

EXHIBIT B

PROJECT OPERATION AND RESOURCE UTILIZATION

**Black Canyon Hydroelectric Project
FERC No. 14110**

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ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
cfs	cubic feet per second
RM	river mile
GWh	gigawatt hours
MW	megawatt
kV	kilovolt

1.0 PROJECT OPERATION

1.1 Proposed Operations

The Project would operate as a run-of-river facility with an instream flow of 50 cfs with a spawning flow of 75 cfs April 16 through July 31. No water would be diverted for power generation if stream flow to the intake dropped below the proposed instream flow. The facility would be operated remotely using a SCADA and PLC controls system located in the powerhouse. The Project would divert up to 900 cfs from the river for power generation.

1.2 Annual Plant Factor

The average annual plant factor is determined by dividing the gross mean annual facility generation by the maximum the plant could generate if it ran at capacity for an entire year.

$$\frac{\text{Mean Annual Generation}}{\text{Plant Capacity} \times 8,760 \frac{\text{hrs}}{\text{year}}} = \text{Annual Plant Factor}$$

In an average year the Project's gross generation would be 110,697 MWh. This would result in a 50.5 % plant factor based on a facility capacity of 25MW. Table B1 shows estimated generation and associated plant factors 2006 through 2013.

Table B1 – Average gross generation and associated plant factor 2006-2013.

Month	2006	2007	2008	2009	2010	2011	2012	2013	Average
January	16,880	12,450	8,056	14,073	13,684	15,422	12,073	9,575	12,337
February	9,006	10,929	9,038	4,953	5,396	10,473	11,431	10,251	8,947
March	5,685	15,999	11,192	6,976	7,940	10,123	12,540	14,341	10,599
April	11,710	12,441	8,945	13,921	11,292	13,308	14,907	17,290	12,314
May	14,870	11,898	17,438	17,922	16,117	16,849	17,537	17,601	14,487
June	13,254	11,465	17,829	12,752	15,468	17,698	17,874	14,748	12,442
July	2,104	2,927	9,840	2,559	4,612	13,320	11,350	3,969	5,455
August	107	624	4,645	388	580	3,804	1,121	508	1,592
September	1,908	441	2,344	1,412	8,046	1,384	36	4,459	2,534
October	3,902	12,320	4,419	7,519	6,898	7,786	7,186	6,943	7,463
November	14,799	7,515	11,837	15,983	11,824	11,413	14,848	11,312	11,562
December	12,179	10,127	10,794	9,185	10,826	6,523	11,083	11,165	10,964
Total	106,404	109,136	116,378	107,643	112,684	128,102	131,987	122,165	110,697
Plant Factor	48.6%	49.8%	53.1%	49.2%	51.5%	58.5%	60.3%	55.8%	50.55%

1.3 Project Operation During Adverse, Mean, and High Water Years

1.3.1 Normal Project Operations

The Project would operate as a run-of-river facility with a proposed instream flow of 50 cfs with a spawning flow of 75 cfs April 16 through July 31. No water would be diverted for power generation if stream flow to the intake dropped below the proposed instream flow. Flows in excess of the hydraulic capacity of the facility would spill over the diversion and continue down river through the bypassed reach.

The facility would be operated remotely using a SCADA and PLC controls system located in the powerhouse. The facilities operational range would be from 10 cfs to 900 cfs. Diversion quantity would be modulated based on a target water surface elevation set point at the diversion. A calibration curve would be developed for the diversion to provide the instream flow requirement at the target water surface elevation set point. A stream gauge would be installed below the diversion and fish screen water return to verify the quantity of water in the bypassed reach.

The turbine utilization scheme would bring each unit on line one at a time to achieve maximum efficiency at all flows. The turbines are designed to be most efficient at or near full capacity. Therefore the most efficient utilization scheme will adjust the output of one unit at a time rather than modulating all units. This results in less wear and tear on the units.

The facility would be taken off line annually for maintenance occurring during the lowest flow period in late summer. Typical plant maintenance would last between 2 to 6 weeks with the facility resuming generation with fall rains in September.

1.3.2 Operation During Adverse Conditions

Flows in excess of the hydraulic capacity of the facility would flow past the facility through the roughened channel into the bypassed reach. During periods of low flow the facility would not divert water and all stream flow would flow past the facility through the roughened channel into the bypassed reach.

1.3.3 Operation During Flood Conditions

When river flows are in excess of facility capacity the excess water would flow past the facility through the roughened channel into the bypassed reach. During periods of very high flows the facility would shut down to allow for channel shaping and geomorphological processes to occur. The threshold for channel shaping is yet to be determined but will be the result of consultation with appropriate resource agencies, tribes, and stakeholders.

