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APR 22 2022

Department of Water Resources
Eastern Region

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

STATEMENT OF COMPLETION

FOR SUBMITTING PROOF OF BENEFICIAL USE

RECEIVED

APR 29 2022

DEPARTMENT OF
WATER RESOURCES

FOR OFFICE USE ONLY

Amt. of Fee \$ 600.00Receipt No. E048045Received By CARDate Received 4/22/22

The Idaho Department of Water Resources (Department) considers this form a statement that the permit holder(s) applied water to beneficial use and completed development of a water right to the extent described below. **This form must be accompanied by an examination fee, when necessary, or by a completed Beneficial Use Field Report prepared by a certified water right examiner (CWRE).** Please refer to the instructions and fee schedule for this form. If ownership of the permit has changed, complete an Assignment of Permit form. If you wish to relinquish your permit because you have not established the authorized water use and are not applying for an extension, please notify the Department in writing.

- Permit No. 1-7128 Name of Permit Holder(s) Idaho Power Company
Telephone No. (208) 388-2602 Email KDavis2@idahopower.com
Mailing Address PO Box 70 City Boise State ID Zip 83707-0070
- Source of Water Snake River If Ground Water (well), Date Drilled mo. / yr.
Drilling Permit/Tag No. Drilling Company's Name
- Extent of use(s) completed as authorized by the water right permit:
Domestic (No. households) Irrigation (No. acres) Stockwater (No. and stock type)
Other Hydropower - 7,850 cfs
- Total diversion rate or volume (storage only) for which proof is submitted 7,500 cfs OR af
If the total developed water use is 5 acres of irrigation or less, is stockwater storage of 14.6 acre-feet or less, or has a diversion rate of less than 0.24 cfs, attach a map of the place of use and point of diversion and photographs showing beneficial use.
- Describe the diversion and delivery system from the water source to the use (pump, lift, irrigation method, etc.)
Water is diverted at American Falls Dam through headgates and penstocks for three turbines.

- Permit condition compliance. Refer to the permit approval conditions and check all the items required, then check "Yes" or "No" to indicate whether the required items were established, submitted, and/or installed:
Required? Yes No (If "Yes", attach required data, evidence of compliance, or evidence of installation)

☐	☐	☐	Ground water level data, pumping information, or other diversion data
☐	☐	☐	Mitigation plan
☐	☐	☐	Lockable controlling works
☐	☐	☐	Measuring device
☐	☐	☐	Fish screen
☒	☒	☐	Other requirements of the water right permit <u>Runs concurrent with FERC license</u>
	☐	☐	Reasonably Anticipated Future Needs ("RAFN") Municipal use

If RAFN Municipal use, additional increment of beneficial use developed? ☐ Yes (attach CWRE report) ☐ No
- Fee Enclosed \$ 600 or ☐ CWRE field report attached or ☐ No fee required
See fee schedule on page 3 of the instructions. Proof statements filed without an appropriate fee are incomplete.

- Person to contact to accompany a Department representative during the field examination of the water system:

Name: Kresta Davis Telephone No. (208) 388-2602 Email KDavis2@idahopower.com
Mailing Address PO Box 70 City Boise State ID Zip 83707

The information given on this form is my true statement of the extent to which the above numbered permit has been developed and water has been diverted and applied to beneficial use. I understand that any undeveloped portion of the permit is relinquished to the State of Idaho.

Kresta Davis
SIGNATURE OF PERMIT HOLDER*

Kresta Davis, Senior Manager
PRINTED NAME AND TITLE

4/18/2022
DATE

*Attach power of attorney if completing on behalf of permit holder.

Idaho Power
Water Right 1-7128
Statement of Completion

Idaho Power is filing this Statement of Completion for water right 1-7128 seeking a proof of beneficial use for 7,500 cfs for a total plant diversion of 16,500 cfs. The data included with this document provides evidence that Idaho Power has put that amount of water to beneficial use under water right 1-7128.

