AVISTA CORPORATION

UPPER SPOKANE RIVER

RAINBOW TROUT

SPAWNING AND FRY EMERGENCE

PROTECTION PLAN

2010 ANNUAL SUMMARY

Spokane River Hydroelectric Project
FERC Project No. 2545

Prepared By:
Avista Corporation

June 8, 2010

Introduction and Background

On June 18, 2009, the Federal Energy Regulatory Commission (FERC) issued a new 50-year license for Avista Corporation's Spokane River Project, FERC Project No. 2545-091. The new FERC license (license) became effective on June 1, 2009 and includes operation of the Post Falls Hydroelectric Development (HED) in Idaho. Ordering Paragraph D of the license incorporated the Idaho Department of Environmental Quality's (IDEQ) Certification Conditions under Section 401 of the Federal Clean Water Act. The Conditions can be found in Appendix A of the license. **This summary is to comply with FERC license condition identified in Appendix A, section V of the State of Idaho Section 401 Water Quality Certification for the Post Falls Hydroelectric Development (Idaho WQC).** The Idaho WQC states in section V that Avista will comply with the Post Falls HED discharge levels as outlined in the *Upper Spokane River Rainbow Trout Spawning and Fry Emergence Protection Plan* (Plan) (Avista 2004) or as this Plan may be revised through consultation with cooperating resource agencies and subject to FERC approval. This summary provides the annual results of the spawning period flow, the forecasted stream flows, the target Post Falls HED discharge for effective incubation flow, agency communication, and any other relevant information or circumstances.

Annual Summary

Section 4 of the Plan requires Avista to summarize the annual results of the spawning period flow, the forecasted streamflows, the targeted Post Falls HED discharge for effective incubation flow, and any pertinent and relevant information or other circumstances by September 30 of each year. The mean daily discharge from the Post Falls HED for the period of April 1 – June 7 recorded at the USGS gage near Post Falls (gage number 12419000) is available in Attachment 1. Summary information for 2010 includes:

- The target Post Falls HED discharge[1] was **maintained** in 2010. The lowest daily mean discharge recorded at the USGS gage near Post Falls during the target period was 5,430 cubic feet per second (cfs) on April 15, 2010.
- Target Post Falls HED discharge for April 16 – June 7[2]: **2,837 cfs.**

[1] The lowest daily mean flow recorded at the USGS gage near Post Fall during the target period.
[2] Determined from Table 1 of the Protection Plan (Avista 2004).

- Spawning Period Flow for April 1 – April 15[3]: 6,590 cfs.
- Forecasted Stream Flows for April – July[4]: 42% of average.
  (Forecast updated to 43% when viewed on June 8, 2010.)
- Effective incubation flow was **maximized** above the established target in 2010.

Previous Two Years Target Discharge Results

According to Section 3.2 of the Plan, if the target Post Falls HED discharge for effective incubation flow that preserves 50 percent of the combined index spawning sites wetted through June 7 is not achieved during any two consecutive years, then the following year will be prioritized to preserve 70 percent or greater of the combined index spawning site wetted through June 7 of that year. Effective incubation flow was maximized above the established target in both 2008 and 2009 so no prioritization of flow was required in 2010.

Agency Consultation

Agency consultation is shown in Appendix A. Section 3 of the Plan requires Avista to communicate the spawning period flow and the forecasted streamflows for the Spokane River near Post Falls to the Washington Department of Fish and Wildlife (WDFW) and Idaho Department of Fish and Game (IDFG) by April 30 each year. The spawning period flow, Post Falls target discharge flow, and the Idaho stream flow forecast was communicated via email to IDFG and WDFW on May 12, 2010. The delay in communicating this information was caused by an internal error at Avista. This summary will be distributed to the WDFW and IDFG and retained at Avista in accordance with the requirements of Section 3 of the plan.

Comments

Section 3.2 of the Plan describes actions that will be taken if the target Post Falls HED discharge for effective incubation flow that preserves 50 percent of the combined index spawning sites wetted through June 7 will not be maintained. No alternative target flow or prioritized incubation flow was required in 2010. No other notable circumstances occurred in 2010.