2.0 DEPENDABLE CAPACITY & MEAN ANNUAL ENERGY PRODUCTION

2.1 Project Hydrology

As a run of river Project the dependable capacity of the facility will be determined by stream flow. A typical hydrograph of daily average flows and flows which could be diverted for generation are shown in Figure B1. The greatest generation would be achieved April through June with secondary peak generation occurring with the fall and winter rains November through January.

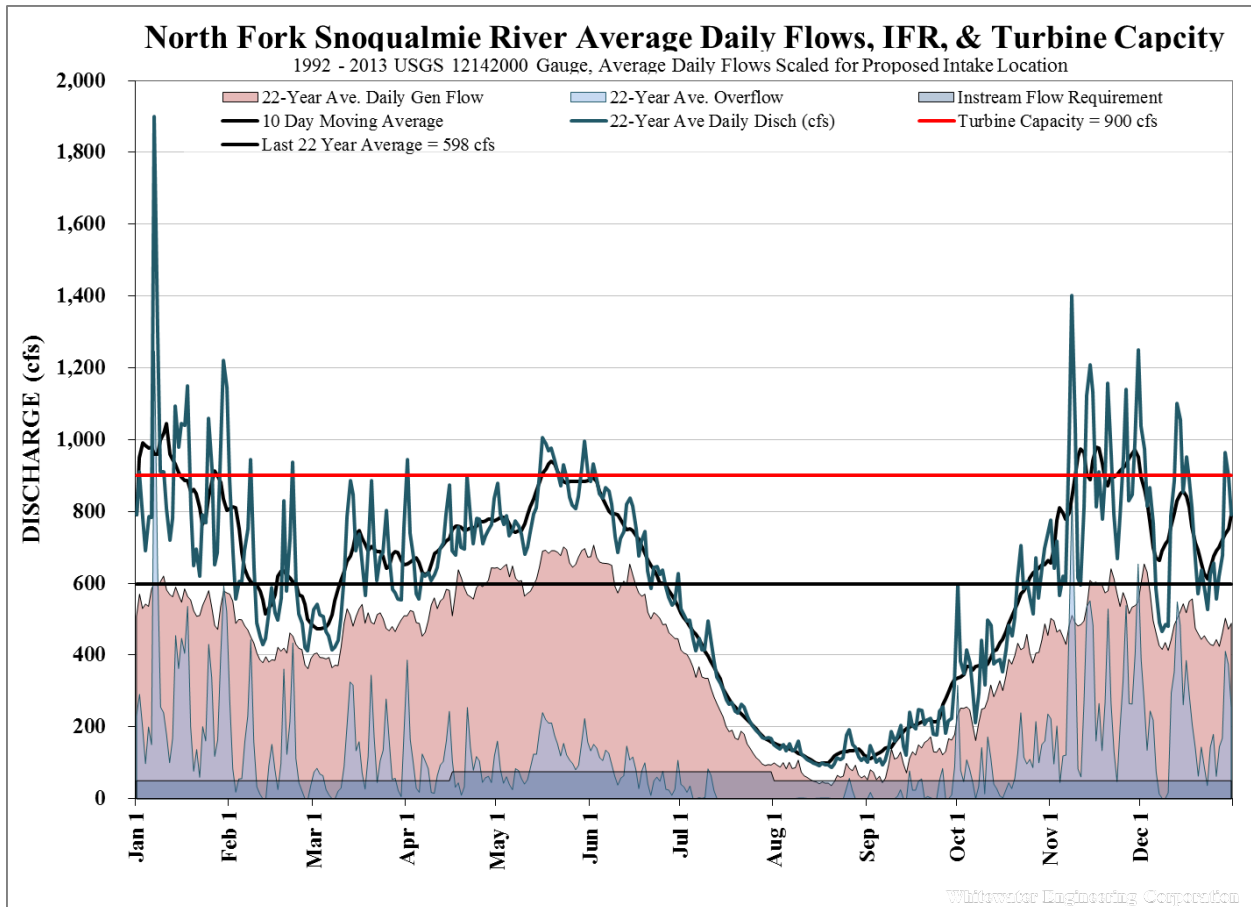


Figure B1 – Average annual flows and generation hydrograph for 1992 – 2013.

Mean monthly and the mean annual flows at the intake location are shown in Table B2.

Table B2 – Mean monthly and mean annual flows to the Project.

Month	Flow (cfs)
January	915
February	602
March	624
April	719
May	846
June	727
July	321
August	124
September	183
October	481
November	887
December	745
Mean	598

2.1.1 Flow Duration Curves

Project flow duration curves are provided in Appendix B1 and were developed using USGS 12142000 gauge data scaled for the intake.

2.2 Dependable Capacity

The monthly dependable capacity of the Black Canyon hydroelectric project is shown in Figure B2. The mean annual dependable capacity is 12.8 MW.

