



Your Northwest renewables utility

December 19, 2016

VIA ELECTRONIC FILING

Kimberly D. Bose, Secretary
Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission (FERC)
888 First Street NE
Washington, DC 20426

**Re: Jackson Hydro Project, FERC No. 2157
Post-Construction Modification of the Instream Flow Schedule for Reach 3 of the
Sultan River - Balance of Water Year 2016-2017**

Dear Secretary Bose:

Public Utility District No. 1 of Snohomish County (the District) will be further modifying the instream flow schedule for the Jackson Hydroelectric Project (Project) within Reach 3 (River Mile [RM] 9.7 to 16.1) of the Sultan River; this modification applies to the remainder of the 2016-2017 Water Year, specifically January through June 2017, see Attachment 1: Water Year 2016-2017, Post Construction Modification of Instream Flow Schedule. This modification is consistent with the requirements identified under "A-LA 9: Minimum Flows" in Appendix G of the Project's License.

The purpose of this change to the previously filed schedule (letter to FERC dated May 20, 2016), is to reallocate the remaining balance of the annual water budget due to the extended duration of construction for the Diversion Dam Volitional Passage project. Reduced flows during the first six months of the Water Year allowed for the project to be successfully completed. Now, with implementation of fish passage at the City of Everett's Diversion Dam at RM 9.7 in place and with the potential pending re-introduction of anadromous fish species (salmon and steelhead) to Reach 3, the emphasis of flow management will shift from meeting the physical habitat and water quality needs of the resident rainbow trout populations towards meeting those of fall (Chinook and coho salmon) and spring (steelhead trout) spawning populations. In contrast to the default flow scheduled identified in A-LA 9, this change will involve re-shaping the flow release schedule but result in no net change to the annual flow budget of 20,362 acre-feet. Reshaping will balance physical habitat and temperature requirements of the evolving fish community. For the balance of the 2016-2017 Water Year, flow reallocation will focus on species that spawn during the spring, most notably, steelhead trout.

The District consulted with the ARC regarding the benefits of the modified flow schedule where it was agreed to add a caveat of if Diversion Dam Volitional Passage construction necessitated instream flows of 20 cfs for a longer period, then the remaining water in the budget would be

reallocated (see Attachment 2: Consultation Documentation). Therefore, the proposed instream flow schedule has been updated to reflect this caveat. As such, the District will implement this modified flow schedule for Reach 3 effective for Water Year 2016-2017.

Please contact Keith Binkley, Natural Resources Manager at (425) 783-1769, if you should have any questions regarding this filing.

Sincerely,

/s/ Tom DeBoer

Tom DeBoer
Assistant General Manager of Generation, Power, Rates and Transmission Management
TADeBoer@snopud.com
(425) 783-1825

cc: Keith Binkley, District
ARC

**ATTACHMENT 1:
Water Year 2016-2017 Post Construction Modification of
Instream Flow Schedule for Reach 3**

Timeframe	Release Flow (cfs)
July 1*-15	20
July 16-31	20
August 1-15	20
August 16-31	20
September 1-14	20
September 15-21	20
September 22-30	20
October 1-15	20
October 16-31	20
November 1-15	20
November 16-30	20
December 1-15	20
December 16-31	20
January 1-15	15
January 16-31	15
February 1-14	30
February 15-28	35
March 1-15	45
March 16-31	50
April 1-15	50
April 16-30	40
May 1-15	45
May 16-31	35
June 1-15	45
June 16-30	35

* July 1 begins the water year.

ATTACHMENT 2:
Consultation Documentation

Presler, Dawn

From: Binkley, Keith
Sent: Tuesday, December 13, 2016 10:40 AM
To: Presler, Dawn
Subject: FW: Reach 3 flows for balance of Water Year 2016

-----Original Message-----

From: Bryden, Andy -FS [mailto:abryden@fs.fed.us]
Sent: Tuesday, December 13, 2016 9:48 AM
To: Binkley, Keith <KMBinkley@SNOPUD.com>
Subject: RE: Reach 3 flows for balance of Water Year 2016

Go forth and concur with the adjusted flow balances.

