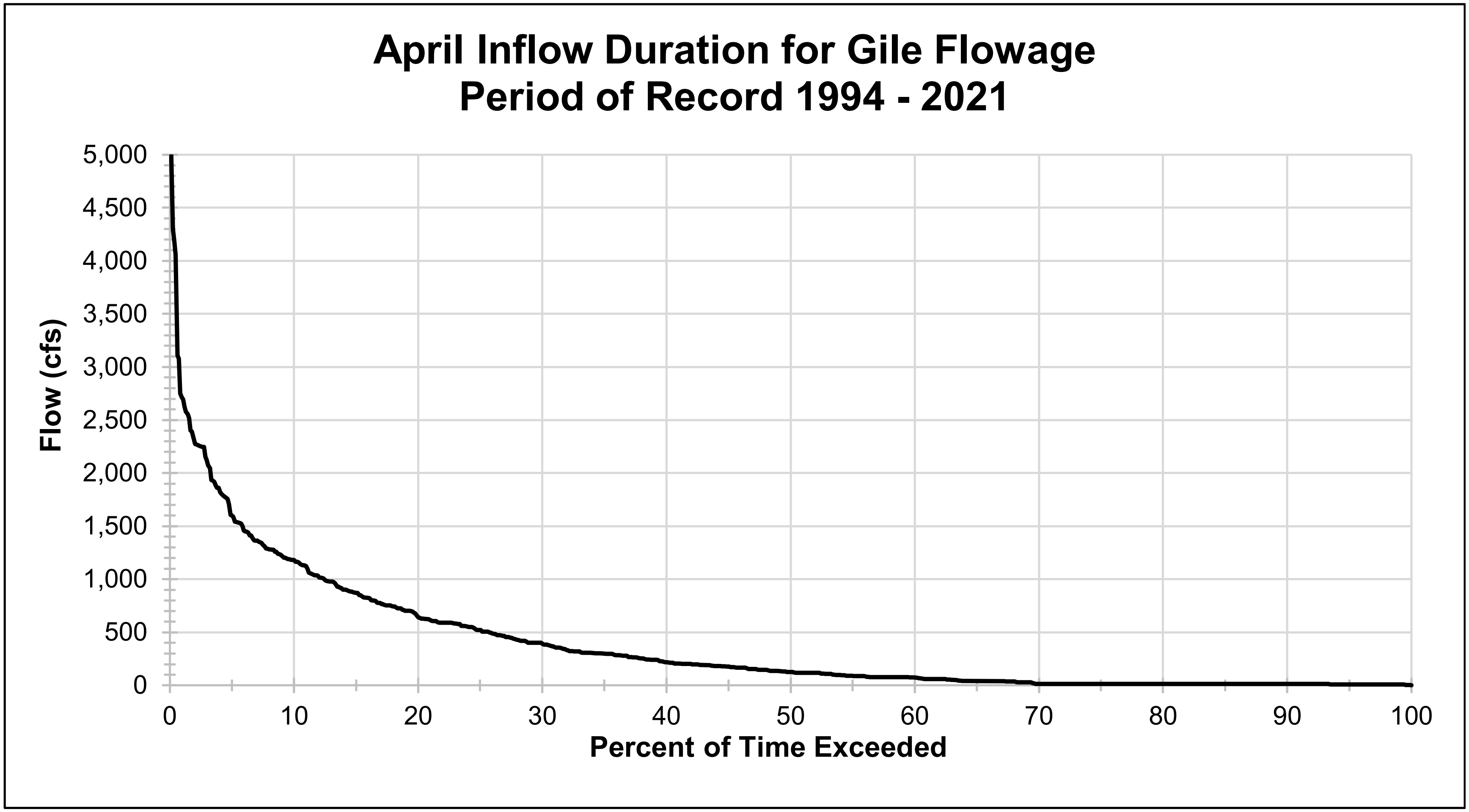


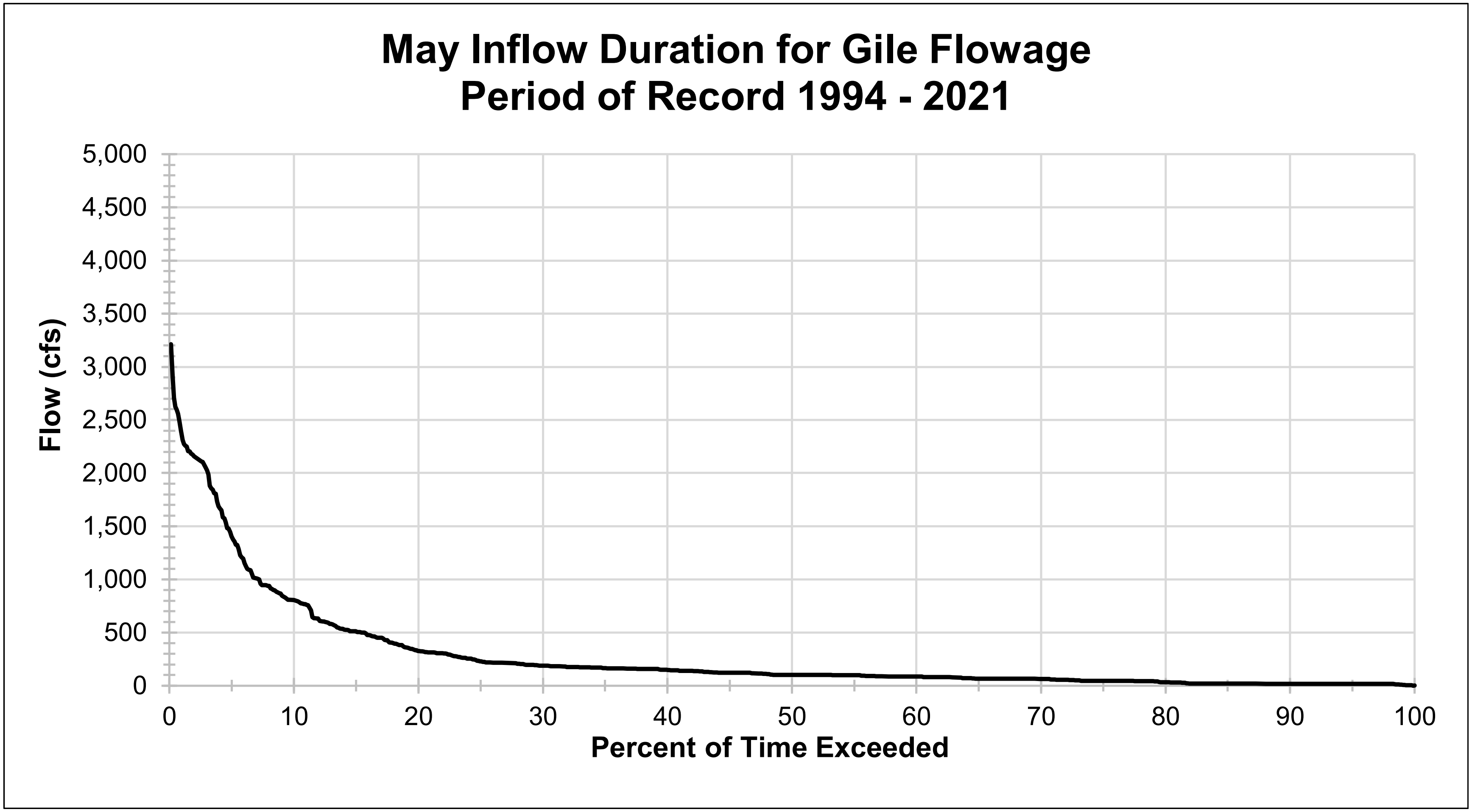
Annual Inflow Duration for Gile Flowage
Period of Record 1994 - 2021
Flow (cfs)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
10
20
30
40
50
60
70
80
90
100
Percent of Time Exceeded