Background Information

Idaho Power owns and operates the American Falls hydropower plant located at American Falls Reservoir. The earth filled dam at American Falls reservoir is owned and operated by the United States Bureau of Reclamation (USBR). The Idaho Power facility contains three turbines with a combined normal output of approximately 92 MW and a recorded maximum of 108.85 MW.

Flow tests at the American Falls hydropower plant were conducted in the mid-1990s to determine the maximum rate of water that could pass through the turbines. The tests were conducted as part of Idaho Power's effort to determine the company's water rights through the Snake River basin adjudication. Those tests showed a maximum turbine capacity of 16,850 cfs. Based on historic data, the company determined it had seven water rights that when combined provided a total rate of 9,000 cfs. In a 1996 filing with the Idaho Department of Water Resources (IDWR), the company made application for water right 1-7128 for 7,850 cfs (Table 1). This right, when combined with the existing rights would give a total maximum diversion rate of 16,850 cfs. The processing of that application was delayed due to a series of legal matters. IDWR permitted water right 1-7128 on May 6, 2021 and the proof of beneficial use is due on June 1, 2022.

Table 1: Water rights for the American Falls hydropower plant.

Basin	Sequence	Basis	Priority Date	Season of Use	Div. Rate (cfs)
1	2017	Decreed	1908-09-03	04/01 - 10/31	1,400
1	2032	Decreed	1919-03-08	04/01 - 10/31	236
1	2046	Decreed	1926-10-15	01/01 - 12/31	2,000
1	10382	Decreed	1901-07-15	04/01 - 10/31	253
1	10383	Decreed	1901-08-01	04/01 - 10/31	611
1	10531	Decreed	1926-04-13	11/01 - 03/31 04/01 - 10/31	6,000 3,500
1	10532	Decreed	1936-05-08	01/01 - 12/31	1,000
1	7128	Permitted	1996-10-23	01/01 - 12/31	7,850

Water Measurement

All units have measuring devices that quantify water flowing through each turbine. The model and serial numbers for measuring devices for each unit can be found in Table 2. Flow rate is not measured via penstock pipe flow due to the inaccessibility for installing such meters. The meters for all turbines measure the pressure differential across the scroll case and flow is calculated using the Winter-Kennedy methodology. Flows are measured and recorded in 15-minute time-steps. Data is also periodically compared to the USGS gage station 13077000, Snake River at Neeley ID, located approximately one mile downstream of the facility.

Turbine Meter Information			
Turbine	Manufacturerer	Model Number	Serial Number
#1	Rosemount	1151DP4S22B2	0987246
#2	Rosemount	1151DP4S22B2	1103526
#3	Rosemount	1151DP4S22B2	1040860

Table 2: Meter information for the American Falls Hydropower Plant.

Flow Information

Data for calendar years 2003 through 2021 were examined to determine monthly maximum flows to gain a recent history of diversion data at the facility (Table 3). Data in Table 3 is based on hourly average flows and not 15-minute data. The data set includes 19 years of data that represent the current configuration of the turbines at the facility. Out of 19 years, five years had at least one month that reached a maximum diversion rate of 16,500 cfs and an additional six years had at least one month that exceeded 16,330 cfs. Flows at or above 16,500 cfs generally occur May, June and July and occur in response to water demand and flood control release.

