



FISH PASSAGE CENTER

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MEMORANDUM

To: Fish Passage Advisory Committee (FPAC)

From: FPC Staff

Date: January 21, 2016

Subject: Action Notes from January 19, 2016, FPAC meeting

On January 19, 2016, FPAC met for its monthly face-to-face meeting at the Fish Passage Center office in Portland, OR. The following people participated in the meeting:

Paul Wagner (FPAC Co-Chair NOAA)	Sheri Sears (Colville Tribe, via phone)
Brandon Chockley (FPC)	Tom Iverson (Yakima Tribe, via phone)
Brent Nichols (Spokane Tribe, via phone)	Tom Skiles (CRITFC)
Charlie Morrill (WDFW)	Tommy Garrison (FPC)
Dave Benner (FPC)	Sebastian Dudek (PSMFC/PTAGIS)
Dave Statler (Nez Perce Tribe)	John Tenney (PSMFC/PTAGIS)
Erick Van Dyke (ODFW)	Pam Kingsbury (BPA)
Erin Cooper (FPC)	Rick Pendergrass (BPA)
Kyle Dittmer (CRITFC, via phone)	Julie Amman (COE)
Margaret Filardo (FPC)	Doug Baus (COE)
Russ Kiefer (IDFG, via phone)	

AGENDA ITEMS

Approval of Notes

- Meeting notes from January 5 and January 12 are pending FPAC approval.

Water Supply/Flood Control

- Dave Benner (FPC) provided a summary of the current reservoir operations and water supply forecasts, snowpack estimates, and ESP runoff volumes.

Weather

- Kyle Dittmer (CRITFC) provided a summary of weather conditions and water year status. See attached.

Chum Operations

- Redd surveys through December 8 show that a BON tailwater elevation of 11.5' would wet most redds deposited by that date.
- COE forecasts indicate that maintaining the 12.2' tailwater elevation and meeting the April 10 Upper Rule Curve elevation at GCL may be in jeopardy. Margaret Filardo (FPC) pointed out that at the last FPAC it was agreed to request that the Action Agencies provide a detailed accounting of Bonneville tailwater elevations and documentation of the reasons why the tailwater elevation might be above the requested amount. The reasons might include Grand Coulee drafting, local flows, precipitation, and Canadian flows relative to the requested Bonneville tailwater elevation. FPAC agreed to request this accounting at the next TMT.

PTAGIS Sort-By-Code Approval

- Sebastian Dudek (PSMFC/PTAGIS) provided an overview of changes to the approval process of sort-by-code requests.
- FPAC members will now review request reports online instead of as a PDF. Links to new request reports will be sent by Paul Wagner or Tom Lorz with each agenda.
- The total number of tags released is now included in the request report.
- The protocol for sort-by-code requests, written by FPAC, is now publically available on the PTAGIS Web site.

Non-Treaty Storage

- Pam Kingsbury (BPA) provided a summary of non-treaty storage and the Short-Term Libby Agreement (see attached). These agreements determine the additional releases from Arrow and how changes to operations are agreed upon.
- Previous questions have been raised as to why Grand Coulee (GCL) continued to be drafted to maintain chum elevations despite the fact that water was being released from Arrow per the Short-Term Libby Agreement. The Short-Term Libby Agreement states that Arrow releases have to be passed through the FCRPS system and that operation has to be "no cost." Taking advantage of Arrow releases to meet chum elevations and reducing outflows at GCL would not be considered "no cost," as outflows from GCL had already been marketed at the level necessary to meet chum elevations, without Arrow releases. Consequently, the water released from Arrow from the two agreements is passed through the hydrosystem to generate power above the non-power requirements, in order to pay Canada as per the agreements.

- Pam also provided clarification that Canadian operations are determined on Thursday, by which time the marketers at BPA have already sold power through Sunday/Monday based on current chum elevation needs.
- There was a discussion of the definition of “no cost” to BPA, but it was not clearly defined.
- There was a discussion of whether BPA had some flexibility to change operations for at least part of an upcoming week. If Canadian Operations are set on Thursday when BPA has already marketed through Monday, then might there be an opportunity to reduce releases from GCL on Monday through the following Thursday. There was no clear answer to this, but reference to the “no cost” was made.
- FPAC expressed concern that while water above the amount needed to meet the 12.2’ BVL tailwater elevation was being moved through the system, they were being asked to cut back chum protection levels because the COE and BOR were concerned that GCL would not attain the April 10 upper rule curve elevation.
- FPAC members ended by expressing concern that this water was not being used in such a way as to benefit fish needs by protecting reservoir elevation at GCL.