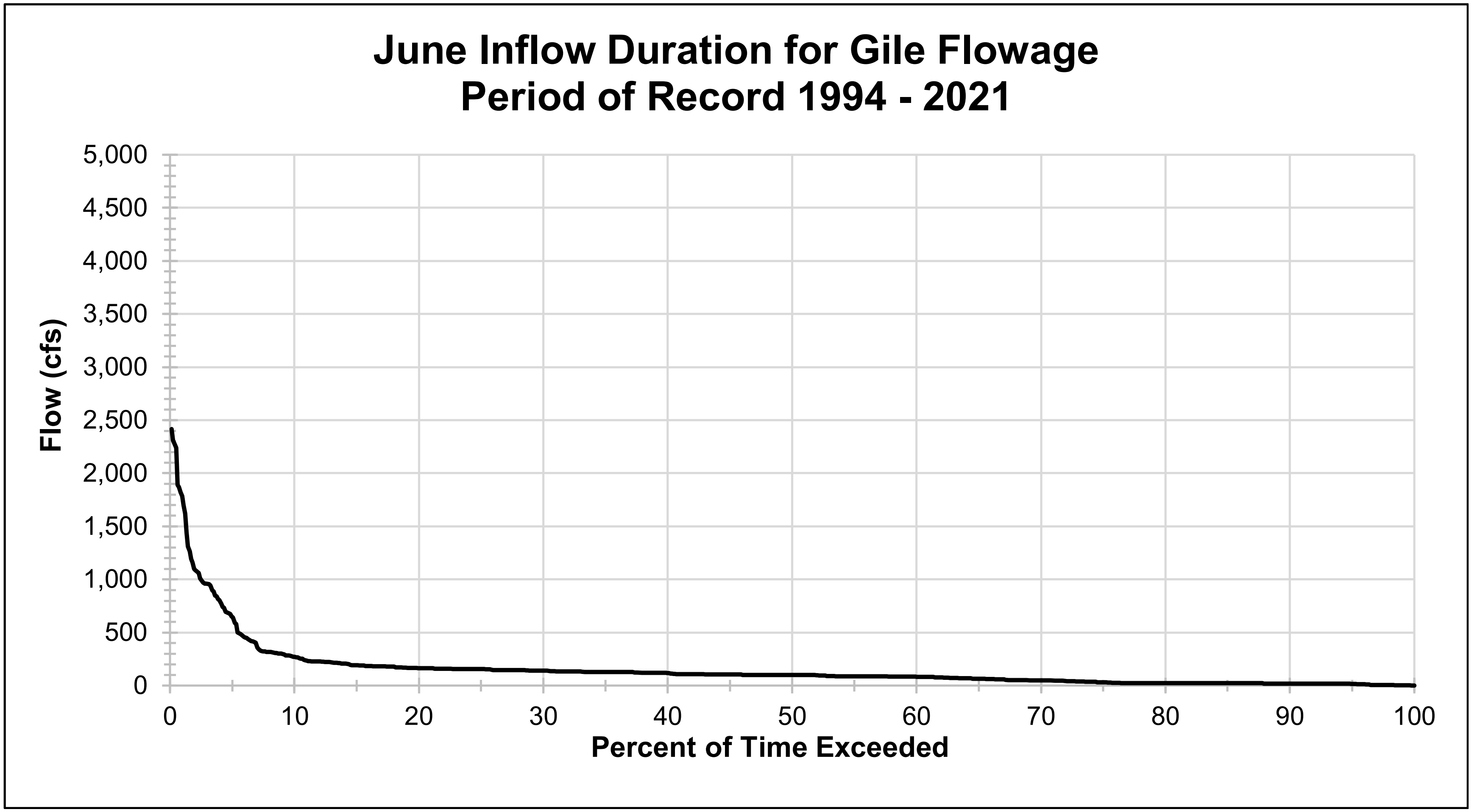

January Inflow Duration for Gile Flowage
Period of Record 1994 - 2021
Flow (cfs)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
10
20
30
40
50
60
70
80
90
100
Percent of Time Exceeded