Andy Bryden
South Zone Hydrologist
Forest Service
Mt. Baker-Snoqualmie National Forest
p: 360-677-2214
f: 360-677-2450
abryden@fs.fed.us
74920 NE Stevens Pass Highway
Skykomish, WA 98288
www.fs.fed.us

Caring for the land and serving people

-----Original Message-----

From: Binkley, Keith [mailto:KMBinkley@SNOPUD.com]
Sent: Tuesday, December 13, 2016 9:45 AM
To: 'Anne Savery' <asavery@tulaliptribes-nsn.gov>; 'Tim_Romanski@fws.gov' (Tim_Romanski@fws.gov) <Tim_Romanski@fws.gov>; 'Pacheco, James (ECY)' <JPAC461@ecy.wa.gov>; 'Applegate, Brock A (DFW)' <Brock.Applegate@dfw.wa.gov>; 'Rustay, Michael' <mike.rustay@co.snohomish.wa.us>; Bryden, Andy -FS <abryden@fs.fed.us>; 'Mick Matheson' <mick.matheson@ci.sultan.wa.us>; okeefe@americanwhitewater.org; 'Jim Miller (JMiller@everettwa.gov)' <JMiller@everettwa.gov>; DJPRESLER@SNOPUD.COM
Subject: RE: Reach 3 flows for balance of Water Year 2016

Thanks Jim M., Anne, Mike, and Jim P. for your feedback. I just got off the phone with Jim P. and he requested a slight modification, shifting 5 cfs for the month of January to June. That change is reflected in the attached Excel file. Please let me know if there are any objections or concerns. If not, we will submit this on Monday December 19th.

Thanks again,

Keith

Presler, Dawn

From: Romanski, Tim <tim_romanski@fws.gov>
Sent: Tuesday, December 13, 2016 9:50 AM
To: Binkley, Keith
Cc: Anne Savery; Pacheco, James (ECY); Applegate, Brock A (DFW); Rustay, Michael; Andrew Bryden (abryden@fs.fed.us); Mick Matheson; Thomas O'Keefe; Jim Miller (JMiller@everettwa.gov); Presler, Dawn
Subject: Re: Reach 3 flows for balance of Water Year 2016

I also approve with modification.

Tim Romanski
Branch Manager, Conservation and Hydropower Planning
U.S. Fish and Wildlife Service
Washington Fish and Wildlife Office
510 Desmond Drive SE, Lacey, WA 98503
360.753.5823 (phone)

On Tue, Dec 13, 2016 at 9:45 AM, Binkley, Keith <KMBinkley@snopud.com> wrote:

Thanks Jim M., Anne, Mike, and Jim P. for your feedback. I just got off the phone with Jim P. and he requested a slight modification, shifting 5 cfs for the month of January to June. That change is reflected in the attached Excel file. Please let me know if there are any objections or concerns. If not, we will submit this on Monday December 19th.

Thanks again,

Keith

-----Original Message-----

From: Anne Savery [mailto:asavery@tulaliptribes-nsn.gov]

Sent: Monday, December 12, 2016 1:26 PM

To: Binkley, Keith <KMBinkley@SNOPUD.com>; 'Tim Romanski@fws.gov' (<Tim_Romanski@fws.gov>); 'Pacheco, James (ECY)' (<JPAC461@ecy.wa.gov>); 'Applegate, Brock A (DFW)' (<Brock.Applegate@dfw.wa.gov>); 'Rustay, Michael' (<mike.rustay@co.snohomish.wa.us>); 'Andrew Bryden (abryden@fs.fed.us)' (<abryden@fs.fed.us>); 'Mick Matheson' (<mick.matheson@ci.sultan.wa.us>); 'Thomas O'Keefe' (<okeefe@americanwhitewater.org>); 'Jim Miller' (<JMiller@everettwa.gov>); Presler, Dawn <DJPresler@SNOPUD.com>

Subject: RE: Reach 3 flows for balance of Water Year 2016

CAUTION: THIS EMAIL IS FROM AN EXTERNAL SENDER.

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Keith

Presler, Dawn

From: mick.matheson@ci.sultan.wa.us
Sent: Tuesday, December 13, 2016 9:49 AM
To: Binkley, Keith; 'Anne Savery'; Tim_Romanski@fws.gov; 'Pacheco, James (ECY)'; 'Applegate, Brock A (DFW)'; 'Rustay, Michael'; 'Andrew Bryden'; 'Thomas O'Keefe'; 'Jim Miller'; Presler, Dawn
Subject: RE: Reach 3 flows for balance of Water Year 2016

Keith,

I have no concerns.