Ocean Indicators

- Paul Wagner (NOAA) presented the newest oceanic indicators and the projected impact on adult returns (link provided with agenda).
- Overall, ocean conditions in 2013–2015 are expected to have a negative effect on adult returns in 2016.

Condition Monitoring

- Paul Wagner (NOAA) has suggested that weight be added to condition monitoring as part of the Bonneville SMP sampling process.
- Brandon Chockley (FPC) explained that weights are currently being collected at transportation sites and MCN. Collecting weights could potentially be added to condition monitoring at BON and JDA. It was pointed out that condition monitoring is a COE program and it would be checked as to how it is being accommodated under the present SMP contract.
- It is unclear if the COE would need to approve this addition, as the decision to not collect weights at BON and JDA was partially theirs.
- There were no objections from other FPAC members. Paul Wagner will draft an official request to add collection of weight data at BON and JDA and submit it to the FPC for consideration. Once FPC receives the request, they will to determine if the request can be accommodated.

Transportation Configuration and Operation Plan (COP)

- The Transportation COP will be reviewed by FPC who will provide comments to FPAC.

Coordination

- TMT face-to-face next Wednesday, January 27.
- FPAC conference call on Tuesday, January 26 at 9:00 AM.
- The next FPAC face-to-face meeting will be on February 16 at 9:00 AM.
- An FPOM meeting on change forms will be Thursday, January 28.
- AFEP review of FY17 research summaries will be February 1–3 in Portland.

These minutes have been reviewed and approved by the Fish Passage Advisory Committee.

FPAC Agenda for Tuesday, January 19, 2016
Meeting time: 9:00 AM
Meeting location: Fish Passage Center Conference Room

1. Approval of notes from January 5th and 12th meeting
2. Water supply and reservoir status
3. Weather update and climate forecast
4. Chum operations for incubation
5. The Blob – An animation of the warming of North Pacific waters:
https://basecamp.com/2912449/projects/8966362/messages/52953173?enlarge=204748198#attachments_for_topic_120512184
6. 2015 Ocean Indicators :
<http://www.nwfsc.noaa.gov/research/divisions/fe/estuarine/oeip/g-forecast.cfm>
7. Presentation by PSMFC on revisions to Sort-by-Code application page
8. Presentation by Pam Kingsbury and Corps staff on Canadian non-treaty storage operations
9. Condition monitoring
10. Transport COP
11. Other
12. Coordination for other schedule meetings

Water Year 2016
Clim Norm 1981-2010

Precipitation

Monthly
Temp. (degF)
(pro-rated)

	Monthly Jan. 1 - 18	Seasonal (Oct. 1 - now)	
Portland	149%	163%	-1.4

UPPER-COLUMBIA:

Kamloops	63%	108%	-0.7
Revelstoke	38%	88%	0.9
Cranbrook	83%	126%	-2.3
Creston	87%	79%	-1.1
average:	68%	100%	-0.8
Normal:	1.06	8.30	25.7

MIDDLE-COLUMBIA:

Pendleton	108%	107%	-3.4
Redmond	92%	122%	-1.4
Yakima	156%	150%	1.2
Wenatchee AP	165%	137%	1.6
Omak	100%	108%	0.5
Spokane	104%	109%	-0.8
average:	121%	122%	-0.4
Normal:	0.88	4.79	30.8

LOWER SNAKE:

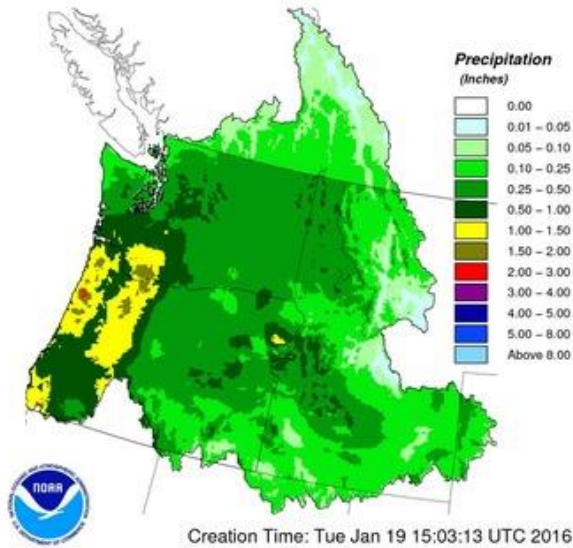
Lewiston	77%	101%	-0.9
Pullman	122%	149%	-0.9
Stanley	128%	152%	1.6
Challis	94%	117%	-5.2
average:	105%	130%	-1.4
Normal:	0.71	4.48	25.3

