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Mark Slade  
Licensing Director

September 19, 2014

**VIA ELECTRONIC FILING**

Honorable Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, N. E.  
Washington, DC 20426

Re: Blenheim-Gilboa Power Project No. 2685-026

Dear Ms. Bose,

The New York Power Authority (Power Authority) filed its Notice of Intent and Pre-Application Document (PAD) with the Federal Energy Regulatory Commission (Commission) on April 10, 2014 commencing the relicensing process for the Blenheim-Gilboa Pumped Storage Project No. 2685. On August 5, 2014, the Commission sent a Request for Additional Information (Request) to the Power Authority with respect to certain aspects of the PAD: project operations and environmental measures.

Enclosed please find the Power Authority's response to the Commission's Request.

If you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mark Slade', is positioned above the typed name.

Mark Slade  
Licensing Director  
Tel. 914.681.6659  
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cc: A. Bernick  
J. Smith

## **1.0 PROJECT OPERATION**

FERC AIR#1: On pages 3-4 and 3-5 of the Pre-Application Document (PAD), you provide a description of the lower dam, lower reservoir spillway, and stilling basin. In this description, you state that the Probable Maximum Flood (PMF) flow is 174,099 cubic feet per second (cfs), but the lower reservoir elevation for the PMF flow of 174,099 cfs is not specified. Please provide the lower reservoir elevation for the PMF flow of 174,099 cfs and clarify if the PMF flow of 174,099 cfs is the PMF inflow or the PMF outflow for the lower dam.

*Power Authority Response AIR#1: The PMF inflow equals 181,809 cfs and the outflow is 174,099 cfs. The lower reservoir elevation for the PMF outflow of 174,099 cfs is 910.0 ft. As approved by the Federal Energy Regulatory Commission (FERC), construction in December 2011 raised the minimum crest elevation to 911.1 to provide 1 foot of freeboard for wave action.*

## **2.0 EXISTING ENVIRONMENTAL MEASURES AND FACILITIES**

FERC AIR #2: Section 5.6 (d) (3) of the Commission's regulations requires that you provide information on existing or proposed resource protection and mitigation measures, including facilities, operations, and management activities within the PAD.

On page 3-8 of the PAD, you state that you are not proposing to construct new facilities or alter operation. Although you include the existing Blenheim-Gilboa Project license and selected license amendments in Appendix C of the PAD, it is difficult to distinguish potentially voluntary activities from the facilities you operate or maintain, and the protection, mitigation, and enhancement (PM&E) measures you carry out, under the terms of your existing license.

For clarity, please provide: (1) a list of all existing PM&E measures you presently implement under your existing license; (2) a list of project facilities that you operate or maintain under the existing license, including all buildings, recreational facilities, and other features; and (3) if applicable, a list of PM&E measures and facilities that you manage outside of your existing license.

*Power Authority Response AIR #2:*

### **2.1 PMEs Implemented Under Existing License**

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

*License Article 20 requires the licensee to take reasonable measures as ordered by the Commission, following notice and opportunity for hearing, to prevent soil erosion, stream siltation or pollution resulting from construction, operation, or maintenance of the project. The FERC license order dated July 13, 1998 approved the Power Authority's Flood Erosion Control Plan.*

#### **2.1.2 Fish and Wildlife Resources**

*License Article 36 requires the licensee to consult with Federal and State resource agencies to conduct studies to determine the magnitude of existing fish and wildlife populations and the effects of project construction and operations on these resources, any measures needed to protect and develop fish and wildlife resources, and to file revised Exhibit S to include: (1) provisions for minimum flow releases; (2) developing replacement habitat for deer winter range; (3)*

*provisions for alleviating any deer migration blocks; and (4) a schedule for the development of fish and wildlife enhancement or conservation measures.*

*With regards to requirement 1, the low level outlet in conjunction with the Tainter gates permits the Power Authority to discharge releases as low as 5 cfs, which is operated as described in section 2.1.3, below.*

*The Power Authority filed a revised Exhibit S which was approved by FERC on November 11, 1977. The revised Exhibit S included provisions for enhancing deer habitat, enhancing the fishery in the Lower Reservoir, constructing a boat launch to provide public access to the Lower Reservoir, and to construct a trout fishing pond elsewhere. To address Article 16 (2) and (3) requirements, the Power Authority established a Wildlife Management Area with forage areas for the neighboring deer population which included tree planting.*