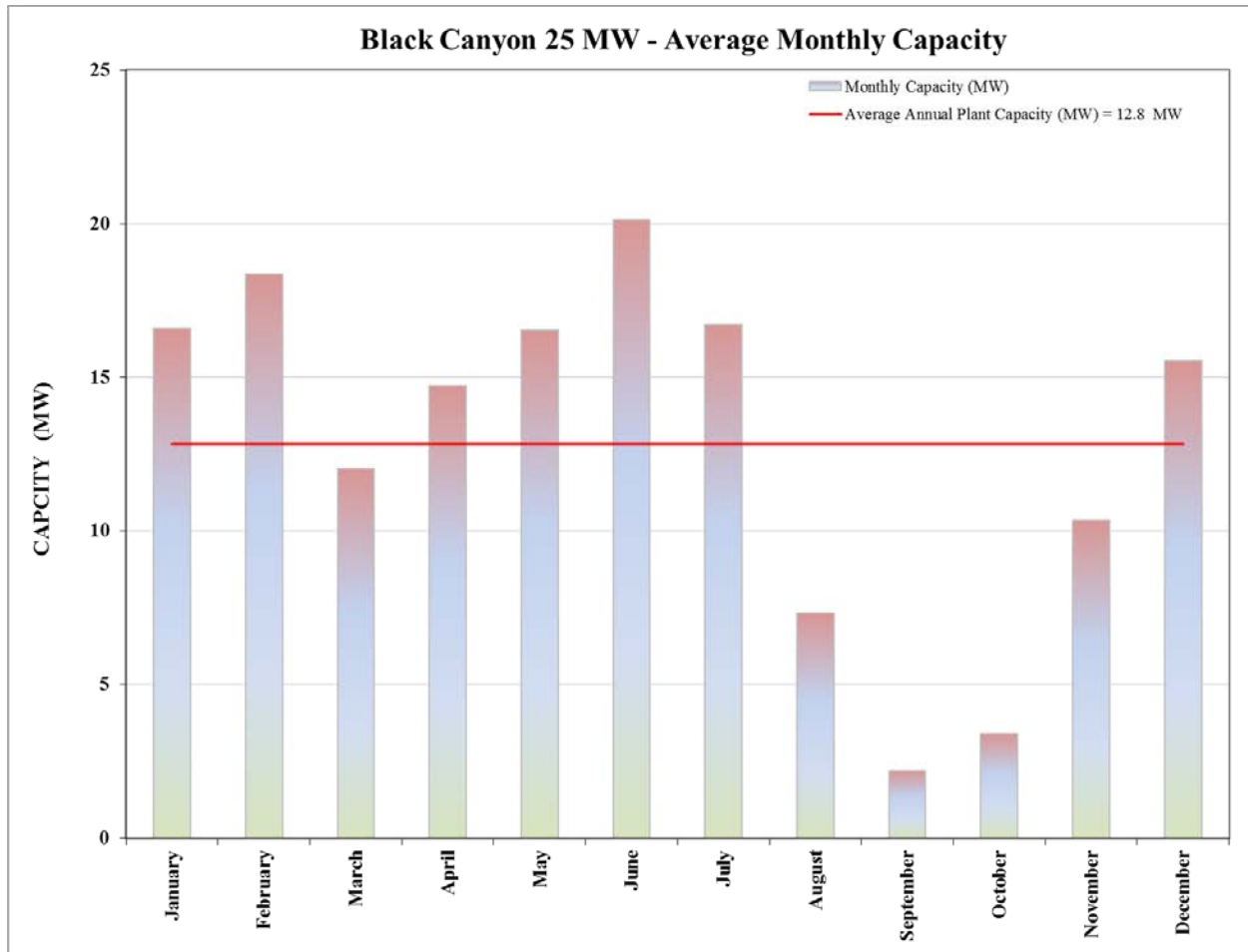


Figure B2 – Monthly dependable capacity for the Project.

2.3 Area Capacity & Rule Curve

The Project would not impound water and thus there is no associated impoundment capacity rating curve.

2.4 Estimated Hydraulic Capacity

The total hydraulic capacity of the Projects is 900 cfs.

2.5 Tailwater Rating Curve

Bathymetry data has not been collected at the tailrace location. Bathymetry will be collected and a tailwater rating curve will be submitted with the final license application.

2.6 Power Plant Capability vs. Head

The Project would have 441 feet of gross head and a capacity of 25 MW. The Project has no storage and therefore the Project head would not change.

3.0 UTILIZATION OF PROJECT POWER

The energy generated by the Project would be sold to a regional utility or utility district. The Project would contribute 110 GWh per year of carbon free energy to the regional supply.