UPPER and MIDDLE SNAKE:

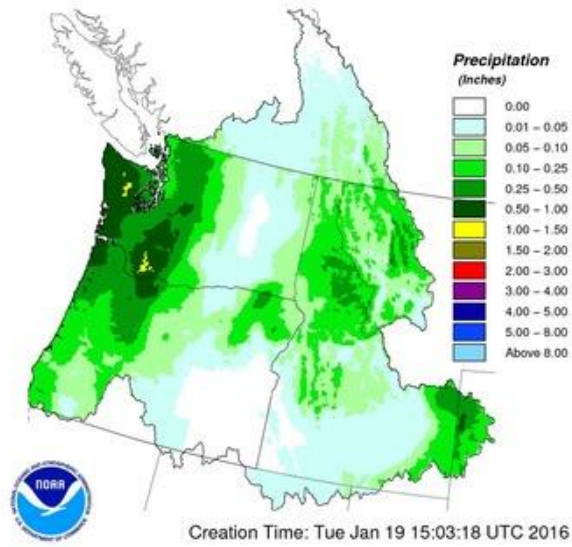
McCall	152%	168%	0.9
Ontario	26%	118%	-0.2
Boise	45%	106%	-0.1
Twin Falls	34%	118%	-2.7
Burley	63%	93%	1
Pocatello	63%	103%	1.1
Idaho Falls	98%	91%	0.1
average:	69%	114%	0.0
Normal:	0.70	4.29	29.3

Forecasted Daily Rain (in inches), BON dam area:	
19-Jan	1.27
20-Jan	0.12
21-Jan	0.82
22-Jan	0.05
23-Jan	0.05
24-Jan	0
25-Jan	0.05

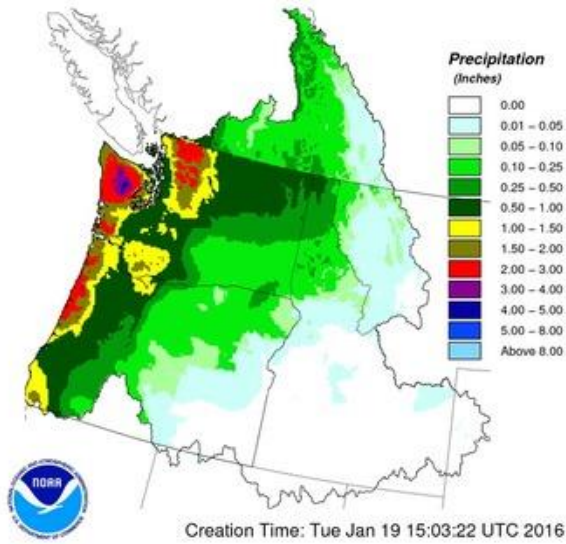
DAY 1 QPF, 24hr Period Ending 12Z, 01/20/2016



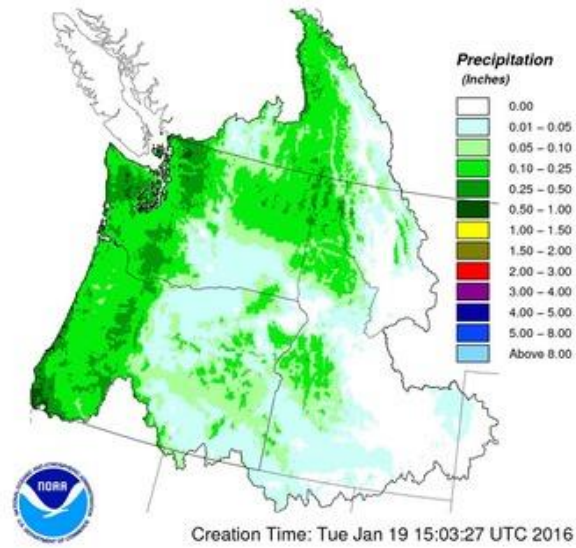
DAY 2 QPF, 24hr Period Ending 12Z, 01/21/2016