*Fishing was enhanced in the Lower Reservoir by the initiation of a stocking program in 1977 and construction of a boat launch. The Power Authority presently supports a New York State Department of Environmental Conservation (NYSDEC) approved and permitted fish stocking program, and NYSDEC's active management of the Upper and Lower Reservoirs. Since 1977, The Power Authority has stocked various fishes in the Upper and Lower Reservoirs including brook trout, brown trout, rainbow trout, tiger trout, largemouth bass, pumpkinseed, and walleye. Selection of fish to be stocked is based on input from local conservation/fishing groups.*

*As required by Exhibit S, the Power Authority also constructed the 16.6 acre trout fishing pond (Mallet Pond) approximately 10 miles northwest of the BG Project on New York State lands. By letter dated December 3, 1976, the NYSDEC stated that the trout fishing pond and associated parking lot were satisfactorily completed and the NYSDEC assumed responsibility for its maintenance.*

### 2.1.3 Water Resources

*The Power Authority releases flow from the Lower Reservoir to Schoharie Creek per the 1975 FERC approved Settlement Agreement and Exhibit S. The project is operated so that outflow generally equals inflow except for low flows. Low flow periods are defined as times when Schoharie Reservoir is below spillway crest and there is no storm runoff. For these times, project outflow is dependent on the amount of storage in the Upper Reservoir and can vary between 7 and 10 cfs (see Exhibit A from FERC approved Settlement Agreement). Since the storage in the Upper Reservoir exceeds that of the Lower Reservoir, at times, the Power Authority has the ability to supplement inflows if excess water (i.e. makeup water) is available in the Upper Reservoir.*

### 2.1.4 Recreation Resources and Public Access

*Ordering Paragraph (B)(ii) of the original license order defines the project as including Minekill State Park, as well as facilities identified in the Exhibit R Recreational Plan.*

*Since the 1969 original licensing order, the Commission has amended the Exhibit R Recreational Plan several times. The most recent Exhibit R was approved by FERC order on November 30, 1995. Exhibit R provides for the Minekill State Park to be operated in cooperation with New York State Office of Parks, Recreation and Historic Preservation (OPHRP). In addition, Exhibit R includes the Visitors Center and Lansing Manor Complex, Upper Reservoir Recreational Facilities, Schoharie Creek Fishing Access Site, and Cooperative Archery Hunting Area. The*

*Power Authority continues to fund operation, maintenance, and capital improvements at these facilities.*

### **2.1.5 Cultural Resources**

*The Power Authority consults the State Historic Preservation Office (SHPO) prior to any renovation or improvements at the National Register of Historic Places listed Lansing Manor Complex or the Project's Visitors Center, which is located in the Manor's former dairy barn, outside of general maintenance (i.e., housekeeping activities, painting, in-kind repair of damaged elements, etc.) and any ground disturbance within the project boundary where previous disturbance to an area cannot be clearly demonstrated. These efforts have included the Power Authority's preparation of a Historic Structures Report for Lansing Manor in 1977, as revised in 1992, prior to restoration work and multiple archaeological investigations at Lansing Manor prior to various improvements that involved ground disturbance.*

## **2.2 Project Facilities in License**

- *an upper reservoir, dike, and emergency spillway*
- *a powerhouse*
- *a switchyard*
- *a lower reservoir and a dam across Schoharie Creek*
- *a concrete-lined, side-chute spillway controlled by three 44 x 36 feet Tainter gates;*
- *recreational facilities consisting of Visitors Center and Lansing Manor Museum, Minekill State Park, Upper Reservoir Recreational Facilities, Schoharie Creek Fishing Access Site, and Cooperative Archery Hunting Area*
- *two access roads*
- *a warehouse complex*
- *Office buildings supporting security, real estate and a vehicle maintenance facility*
- *New construction along the North Access Road of the B-G Project:*
  - *A new security building is under construction and should be complete in Fall 2014;*
  - *A new warehouse with office space will begin construction this fall adjacent to the new security building.*

## **2.3 PMEs outside License**

### **2.3.1 Aquatic Resources**

*In 1979, the Power Authority constructed four constant-level ponds located on the northeast portion of the Upper Reservoir to provide refuge for spawning fish during water level fluctuations. The ponds provide permanent spawning and rearing habitat for warm water nest-building fish species such as largemouth bass, smallmouth bass, and yellow perch.*