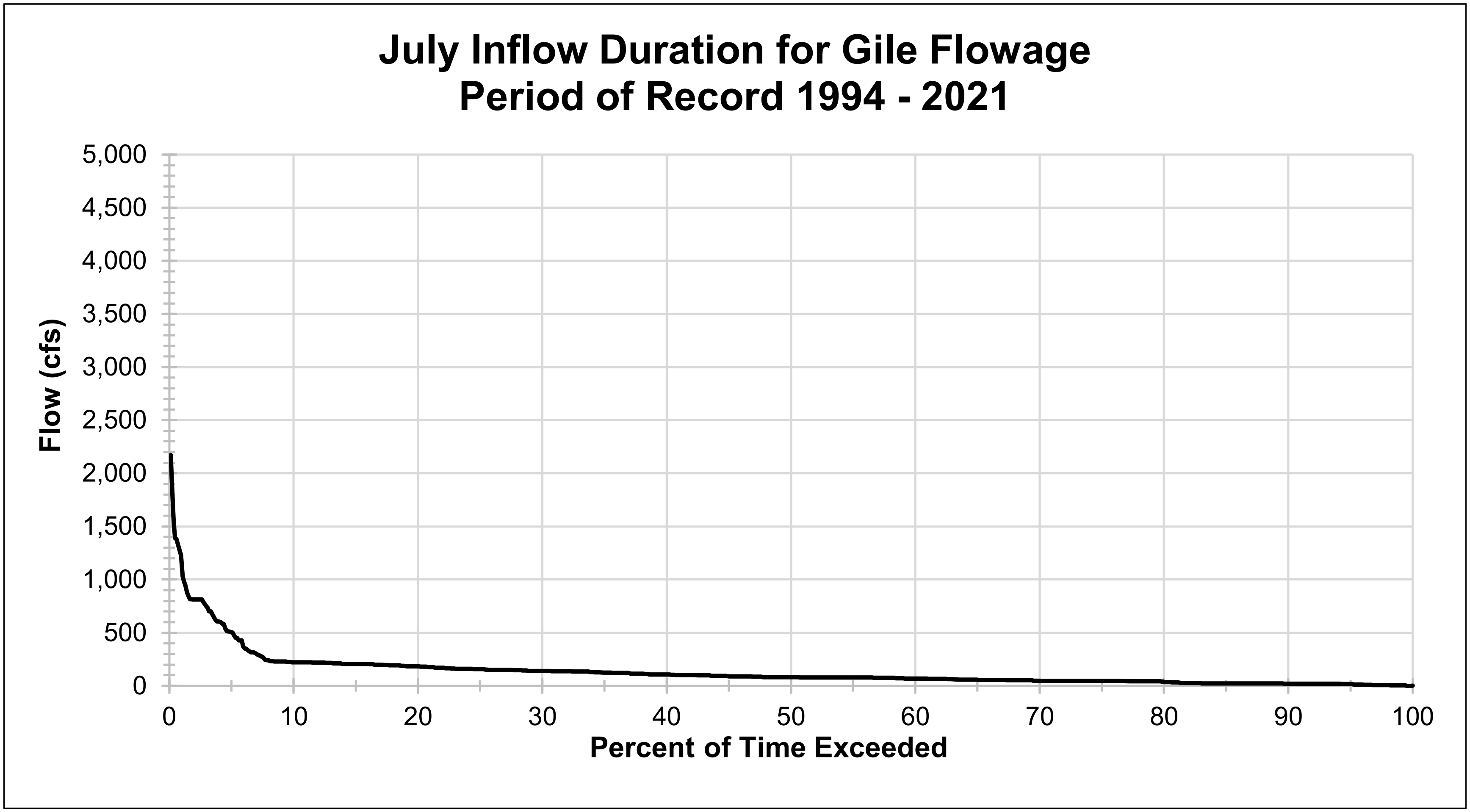

February Inflow Duration for Gile Flowage
Period of Record 1994 - 2021
Flow (cfs)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
10
20
30
40
50
60
70
80
90
100
Percent of Time Exceeded


March Inflow Duration for Gile Flowage
Period of Record 1994 - 2021
Flow (cfs)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
10
20
30
40
50
60
70
80
90
100
Percent of Time Exceeded