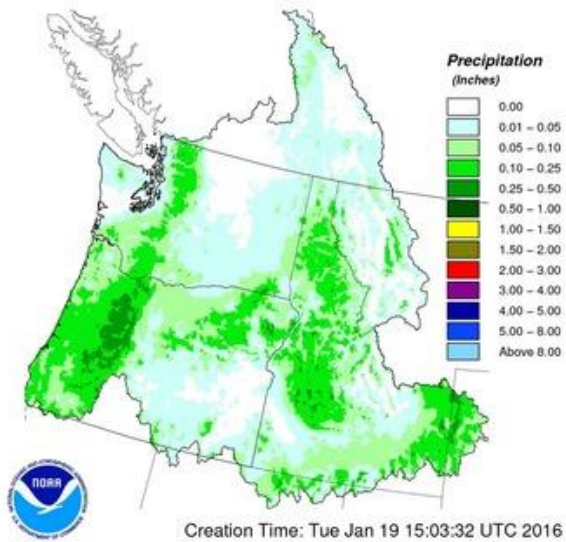
DAY 3 QPF, 24hr Period Ending 12Z, 01/22/2016



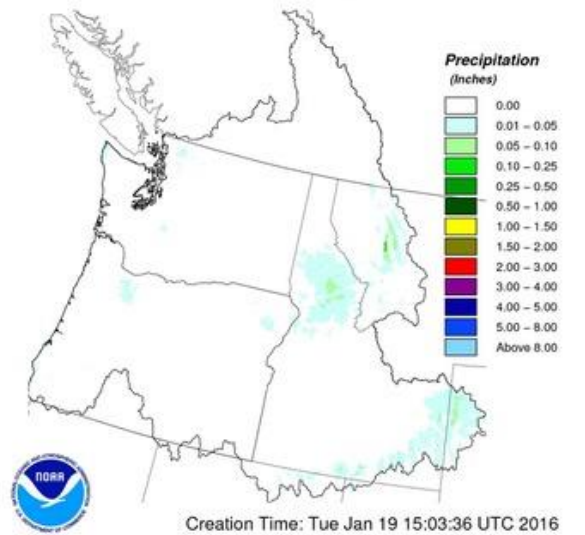
DAY 4 QPF, 24hr Period Ending 12Z, 01/23/2016



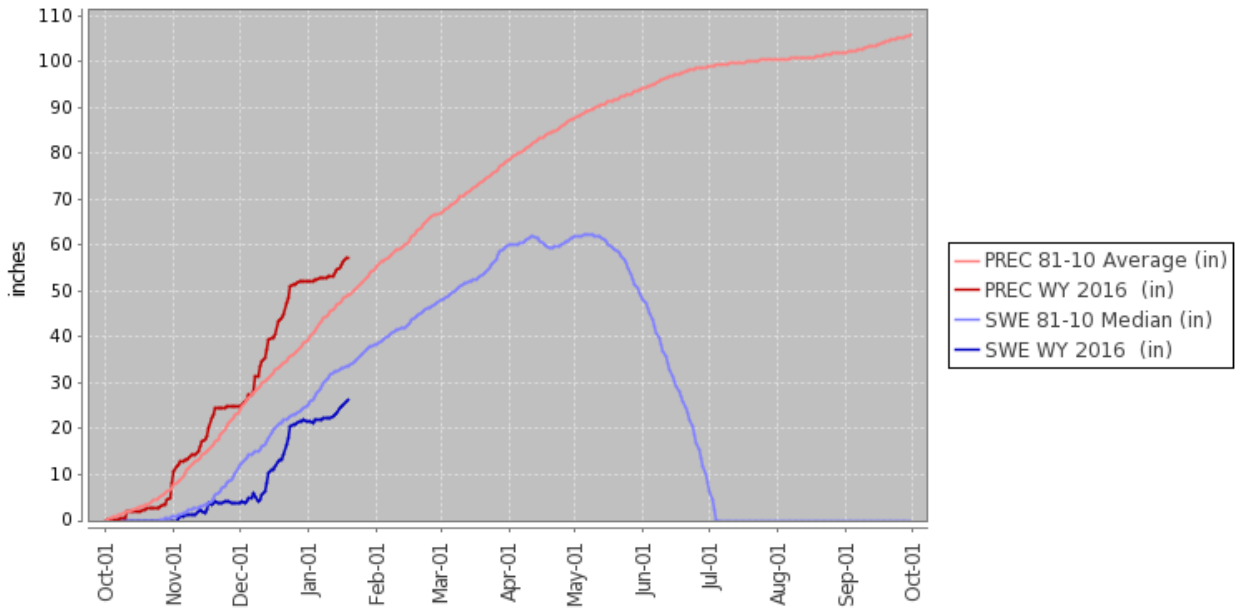
DAY 5 QPF, 24hr Period Ending 12Z, 01/24/2016