### **2.3.2 Terrestrial Resources**

*The Power Authority coordinates meetings of the Wildlife Management Task Force consisting of the Power Authority, NYSDEC, OPRHP, SUNY Cobleskill, and Schoharie County Conservation Association. The group meets semi-annually to maintain, enhance and perpetuate wildlife as well as increase awareness and opportunities to interact with the local environment.*

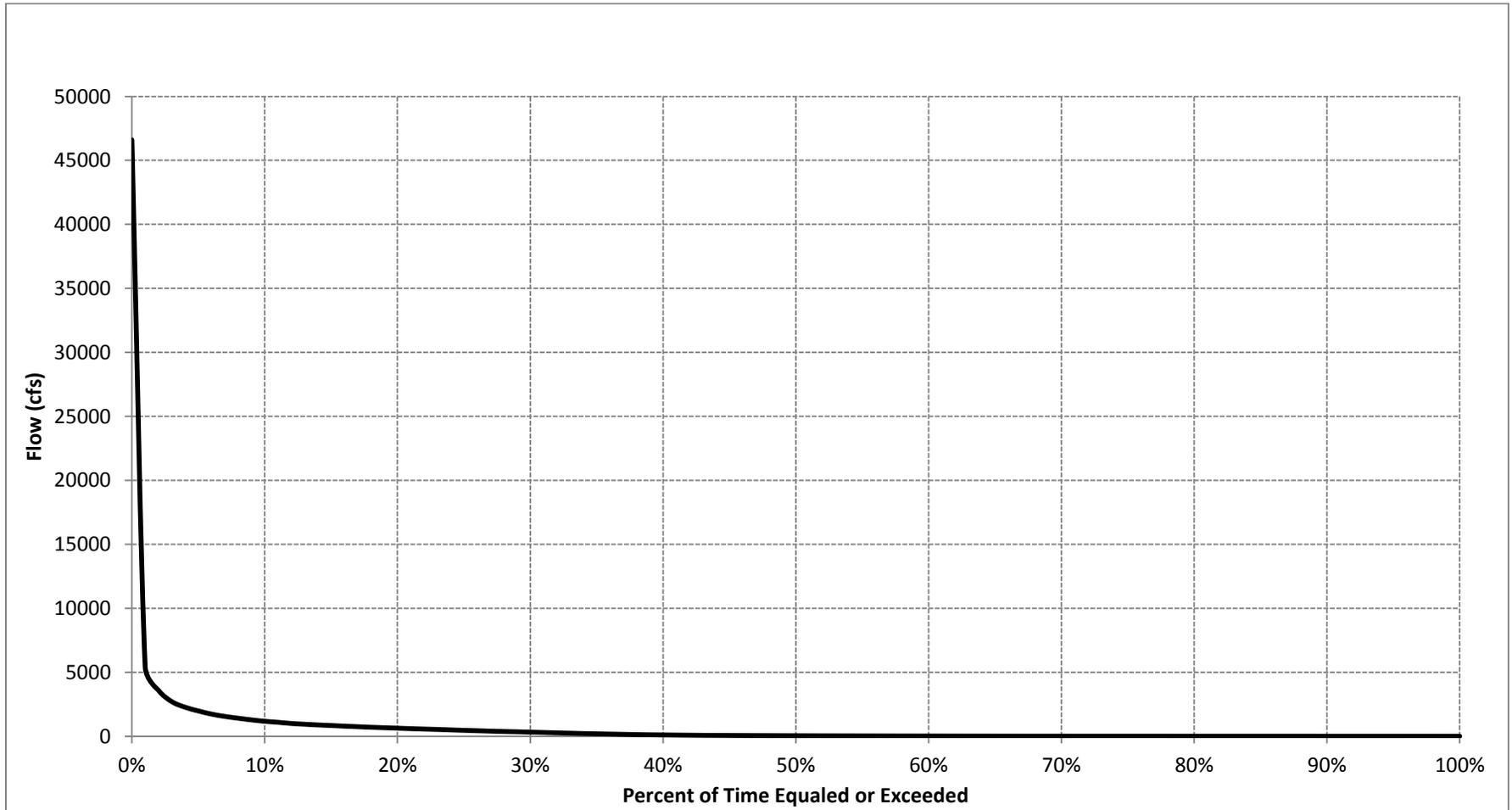
### 3.0 WATER RESOURCES

FERC AIR#3: On pages 4-74 to 4-78 of the PAD, you provide annual and monthly flow duration curves for the USGS Gage No. 01350180 below the project's lower dam for the period of record (October 1970 to September 2011). However, it appears that some high flow values apparent in the monthly flow duration curves are not included within the annual flow duration curve. For example, the April flow duration curve you presented on page 4-76 indicated a maximum flow of 4,500 cfs, but the annual flow duration curve based on the same period of record indicated a maximum flow of 2,000 cfs. Please clarify the inconsistency.