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[3] The highest five-day running average of the mean daily discharge at the USGS gage near Post Falls.
[4] Determined from the April 1, 2010 NRCS report (web site), Idaho State Basin Outlook.

References

Avista. 2004. Upper Spokane River Rainbow Trout Spawning and Fry Emergence Protection Plan. Avista Corporation. Spokane, WA.

FERC. 2009. Order Issuing New License and Approving Annual Charges For Use Of Reservation Lands. FERC Project No. 2545-091. Federal Energy Regulatory Commission, Washington DC.

NRCS [by year]. Idaho Water Supply Outlook Report April 1, [by year]. Natural Resources Conservation Service Snow Surveys, Boise, Idaho. Web Site: http://www.wcc.nrcs.usda.gov/cgibin/bor2.pl?state=id&year=2010&month=4&format=text

USGS Daily Water Data for USGS 124190000 Spokane River NR Post Falls ID. U.S. Geological Survey web site: http://waterdata.usgs.gov/nwis/dv/?site_no=12419000&agency_cd=USGS&referred_module=sw

Appendix A
Avista, IDFG, and WDFW Correspondence Regarding the Plan

From:	Vore, Tim
Sent:	Wednesday, May 12, 2010 1:11 PM
To:	'Robison, Douglas L (DFW)'; Jim Fredricks
Cc:	Fitzhugh, Speed (Elvin); Hirschberger, Cherie
Subject:	RE: Spokane R trout incubation flows
Attachments:	USGS Real-Time Water Data for USGS 12419000 SPOKANE RIVER NR POST FALLS ID.HTM; PANHANDLE REGION as of April 1 2010.doc

Hello Doug and Jim-
As part of implementing the new license Appendix A, V. we need to comply with the Post Falls Project discharge levels as outlined in the *Upper Spokane River Rainbow Trout Spawning and Fry Emergence Protection Plan.*

We followed the steps outlined in the plan to determine the target discharge for this year. This year the target Post Falls discharge to maintain through June 7th is **2,837 cfs.** We expect to maintain the target Post Falls discharge this year.

There are three steps to determine a target discharge to maintain from April 16 through June 7th of each year.

Step 1. Determine a spawning period flow for April 1 – April 15. This is the highest 5-day running average daily Q from the USGS gage near Post Falls. The 2010 spawning period flow was 6,590 cfs.

Step 2. Determine the forecasted stream flows for April-July. The Idaho 2010 April 1 forecast for the Spokane River near Post Falls is 42% of normal.

Step 3. Take the above information and use Table 1 in the Plan to determine the target discharge for Post Falls.

I apologize for not forwarding this information to you earlier, it was an oversight on my part, and I'll make sure to get it to you in April from now on. Hopefully it did not create any problems for you. If you have any question or want to meet I can certainly set up a time.

Have a great day.
Tim

Attachment 1
USGS Daily Mean Discharge near Post Falls, ID
(http://waterdata.usgs.gov/nwis/dv/?site_no=12419000&agency_cd=USGS&referred_module=sw)