DAY 6 QPF, 24hr Period Ending 12Z, 01/25/2016

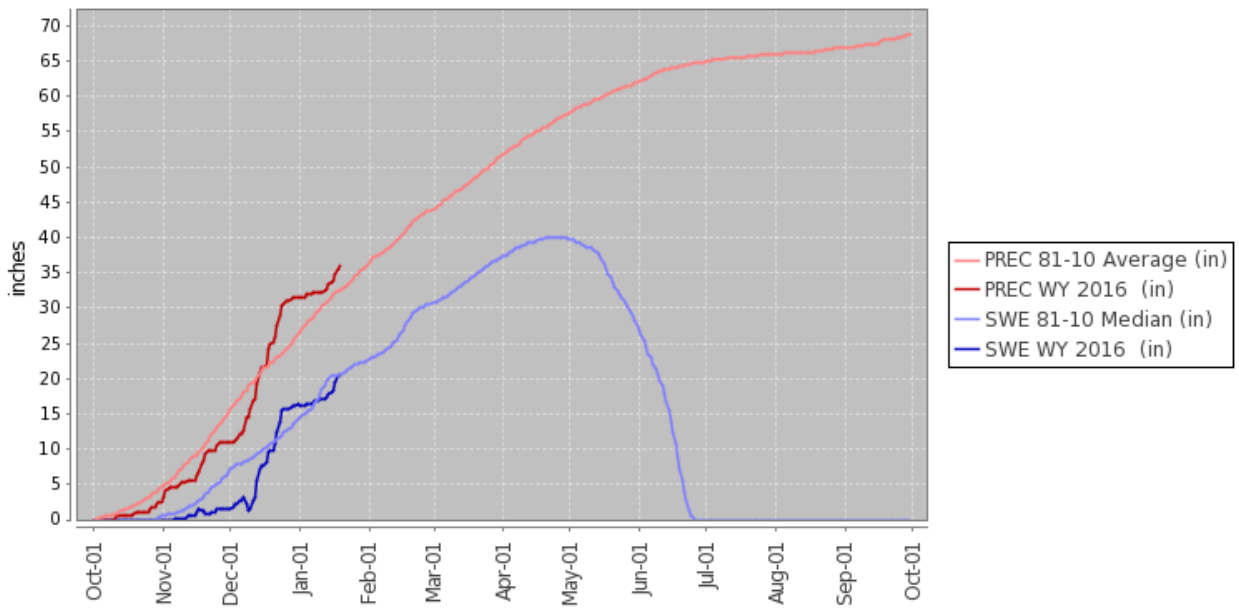


Station (651) WATERYEAR=2016 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision
Tue Jan 19 08:33:24 GMT-08:00 2016