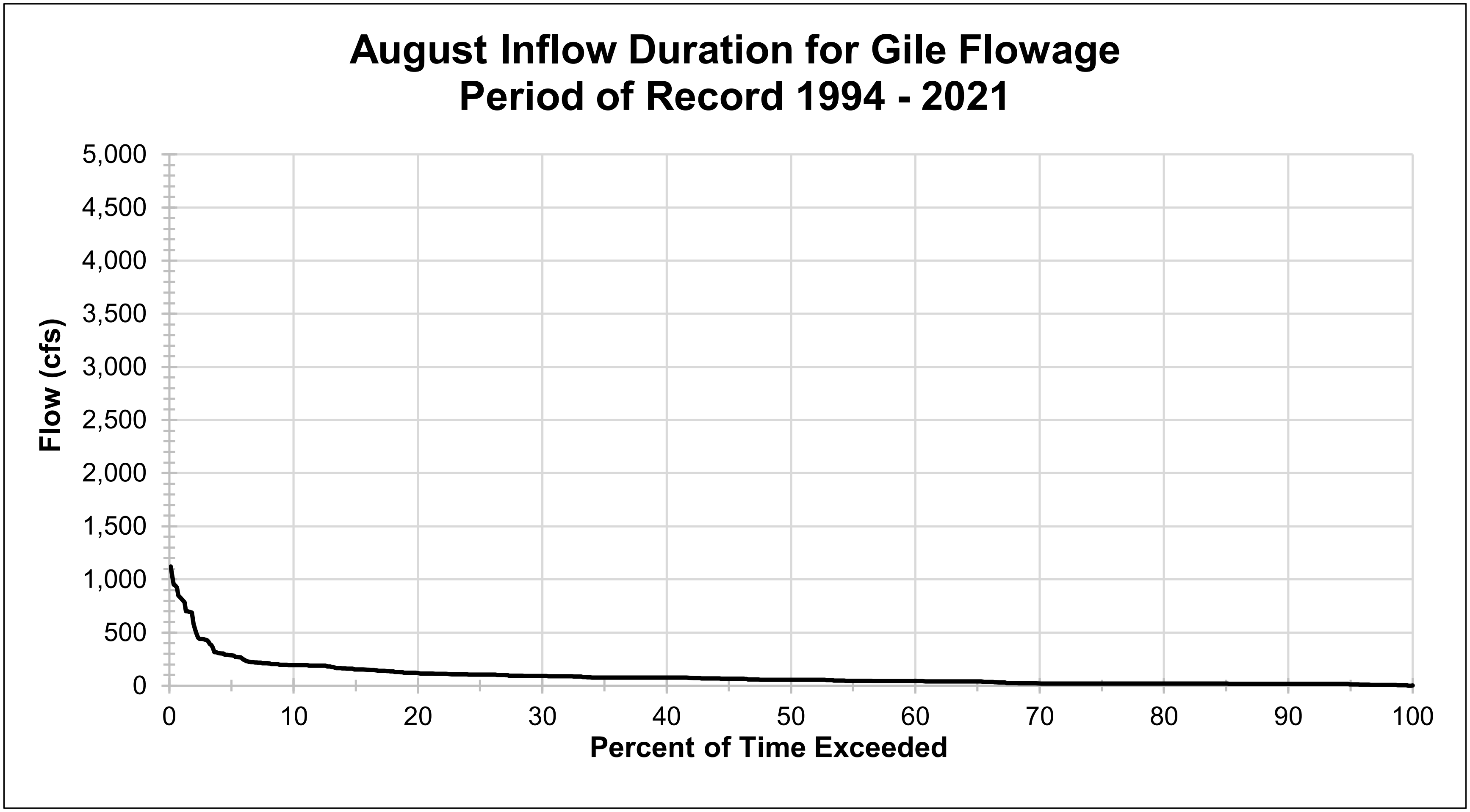

April Inflow Duration for Gile Flowage
Period of Record 1994 - 2021
Flow (cfs)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
10
20
30
40
50
60
70
80
90
100
Percent of Time Exceeded