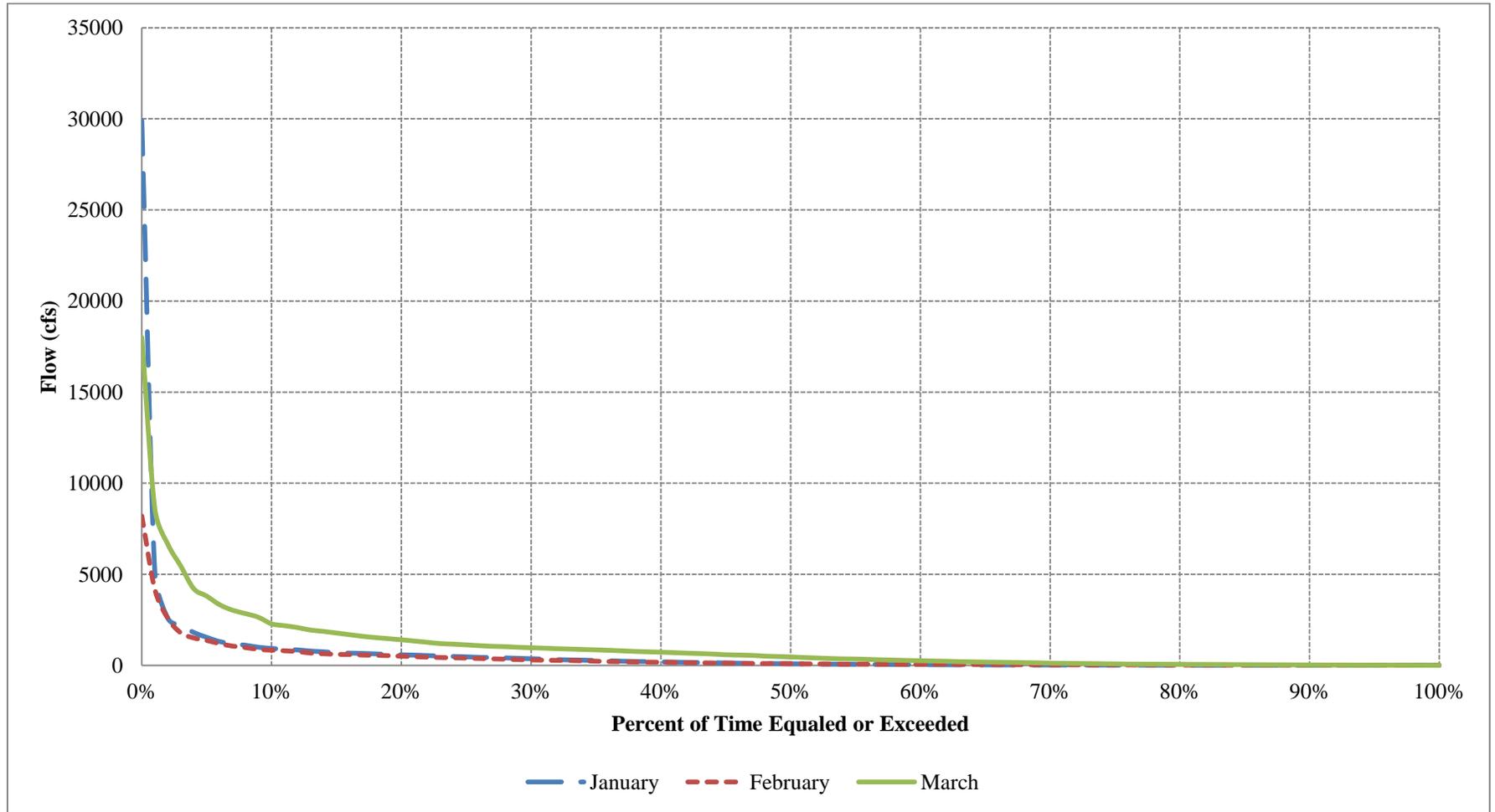
*Power Authority Response AIR#3: The PAD presented 5%-95% exceedance flow duration curves to allow the detail of the curves for the vast majority of flows to be clearly observed. If all flows are included, high flow events force the scale of the charts to be compressed so that this detail becomes obscured. Attached for your comparison, we have provided flow duration curves plotted from 0%-100% exceedance.*