Thanks,

Mick Matheson, P.E.
City of Sultan
Director of Public Works/City Engineer
Tel: (360) 793-2231
Fax: (360) 793-3344
Direct: (360) 793-2262
Cell: (425) 583-6528
mick.matheson@ci.sultan.wa.us

NOTICE: All emails and attachments sent to and from the City of Sultan are public records and may be subject to disclosure pursuant to the Public Records Act (RCW 42.56)

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Subject: RE: Reach 3 flows for balance of Water Year 2016

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Presler, Dawn

From: Binkley, Keith
Sent: Tuesday, December 13, 2016 10:42 AM
To: Presler, Dawn
Subject: FW: Reach 3 flows for balance of Water Year 2016

From: Rustay, Michael [mailto:mike.rustay@co.snohomish.wa.us]
Sent: Monday, December 12, 2016 10:35 AM
To: Binkley, Keith <KMBinkley@SNOPUD.com>
Subject: RE: Reach 3 flows for balance of Water Year 2016

CAUTION: THIS EMAIL IS FROM AN EXTERNAL SENDER.
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Hi Keith,

The hydrograph looks reasonable to me.

Thanks much,
Mike

Mike Rustay | *Senior Habitat Specialist*
[Snohomish County Public Works](#) | Surface Water Management
3000 Rockefeller Ave., M/S 607 | Everett, WA 98201
O: 425-388-3464 X4666 | M: 425-238-6041 | mike.rustay@snoco.org

NOTICE: All emails and attachments sent to and from Snohomish County are public records and may be subject to disclosure pursuant to the Public Records Act (RCW 42.56).

From: Binkley, Keith [mailto:KMBinkley@SNOPUD.com]
Sent: Monday, December 12, 2016 9:08 AM
To: "Tim_Romanski@fws.gov" (Tim_Romanski@fws.gov) <Tim_Romanski@fws.gov>; 'Pacheco, James (ECY)' <JPAC461@ecy.wa.gov>; 'Anne Savery' (asavery@tulaliptribes-nsn.gov) <asavery@tulaliptribes-nsn.gov>; 'Applegate, Brock A (DFW)' <Brock.Applegate@dfw.wa.gov>; Rustay, Michael <mike.rustay@co.snohomish.wa.us>; 'Andrew Bryden' (abryden@fs.fed.us) <abryden@fs.fed.us>; 'Mick Matheson' <mick.matheson@ci.sultan.wa.us>; 'Thomas O'Keefe' <okeefe@americanwhitewater.org>; 'Jim Miller' (JMiller@everettwa.gov) <JMiller@everettwa.gov>; Presler, Dawn <DJPresler@SNOPUD.com>
Subject: RE: Reach 3 flows for balance of Water Year 2016

ARC members – Attached is what I propose to submit as the plan for reallocation of Reach 3 releases for the balance of this Water Year. This is what the hydrograph will look like assuming median accretion values.

Presler, Dawn

From: Pacheco, James (ECY) <JPAC461@ecy.wa.gov>
Sent: Tuesday, December 13, 2016 10:11 AM
To: Binkley, Keith; 'Anne Savery'; 'Tim_Romanski@fws.gov' (Tim_Romanski@fws.gov); Applegate, Brock A (DFW); 'Rustay, Michael'; 'Andrew Bryden (abryden@fs.fed.us)'; 'Mick Matheson'; 'Thomas O'Keefe'; 'Jim Miller (JMiller@everettwa.gov)'; Presler, Dawn
Subject: RE: Reach 3 flows for balance of Water Year 2016

I guess since the latest change was my idea, I have to approve.
Jim (the troublemaker)

-----Original Message-----

From: Binkley, Keith [mailto:KMBinkley@SNOPUD.com]
Sent: Tuesday, December 13, 2016 9:45 AM
To: 'Anne Savery' <asavery@tulaliptribes-nsn.gov>; 'Tim_Romanski@fws.gov' (Tim_Romanski@fws.gov) <Tim_Romanski@fws.gov>; Pacheco, James (ECY) <JPAC461@ECY.WA.GOV>; Applegate, Brock A (DFW) <Brock.Applegate@dfw.wa.gov>; 'Rustay, Michael' <mike.rustay@co.snohomish.wa.us>; 'Andrew Bryden (abryden@fs.fed.us)' <abryden@fs.fed.us>; 'Mick Matheson' <mick.matheson@ci.sultan.wa.us>; 'Thomas O'Keefe' <okeefe@americanwhitewater.org>; 'Jim Miller (JMiller@everettwa.gov)' <JMiller@everettwa.gov>; Presler, Dawn <DJPresler@SNOPUD.com>
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Thanks again,