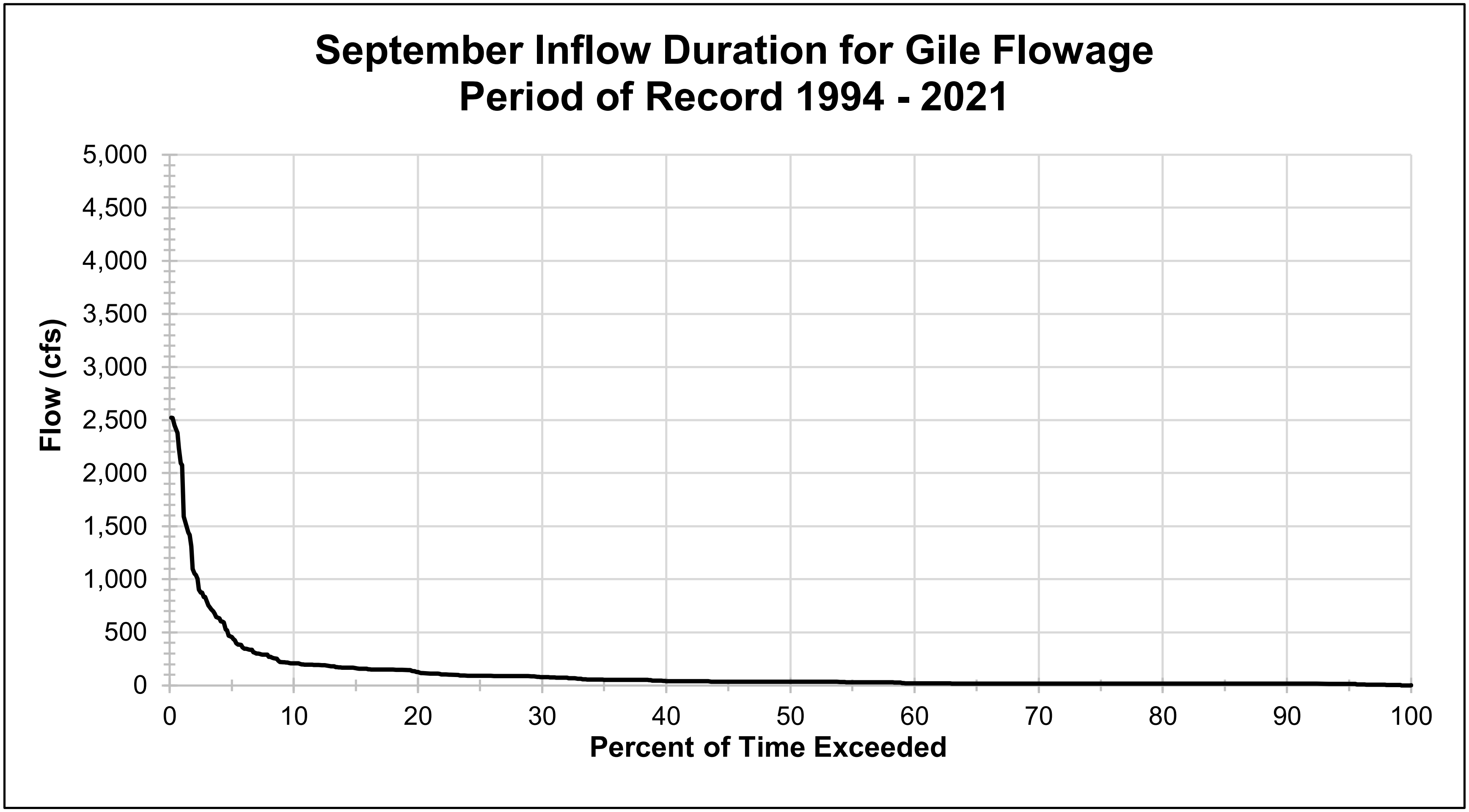

May Inflow Duration for Gile Flowage
Period of Record 1994 - 2021
Flow (cfs)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
10
20
30
40
50
60
70
80
90
100
Percent of Time Exceeded


June Inflow Duration for Gile Flowage
Period of Record 1994 - 2021
Flow (cfs)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
10
20
30
40
50
60
70
80
90
100
Percent of Time Exceeded