*Please note that the values plotted are daily average flows so values for extreme hourly flows will not be shown (e.g. maximum flows for Tropical Storm Irene event).*

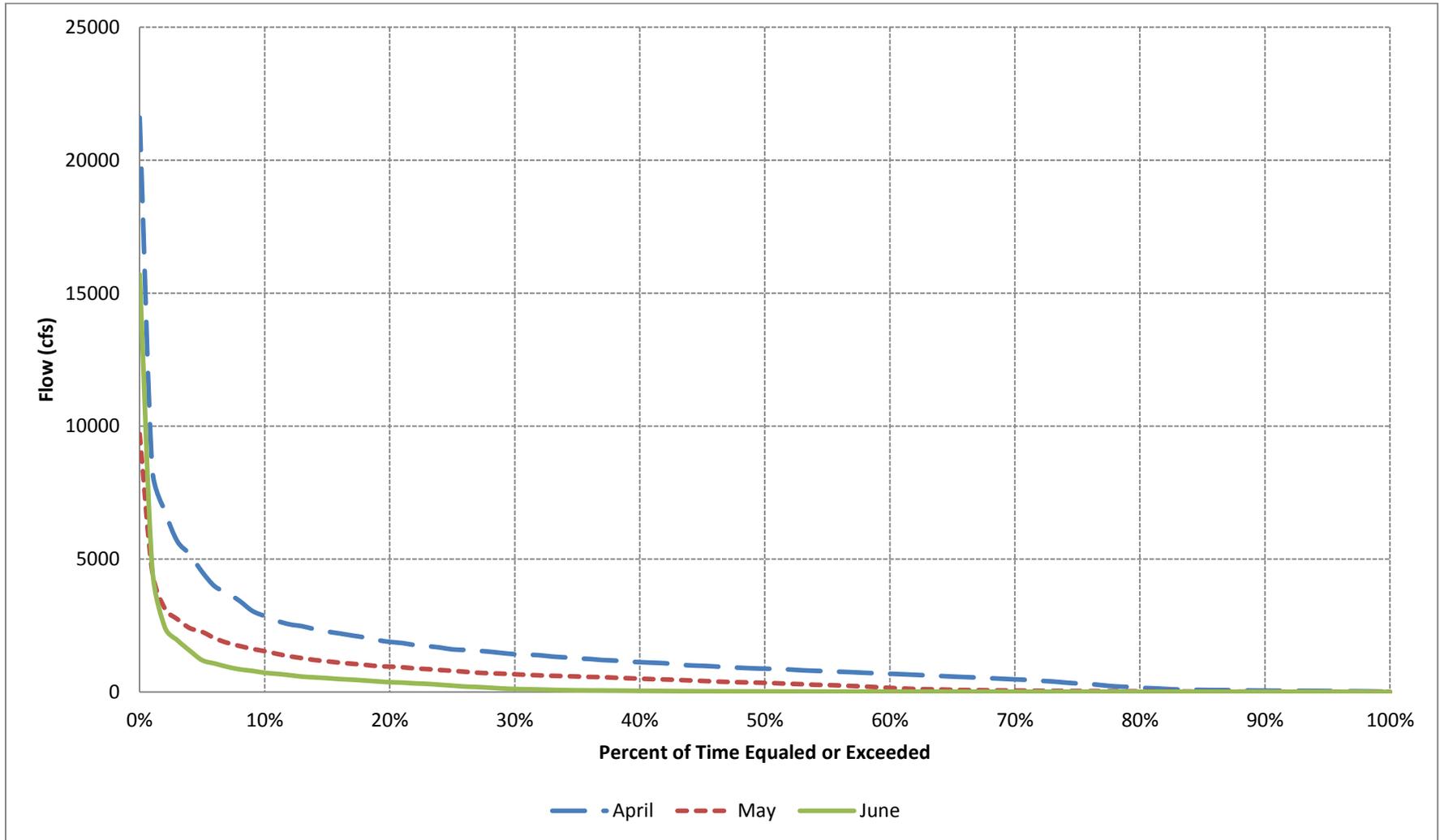
**Annual Flow Duration (Water Years 1971-2011)  
Schoharie Creek at North Blenheim, NY (Gage No. 01350180)**