Table 3: Monthly maximum flows at the American Falls Hydropower plant from 2003 to 2021.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Max
2003				6,369	11,514	14,708	15,170	13,677	9,000	3,480	0	0	15,170
2004	0	2,531	3,498	9,267	11,179	12,308	11,462	10,633	6,996	3,613	0	198	12,308
2005	0	1,527	5,186	5,782	7,934	14,565	14,682	12,895	10,565	4,636	0	1,403	14,682
2006	0	3,750	5,252	16,500	16,500	16,006	16,068	14,751	9,795	3,619	2	3,016	16,500
2007	3,132	4,053	2,895	8,785	11,889	14,760	16,388	12,861	3,199	1,330	0	0	16,388
2008	2,318	1,615	2,298	8,443	12,249	16,500	16,500	14,273	11,292	4,822	15	0	16,500
2009	35	0	7,107	16,500	16,480	16,352	16,500	13,219	12,251	7,045	1,754	2,902	16,500
2010	2,973	5,691	4,595	6,655	12,925	14,854	15,429	13,241	11,754	6,909	0	2,794	15,429
2011	6,430	6,481	6,659	16,500	16,498	16,500	16,392	16,368	15,990	15,072	10,237	9,352	16,500
2012	5,687	6,145	11,617	14,299	14,240	16,500	16,498	14,313	10,026	6,332	29	0	16,500
2013	0	0	3,212	12,241	14,285	13,001	13,971	13,655	9,580	4,203	2	2,477	14,285
2014	2,508	3,627	5,487	8,725	11,945	15,939	15,831	13,053	9,272	3,602	8	2,766	15,939
2015	2,665	3,513	5,558	9,434	12,927	15,220	14,193	11,876	11,011	6,392	29	8,038	15,220
2016	3,676	1,945	2	8,651	12,364	16,475	14,719	12,680	11,557	5,208	6,517	5,109	16,475
2017	1,236	3,186	16,440	16,492	16,494	15,536	15,343	15,288	10,846	5,387	2,997	7,909	16,494
2018	11,528	9,933	12,217	16,461	16,203	16,177	15,930	16,464	10,180	6,933	10	8	16,464
2019	5,481	5,882	10,182	16,426	15,796	15,431	15,146	13,648	11,240	5,401	96	2,620	16,426
2020	8,202	8,228	7,891	16,241	16,338	16,187	16,269	14,872	11,726	6,753	3,758	4,509	16,338
2021	65	3,801	3,012	9,651	16,386	15,046	15,157	16,023					16,386
Monthly Max	11,528	9,933	16,440	16,500	16,500	16,500	16,500	16,464	15,990	15,072	10,237	9,352	16,500

cfs 0 1,500 3,000 4,500 6,000 7,500 9,000 10,500 12,000 13,500 15,000 16,500

cfs
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1,500
0

A detailed analysis is provided for March – May of 2017 (Figure 1) showing 15-minute time step data for turbine flow, generation, and flow data from the USGS Gage 13077000. The graph demonstrates good agreement between turbine flow and the USGS gage when flows are less than 16,500 cfs. The 15-minute data for the USGS gage and the calculated turbine flow were analyzed to determine the overall difference between the two measurements. The analysis was limited to those periods when flow was relatively steady at both the gage and through the turbines. This analysis shows the average difference between the USGS gage and turbine flow at the plant is approximately 4% when flows are less than 16,500 cfs for March – May of 2017. There are differences between flow measurements when flows are changing however, when flows are steady the overall difference between the Snake River at Neeley and calculated turbine flow is small.