Keith

-----Original Message-----

From: Anne Savery [mailto:asavery@tulaliptribes-nsn.gov]
Sent: Monday, December 12, 2016 1:26 PM
To: Binkley, Keith <KMBinkley@SNOPUD.com>; 'Tim_Romanski@fws.gov' (Tim_Romanski@fws.gov) <Tim_Romanski@fws.gov>; 'Pacheco, James (ECY)' <JPAC461@ecy.wa.gov>; 'Applegate, Brock A (DFW)' <Brock.Applegate@dfw.wa.gov>; 'Rustay, Michael' <mike.rustay@co.snohomish.wa.us>; 'Andrew Bryden (abryden@fs.fed.us)' <abryden@fs.fed.us>; 'Mick Matheson' <mick.matheson@ci.sultan.wa.us>; 'Thomas O'Keefe' <okeefe@americanwhitewater.org>; 'Jim Miller (JMiller@everettwa.gov)' <JMiller@everettwa.gov>; Presler, Dawn <DJPresler@SNOPUD.com>
Subject: RE: Reach 3 flows for balance of Water Year 2016

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Keith

I approve of the flows as allocated. Thanks for the information.

Presler, Dawn

From: Applegate, Brock A (DFW) <Brock.Applegate@dfw.wa.gov>
Sent: Tuesday, December 13, 2016 10:17 AM
To: Anne Savery; Pacheco, James (ECY); Rustay, Michael; Andrew Bryden (abryden@fs.fed.us); Mick Matheson; Thomas O'Keefe; Jim Miller (JMiller@everettwa.gov); Presler, Dawn
Cc: Whitney, Jennifer L (DFW); Eleazer, Edward J (DFW)
Subject: FW: Reach 3 flows for balance of Water Year 2016 -- Jackson Hydro (Sultan River)
Attachments: PROPOSED REALLOCATION REACH 3 WY 2016.xlsx

Hi Keith, I am good with your proposed flows in Reach 3 as long as we have enough water to incubate eggs from any possible redds from resident trout and any spring anadromous(?) spawners. As long as we have enough water to protect redds, I think your logic makes sense.

Thanks for putting this flow proposal together.

Sincerely, Brock

Brock Applegate
Renewable Energy/Major Projects Mitigation Biologist Washington Department of Fish and Wildlife P.O. Box 1100
111 Sherman St. (physical address)
La Conner, WA 98257-9612

(360) 466-4345 x244 (office)

(360) 789-0578 (cell)

(360) 466-0515 (fax)

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From: Binkley, Keith [mailto:KMBinkley@SNOPUD.com]

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To: 'Anne Savery'; 'Tim_Romanski@fws.gov' (Tim_Romanski@fws.gov); Pacheco, James (ECY); Applegate, Brock A (DFW); 'Rustay, Michael'; 'Andrew Bryden (abryden@fs.fed.us)'; 'Mick Matheson'; 'Thomas O'Keefe'; 'Jim Miller (JMiller@everettwa.gov)'; Presler, Dawn

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Thanks again,

Keith

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Sent: Monday, December 12, 2016 1:26 PM

Presler, Dawn

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Subject: RE: Reach 3 flows for balance of Water Year 2016

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Keith

I approve of the flows as allocated. Thanks for the information.