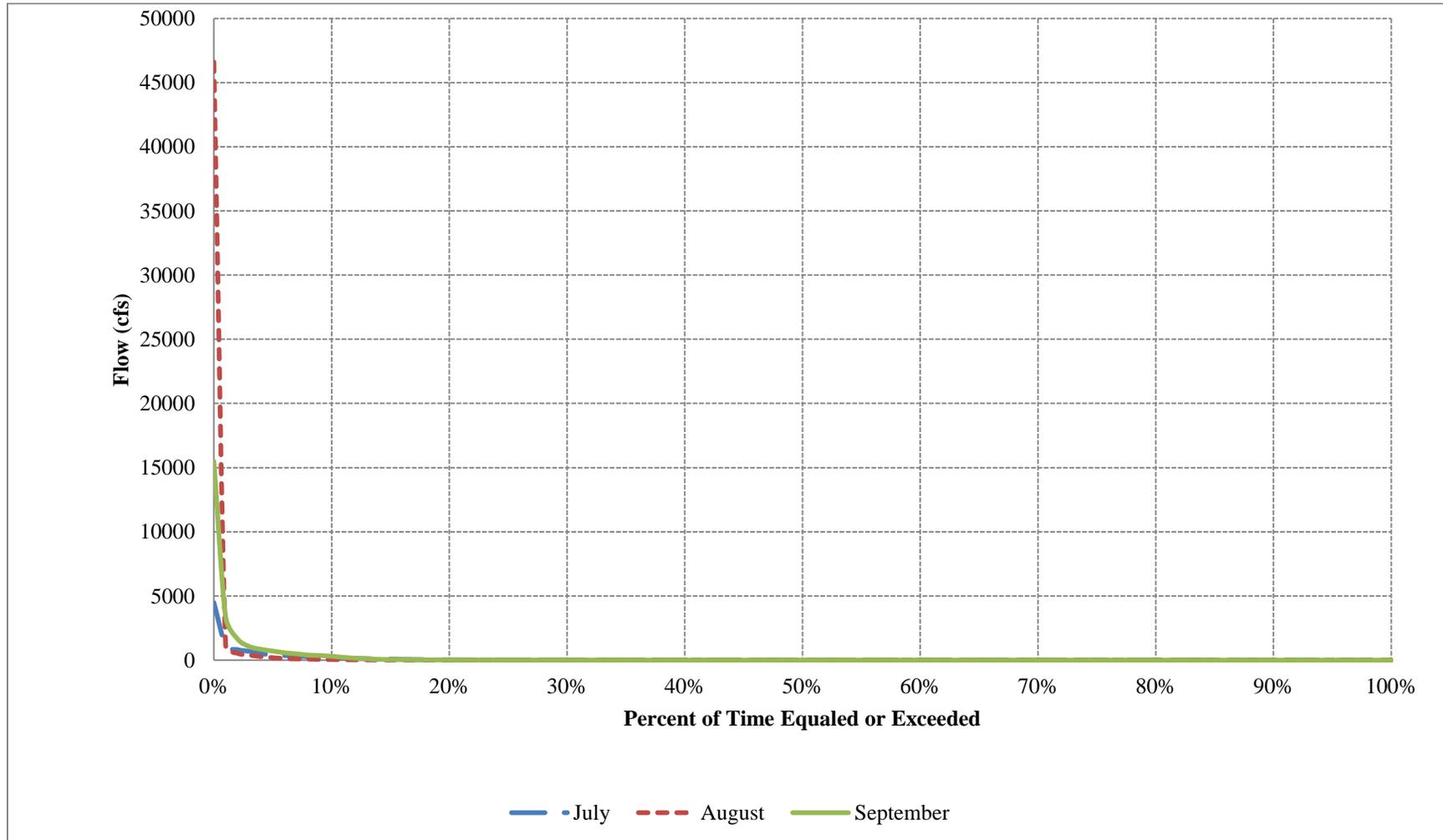
**January, February and March Monthly Flow Duration (Water Years 1971-2011)  
Schoharie Creek at North Blenheim, NY (Gage No. 01350180)**



**April, May, and June Monthly Flow Duration (Water Years 1971-2011)  
Schoharie Creek at North Blenheim, NY (Gage No. 01350180)**



**July, August, and September Monthly Flow Duration (Water Years 1971-2011)  
Schoharie Creek at North Blenheim, NY (Gage No. 01350180)**



**October, November, and December Monthly Flow Duration (Water Years 1971-2011)  
Schoharie Creek at North Blenheim, NY (Gage No. 01350180)**