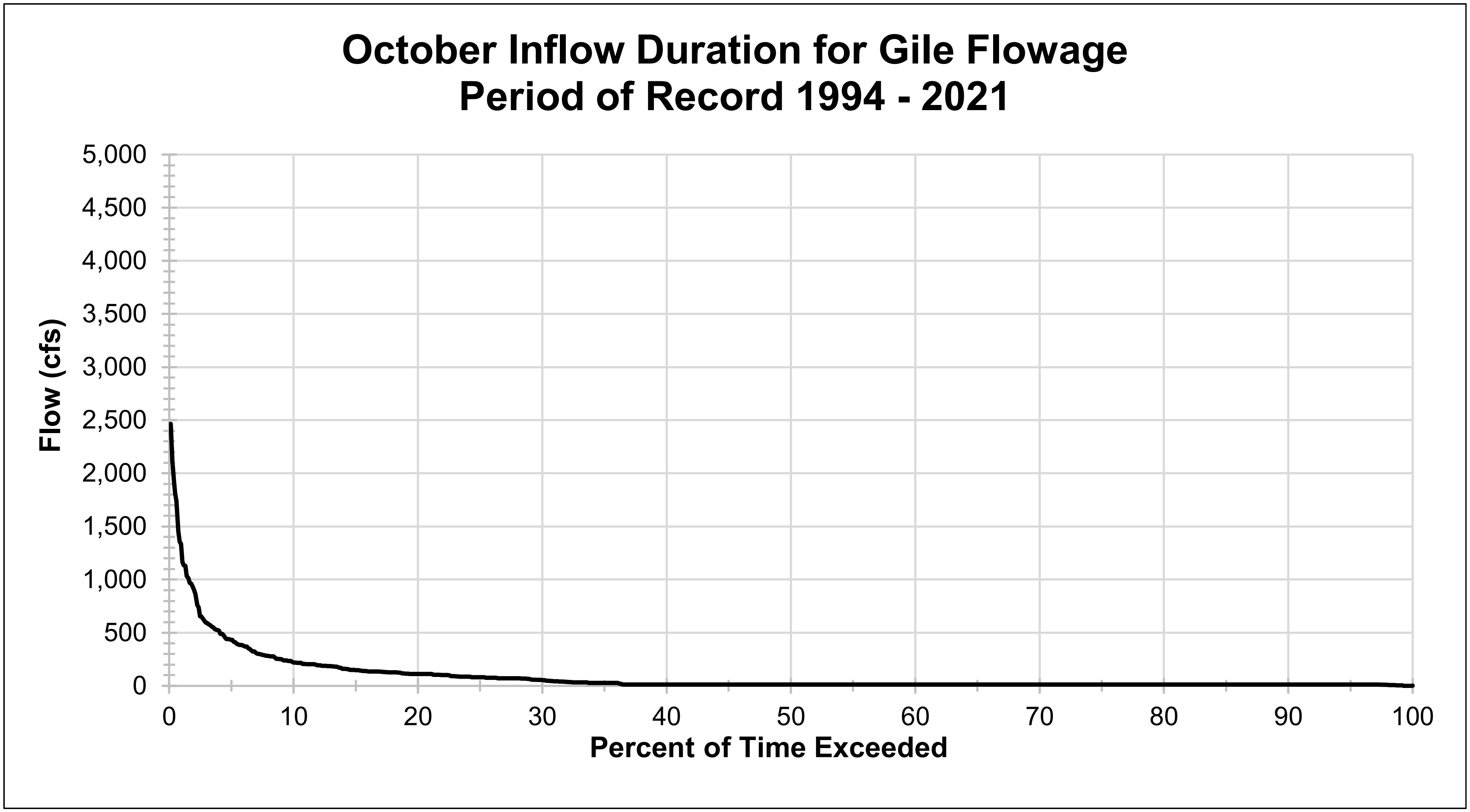


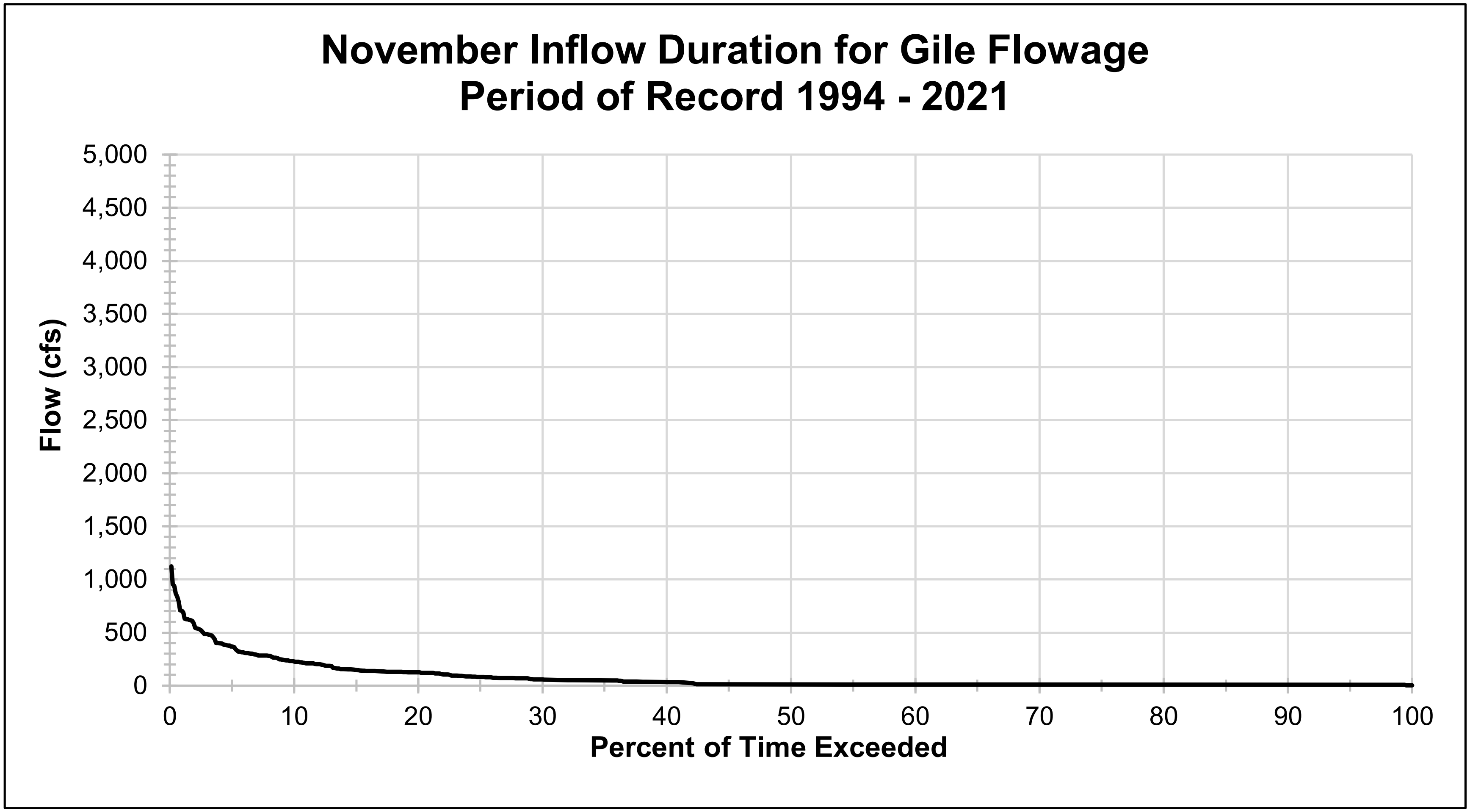
July Inflow Duration for Gile Flowage
Period of Record 1994 - 2021
Flow (cfs)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
10
20
30
40
50
60
70
80
90
100
Percent of Time Exceeded