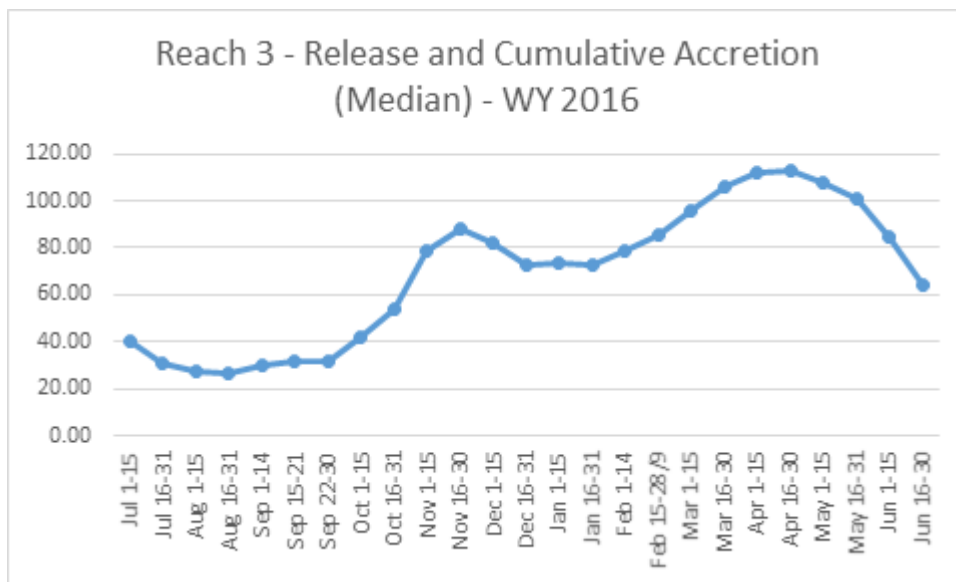
Anne Savery
Hydrologist
503-984-0667

From: Binkley, Keith [KMBinkley@SNOPUD.com]
Sent: Monday, December 12, 2016 9:07 AM
To: 'Tim_Romanski@fws.gov' (Tim_Romanski@fws.gov); 'Pacheco, James (ECY)'; Anne Savery; 'Applegate, Brock A (DFW)'; 'Rustay, Michael'; 'Andrew Bryden (abryden@fs.fed.us)'; 'Mick Matheson'; 'Thomas O'Keefe'; 'Jim Miller (JMiller@everettwa.gov)'; Presler, Dawn
Subject: RE: Reach 3 flows for balance of Water Year 2016

Presler, Dawn

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Subject: RE: Reach 3 flows for balance of Water Year 2016
Attachments: WY2016-17 Reach 3 Flows Updated after DDVP - proposed reallocation.docx

ARC members – Attached is what I propose to submit as the plan for reallocation of Reach 3 releases for the balance of this Water Year. This is what the hydrograph will look like assuming median accretion values.



Thanks for your consideration,

Keith

From: Binkley, Keith
Sent: Wednesday, November 30, 2016 4:01 PM
To: 'Tim_Romanski@fws.gov' (Tim_Romanski@fws.gov) <Tim_Romanski@fws.gov>; Pacheco, James (ECY) <JPAC461@ecy.wa.gov>; Anne Savery (asavery@tulaliptribes-nsn.gov) <asavery@tulaliptribes-nsn.gov>; 'Applegate, Brock A (DFW)' <Brock.Applegate@dfw.wa.gov>; 'Rustay, Michael' <mike.rustay@co.snohomish.wa.us>; Andrew Bryden (abryden@fs.fed.us) <abryden@fs.fed.us>; 'Mick Matheson' <mick.matheson@ci.sultan.wa.us>; 'Thomas O'Keefe' <okeefe@americanwhitewater.org>; Jim Miller (JMiller@everettwa.gov) <JMiller@everettwa.gov>; Presler, Dawn <DJPresler@SNOPUD.com>
Subject: Reach 3 flows for balance of Water Year 2016

ARC members – below is an email that I sent last March of the topic of minimum flows in Reach 3 and shaping of the flow budget. Now that construction is complete at the Diversion Dam and anadromous fish are accessing Reach 3, we can return to our “normal” non-construction mode but we need to look at developing the flow regime for the balance of WY16. The attached files should help craft that regime starting January 1 and running through June 30. I highlighted WY ANAD SPR file because I believe that to make most sense. **Factors that play into it are: 1) habitat, 2) accretion, and 3)**

temperature, including temperature control under Phase 1 of the WTC plan. I am requesting an expedited review of the attached materials as I would like the release schedule developed by December 16. I am available to discuss as necessary.

Thank you,

Keith

From: Binkley, Keith

Sent: Thursday, March 03, 2016 10:13 AM

To: 'Tim_Romanski@fws.gov' (Tim_Romanski@fws.gov) <Tim_Romanski@fws.gov>; Pacheco, James (ECY) <JPAC461@ecy.wa.gov>; Anne Savery (asavery@tulaliptribes-nsn.gov) <asavery@tulaliptribes-nsn.gov>; 'Applegate, Brock A (DFW)' <Brock.Applegate@dfw.wa.gov>; 'Rustay, Michael' <mike.rustay@co.snohomish.wa.us>; Andrew Bryden (abryden@fs.fed.us) <abryden@fs.fed.us>; 'Mick Matheson' <mick.matheson@ci.sultan.wa.us>; 'Thomas O'Keefe' <okeefe@americanwhitewater.org>; Jim Miller (JMiller@everettwa.gov) <JMiller@everettwa.gov>; Presler, Dawn <DJPresler@SNOPUD.com>