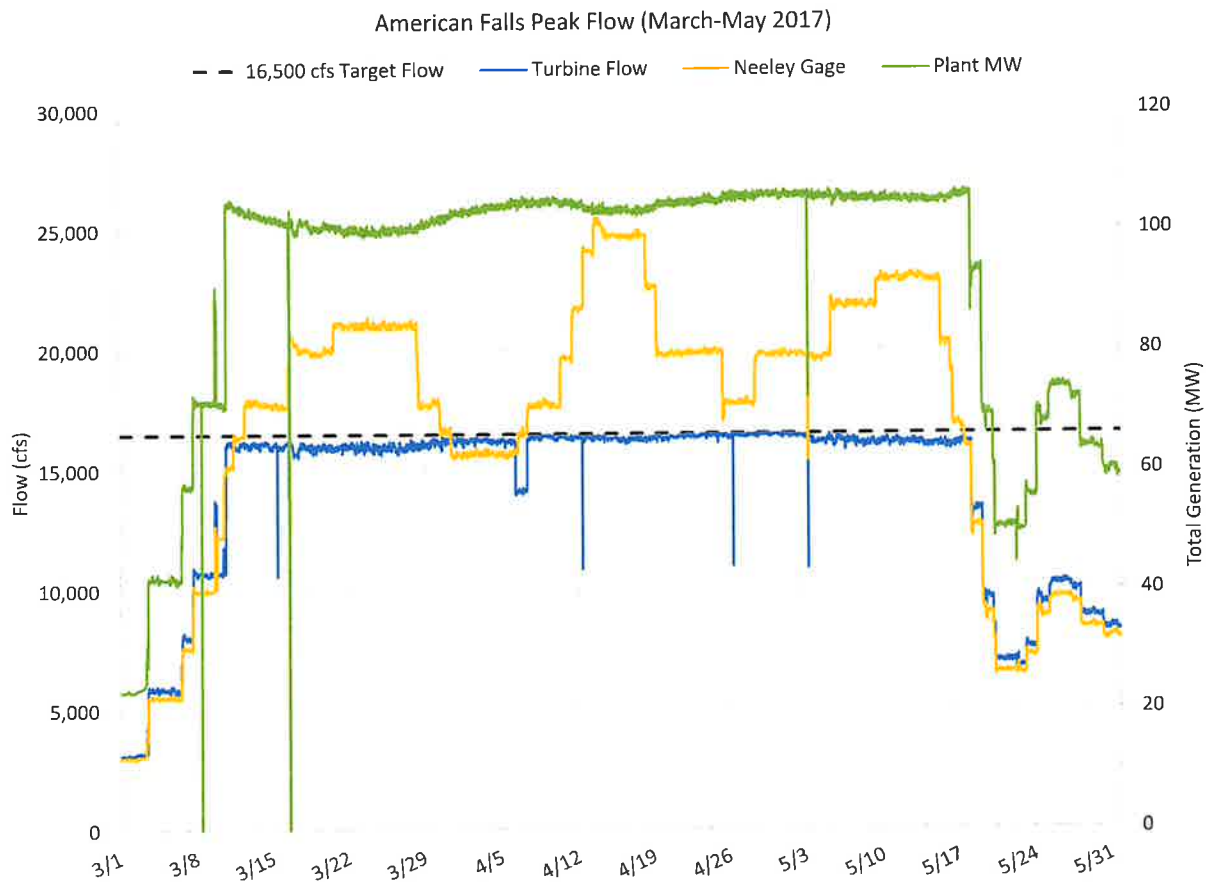


Figure 1: Turbine flow, USGS Gage 13077000 flow and generation at the American Falls Hydropower plant for March through May of 2017.

Figure 2 shows a data set for a 2-week period at the end of April 2017 to the first week of May 2017. The data is from a period when American Falls Reservoir was near maximum reservoir elevation and total outflows, as measured at the USGS Neeley gage were not excessive and impacting tailrace water elevations. These conditions facilitate maximum diversions and generation at the plant. Through this two-week period turbine flows are at or near 16,500 cfs and generation output averaged 105 MW.