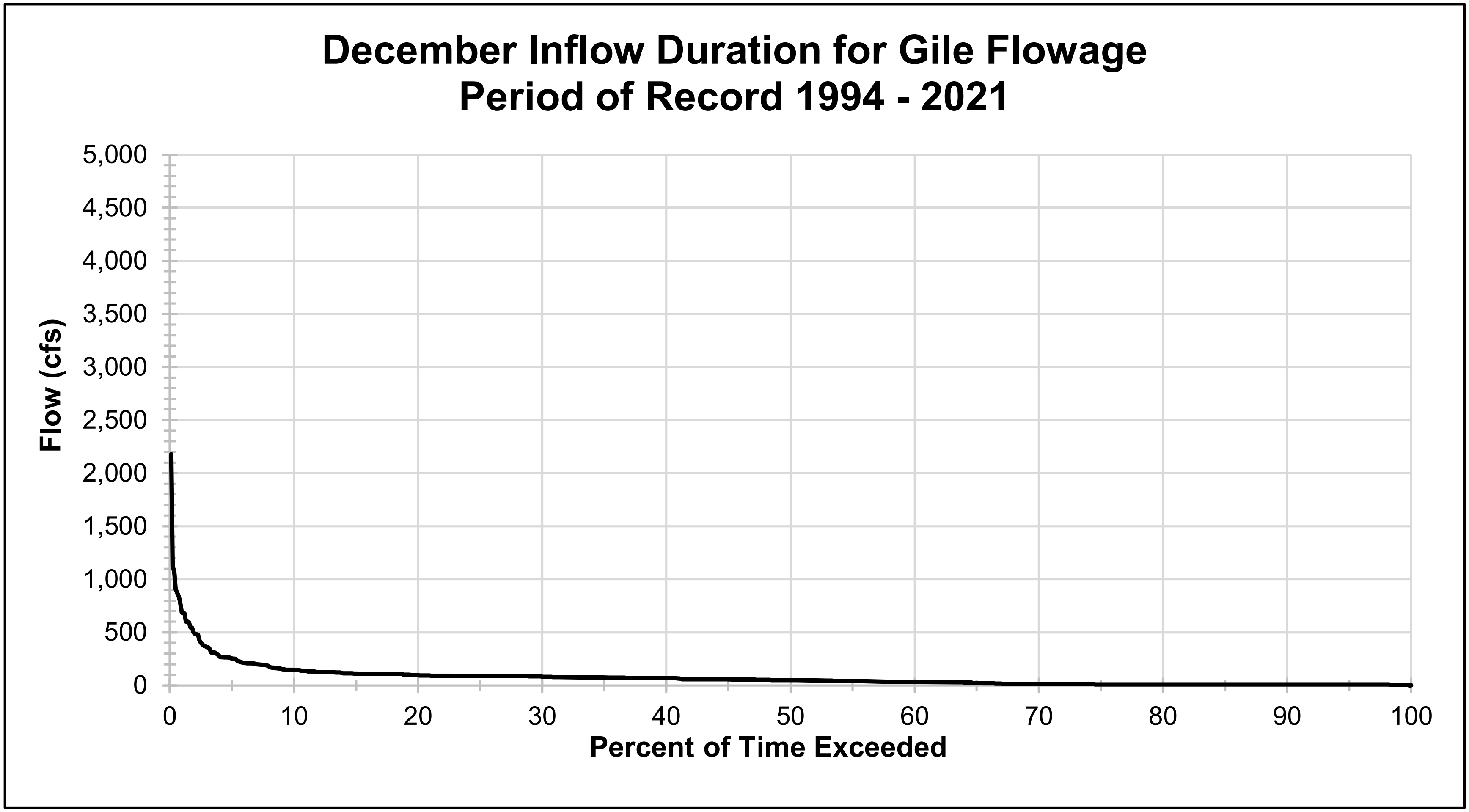

August Inflow Duration for Gile Flowage
Period of Record 1994 - 2021
Flow (cfs)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
10
20
30
40
50
60
70
80
90
100
Percent of Time Exceeded



September Inflow Duration for Gile Flowage
Period of Record 1994 - 2021
Flow (cfs)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
10
20
30
40
50
60
70
80
90
100
Percent of Time Exceeded


October Inflow Duration for Gile Flowage
Period of Record 1994 - 2021
Flow (cfs)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
10
20
30
40
50
60
70
80
90
100
Percent of Time Exceeded


November Inflow Duration for Gile Flowage
Period of Record 1994 - 2021
Flow (cfs)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
10
20
30
40
50
60
70
80
90
100
Percent of Time Exceeded



December Inflow Duration for Gile Flowage
Period of Record 1994 - 2021
Flow (cfs)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
0
10
20
30
40
50
60
70
80
90
100
Percent of Time Exceeded