Subject: Reach 3 flows for Water Year 2016

ARC members – this is the time of year when we discuss and subsequently establish flow releases for Reach 3 for the upcoming water year. Since license issuance, we have shaped the annual release of the 20,362 acre feet budget in a way that integrates accretion and balances physical habitat for the resident rainbow trout fishery with water quality (temperature). For the coming water year (starting July 1), we have a couple items that warrant reshaping of the monthly releases. First off, we will need to have minimum flows as low as possible during construction of the fish passage at the Diversion Dam (DDVP). We will be installing coffer dams to isolate the work site and are requesting that releases be no more than 20 cfs during the period of in-water work (June 15 to October 1). For reference, 20 cfs was the year-round minimum instream flow release during the past license. Jim P. and Anne S. have already indicated their support for this adjustment. Secondly, with passage complete, we will want to re-shape the flow regime preferentially for either: 1) fall spawners, 2) spring spawners, or 3) both. For what it's worth: the post passage default flow regime in A-LA 9 places proportionately more emphasis on fall releases simply because accretion tends to be greater in the spring. One option would be to mimic that for the portion of the water year outside the construction season. We also have the latitude to adjust the release schedule, as outlined in A-LA 9.

Attached is an Excel file with several scenarios for how we might choose to manage releases for Water Year 2016: 1) the current, 2) the joint spring / fall anadromous spawning, 3) the spring anadromous spawning, and 4) the fall anadromous spawning. I simply adjusted releases, within the budget, to maximize spawning habitat in accordance with Table 4-1 (attached pdf) from the instream flow report. I assumed 20 cfs for the release during the construction season (highlighted in yellow) and used median accretion values. One item to note: at 20 cfs, the rate of longitudinal warming will be greater than at higher flow releases. As such, we will monitor and actively blend releases from the aux line and the cone valve to ensure compliance with state water quality criteria.

For DDVP contracting purposes, I would like to see if we all could get this resolved by April 1. If we can't, the District will still submit a preliminary Flow Report containing a recommended release schedule for the annual water budget for the upcoming water year to the ARC for their review. If we need to, we can discuss and finalize at our quarterly meeting on April 19th. We will then adjust the review schedule, as necessary, to meet our submittal requirements to FERC. I appreciate folks giving this their attention.

Thanks

Keith

Keith Binkley
Manager of Natural Resources

Presler, Dawn

From: Anne Savery <asavery@tulaliptribes-nsn.gov>
Sent: Monday, December 12, 2016 1:26 PM
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Subject: RE: Reach 3 flows for balance of Water Year 2016
Attachments: image001.png

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Keith

I approve of the flows as allocated. Thanks for the information.

Anne Savery
Hydrologist
503-984-0667

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[cid:image001.png@01D25457.361A31E0]

Thanks for your consideration,

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From: Binkley, Keith
Sent: Wednesday, November 30, 2016 4:01 PM
To: 'Tim_Romanski@fws.gov' (Tim_Romanski@fws.gov) <Tim_Romanski@fws.gov>; Pacheco, James (ECY) <JPAC461@ecy.wa.gov>; Anne Savery (asavery@tulaliptribes-nsn.gov) <asavery@tulaliptribes-nsn.gov>; 'Applegate, Brock A (DFW)' <Brock.Applegate@dfw.wa.gov>; 'Rustay, Michael' <mike.rustay@co.snohomish.wa.us>; Andrew Bryden (abryden@fs.fed.us) <abryden@fs.fed.us>; 'Mick Matheson' <mick.matheson@ci.sultan.wa.us>; 'Thomas O'Keefe' <okeefe@americanwhitewater.org>; Jim Miller (JMiller@everettwa.gov) <JMiller@everettwa.gov>; Presler, Dawn <DJPresler@SNOPUD.com>
Subject: Reach 3 flows for balance of Water Year 2016