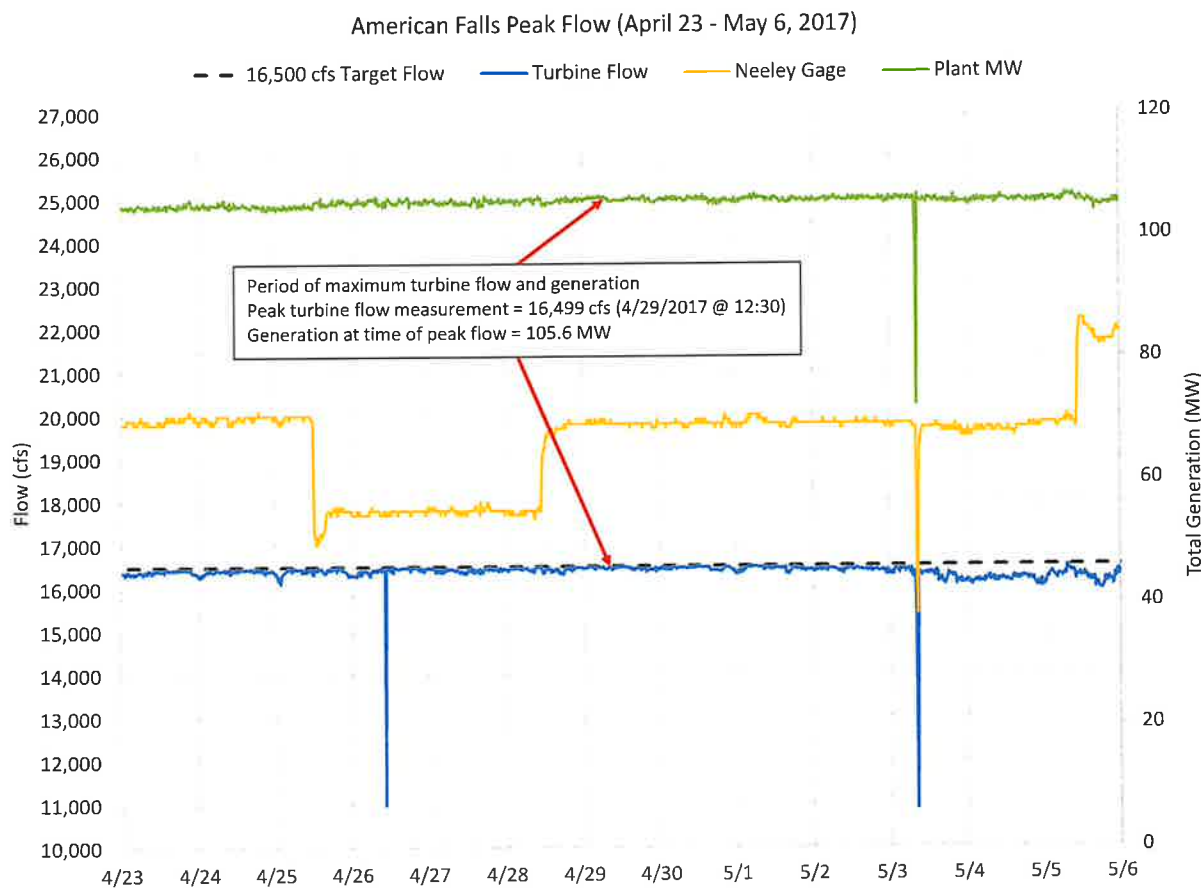


Figure 2: Turbine flow, USGS Gage 13077000 flow and generation at the American Falls Hydropower plant for April 23, 2017, through May 6, 2017.

Conclusions

The data clearly shows maximum flows at or near 16,500 cfs consistently over a nearly 20-year period. The fifteen-minute data of calculated turbine flows shows a reasonably good agreement with the USGS gage 13077000. This data provides support that Idaho Power has put 7,500 cfs of water right permit 1-7128 to appropriate beneficial uses in recent history.

The full data sets for 15-minute flow data at the American Falls Hydropower Plant are available upon request.

Governor Brad Little

Director Gary Spackman

May 4, 2022

IDAHO POWER COMPANY
PO BOX 70
BOISE ID 83707-0070

PROOF ACKNOWLEDGEMENT LETTER

RE: Permit No. 1-7128

Dear Permit Holder:

The Department acknowledges receipt of the proof of beneficial use form submitted for the above referenced permit. The next step in the process of developing a water right is for the Department to conduct a field examination to determine and confirm the use being made of the water.

Please be advised that Idaho Code § 42-248, requires you or the owner of this water right to maintain current ownership and address records on file with the Department. Forms to file a change of ownership of a water right and/or a change in the address of the water right owner are available from any Department office or at the Department's website at www.idwr.idaho.gov.

If you have any questions concerning the field examination, please contact the Southern Region Office of the Department located in Twin Falls at (208) 736-3033.

Sincerely,



Debbi Judd
Technical Records Specialist

Enclosures

c: JOHN K SIMPSON – *via email*



September 30, 2020

Idaho Department of Water Resources
322 E Front Street, Ste 648
Boise, Idaho 83720-0098

Subject: Idaho Power Company Representation

Kresta Davis, as representative of Idaho Power in matters associated with the company's water rights and water rentals and leases, has authorization to sign forms, applications and requests on behalf of the company. Please let me know if you have any questions or concerns

Sincerely,

Ryan Adelman

Vice President of Power Supply