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# ---------------------------------- WARNING ----------------------------------
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# The data you have obtained from this automated U.S. Geological Survey
database
# have not received Director's approval and as such are provisional and
subject to
# revision.  The data are released on the condition that neither the USGS nor
the
# United States Government may be held liable for any damages resulting from
its use.
# Additional info: http://waterdata.usgs.gov/nwis/help/?provisional
#
# File-format description:
http://waterdata.usgs.gov/nwis/?tab_delimited_format_info
# Automated-retrieval info:
http://waterdata.usgs.gov/nwis/?automated_retrieval_info
#
# Contact:   gs-w_support_nwisweb@usgs.gov
# retrieved: 2010-06-08 15:21:32 EDT
#
# Data for the following site(s) are contained in this file
#    USGS 12419000 SPOKANE RIVER NR POST FALLS ID
# ---------------------------------------------------------------------------
-------
#
# Data provided for site 12419000
#    DD parameter statistic   Description
#    01   00060     00003     Discharge, cubic feet per second (Mean)
#    05   00010     00001     Temperature, water, degrees Celsius (Maximum)
#    05   00010     00002     Temperature, water, degrees Celsius (Minimum)
#    05   00010     00003     Temperature, water, degrees Celsius (Mean)
#
# Data-value qualification codes included in this output:
#     P  Provisional data subject to revision.
#
agency_cd      site_no datetime        01_00060_00003 01_00060_00003_cd
       05_00010_00001 05_00010_00001_cd     05_00010_00002
       05_00010_00002_cd     05_00010_00003 05_00010_00003_cd
5s     15s     16d     14n     10s     14n     10s     14n     10s     14n
       10s
USGS   12419000        2010-04-01     5880    P
USGS   12419000        2010-04-02     6410    P
USGS   12419000        2010-04-03     6700    P
USGS   12419000        2010-04-04     6720    P
USGS   12419000        2010-04-05     6590    P
USGS   12419000        2010-04-06     6500    P
USGS   12419000        2010-04-07     6440    P
USGS   12419000        2010-04-08     6160    P
USGS   12419000        2010-04-09     5900    P
USGS   12419000        2010-04-10     5840    P
USGS   12419000        2010-04-11     5690    P
USGS   12419000        2010-04-12     5540    P
USGS   12419000        2010-04-13     5460    P
USGS   12419000        2010-04-14     5460    P
USGS   12419000        2010-04-15     5430    P
USGS   12419000        2010-04-16     5430    P
USGS   12419000        2010-04-17     5450    P
USGS   12419000        2010-04-18     5480    P
```

USGS	12419000	2010-04-19	5740	P
USGS	12419000	2010-04-20	6030	P
USGS	12419000	2010-04-21	6200	P
USGS	12419000	2010-04-22	6370	P
USGS	12419000	2010-04-23	6550	P
USGS	12419000	2010-04-24	6690	P
USGS	12419000	2010-04-25	6760	P
USGS	12419000	2010-04-26	6580	P
USGS	12419000	2010-04-27	6510	P
USGS	12419000	2010-04-28	6570	P
USGS	12419000	2010-04-29	6610	P
USGS	12419000	2010-04-30	6670	P
USGS	12419000	2010-05-01	6730	P
USGS	12419000	2010-05-02	9670	P
USGS	12419000	2010-05-03	11500	P
USGS	12419000	2010-05-04	15400	P
USGS	12419000	2010-05-05	16400	P
USGS	12419000	2010-05-06	16400	P
USGS	12419000	2010-05-07	15300	P
USGS	12419000	2010-05-08	11400	P
USGS	12419000	2010-05-09	10500	P
USGS	12419000	2010-05-10	9580	P
USGS	12419000	2010-05-11	8610	P
USGS	12419000	2010-05-12	8610	P
USGS	12419000	2010-05-13	8650	P
USGS	12419000	2010-05-14	8520	P
USGS	12419000	2010-05-15	8130	P
USGS	12419000	2010-05-16	8240	P
USGS	12419000	2010-05-17	10100	P
USGS	12419000	2010-05-18	12600	P
USGS	12419000	2010-05-19	14000	P
USGS	12419000	2010-05-20	14500	P
USGS	12419000	2010-05-21	13300	P
USGS	12419000	2010-05-22	9420	P
USGS	12419000	2010-05-23	8630	P
USGS	12419000	2010-05-24	6560	P
USGS	12419000	2010-05-25	6470	P
USGS	12419000	2010-05-26	6470	P
USGS	12419000	2010-05-27	6570	P
USGS	12419000	2010-05-28	6680	P
USGS	12419000	2010-05-29	6550	P
USGS	12419000	2010-05-30	7360	P
USGS	12419000	2010-05-31	8370	P
USGS	12419000	2010-06-01	10500	P
USGS	12419000	2010-06-02	12100	P
USGS	12419000	2010-06-03	15400	P
USGS	12419000	2010-06-04	16900	P
USGS	12419000	2010-06-05	16900	P
USGS	12419000	2010-06-06	17000	P
USGS	12419000	2010-06-07	17100	P