Presler, Dawn

From: Binkley, Keith
Sent: Wednesday, November 30, 2016 4:01 PM
To: 'Tim_Romanski@fws.gov' (Tim_Romanski@fws.gov); Pacheco, James (ECY); Anne Savery (asavery@tulaliptribes-nsn.gov); 'Applegate, Brock A (DFW)'; 'Rustay, Michael'; Andrew Bryden (abryden@fs.fed.us); 'Mick Matheson'; 'Thomas O'Keefe'; Jim Miller (JMiller@everettwa.gov); Presler, Dawn
Subject: Reach 3 flows for balance of Water Year 2016
Attachments: Reach 3 WUA.pdf; Variable Instream Flow Release Schedule for Reach 3 - revised and updated.xls

ARC members – below is an email that I sent last March of the topic of minimum flows in Reach 3 and shaping of the flow budget. Now that construction is complete at the Diversion Dam and anadromous fish are accessing Reach 3, we can return to our “normal” non-construction mode but we need to look at developing the flow regime for the balance of WY16. The attached files should help craft that regime starting January 1 and running through June 30. I highlighted WY ANAD SPR file because I believe that to make most sense. Factors that play into it are: 1) habitat, 2) accretion, and 3) temperature, including temperature control under Phase 1 of the WTC plan. I am requesting an expedited review of the attached materials as I would like the release schedule developed by December 16. I am available to discuss as necessary.

Thank you,

Keith

From: Binkley, Keith
Sent: Thursday, March 03, 2016 10:13 AM
To: 'Tim_Romanski@fws.gov' (Tim_Romanski@fws.gov) <Tim_Romanski@fws.gov>; Pacheco, James (ECY) <JPAC461@ecy.wa.gov>; Anne Savery (asavery@tulaliptribes-nsn.gov) <asavery@tulaliptribes-nsn.gov>; 'Applegate, Brock A (DFW)' <Brock.Applegate@dfw.wa.gov>; 'Rustay, Michael' <mike.rustay@co.snohomish.wa.us>; Andrew Bryden (abryden@fs.fed.us) <abryden@fs.fed.us>; 'Mick Matheson' <mick.matheson@ci.sultan.wa.us>; 'Thomas O'Keefe' <okeefe@americanwhitewater.org>; Jim Miller (JMiller@everettwa.gov) <JMiller@everettwa.gov>; Presler, Dawn <DJPresler@SNOPUD.com>
Subject: Reach 3 flows for Water Year 2016

ARC members – this is the time of year when we discuss and subsequently establish flow releases for Reach 3 for the upcoming water year. Since license issuance, we have shaped the annual release of the 20,362 acre feet budget in a way that integrates accretion and balances physical habitat for the resident rainbow trout fishery with water quality (temperature). For the coming water year (starting July 1), we have a couple items that warrant reshaping of the monthly releases. First off, we will need to have minimum flows as low as possible during construction of the fish passage at the Diversion Dam (DDVP). We will be installing coffer dams to isolate the work site and are requesting that releases be no more than 20 cfs during the period of in-water work (June 15 to October 1). For reference, 20 cfs was the year-round minimum instream flow release during the past license. Jim P. and Anne S. have already indicated their support for this adjustment. Secondly, with passage complete, we will want to re-shape the flow regime preferentially for either: 1) fall spawners, 2) spring spawners, or 3) both. For what it's worth: the post passage default flow regime in A-LA 9 places proportionately more emphasis on fall releases simply because accretion tends to be greater in the spring. One option would be to mimic that for the portion of the water year outside the construction season. We also have the latitude to adjust the release schedule, as outlined in A-LA 9.

Attached is an Excel file with several scenarios for how we might choose to manage releases for Water Year 2016: 1) the current, 2) the joint spring / fall anadromous spawning, 3) the spring anadromous spawning, and 4) the fall anadromous spawning. I simply adjusted releases, within the budget, to maximize spawning habitat in accordance with Table 4-1 (attached pdf) from the instream flow report. I assumed 20 cfs for the release during the construction season (highlighted in yellow) and used median accretion values. One item to note: at 20 cfs, the rate of longitudinal warming will be greater than at higher flow releases. As such, we will monitor and actively blend releases from the aux line and the cone valve to ensure compliance with state water quality criteria.

For DDVP contracting purposes, I would like to see if we all could get this resolved by April 1. If we can't, the District will still submit a preliminary Flow Report containing a recommended release schedule for the annual water budget for the upcoming water year to the ARC for their review. If we need to, we can discuss and finalize at our quarterly meeting on April 19th. We will then adjust the review schedule, as necessary, to meet our submittal requirements to FERC. I appreciate folks giving this their attention.

Thanks

Keith

Keith Binkley
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425 293 6201 (cell)