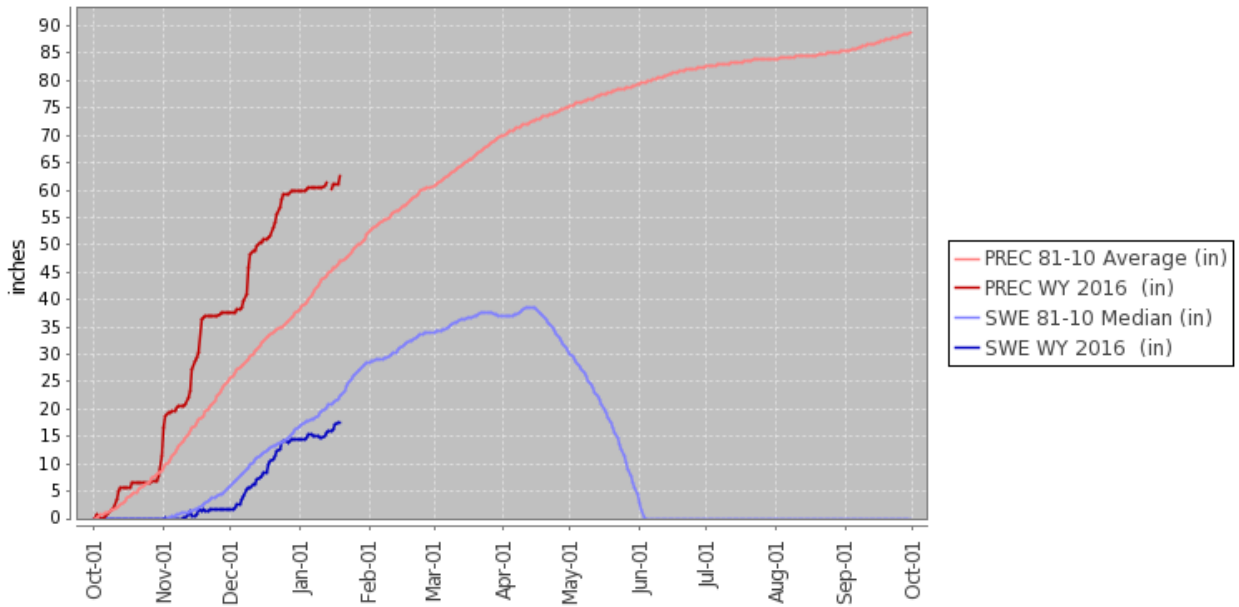
Mt. Hood Test Site, Oregon (north Oregon Cascades). Elevation 5370 feet.

Station (545) WATERYEAR=2016 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision
Tue Jan 19 08:33:50 GMT-08:00 2016



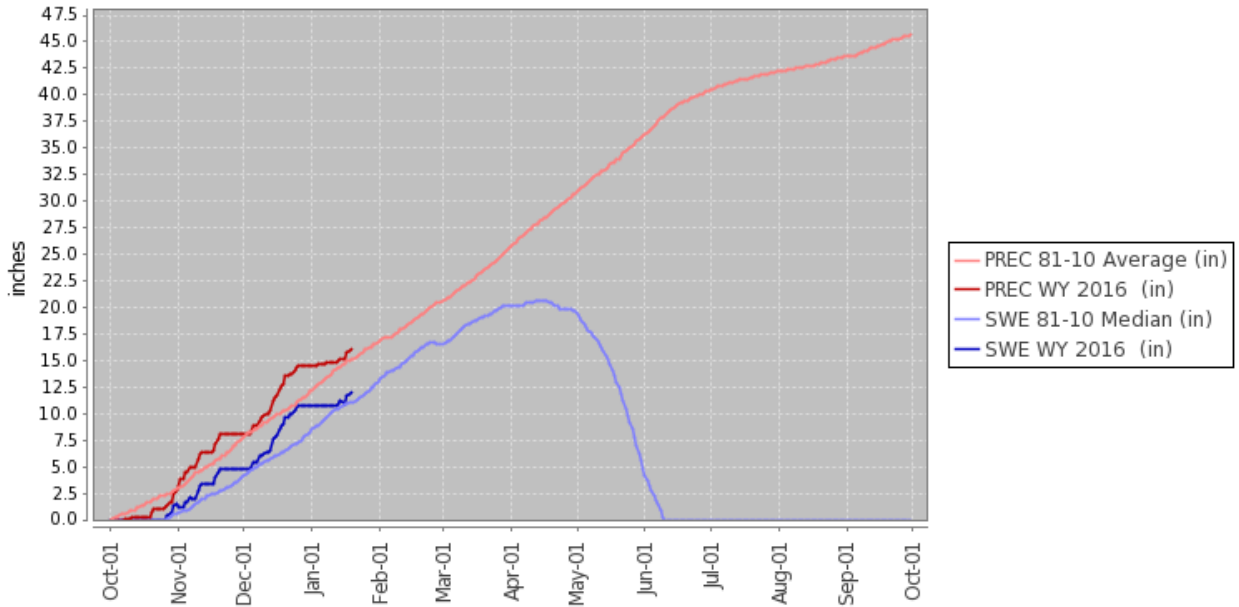
Irish Taylor, Oregon (central Oregon Cascades). Elevation 5540 feet.

Station (791) WATERYEAR=2016 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision
Tue Jan 19 08:34:21 GMT-08:00 2016

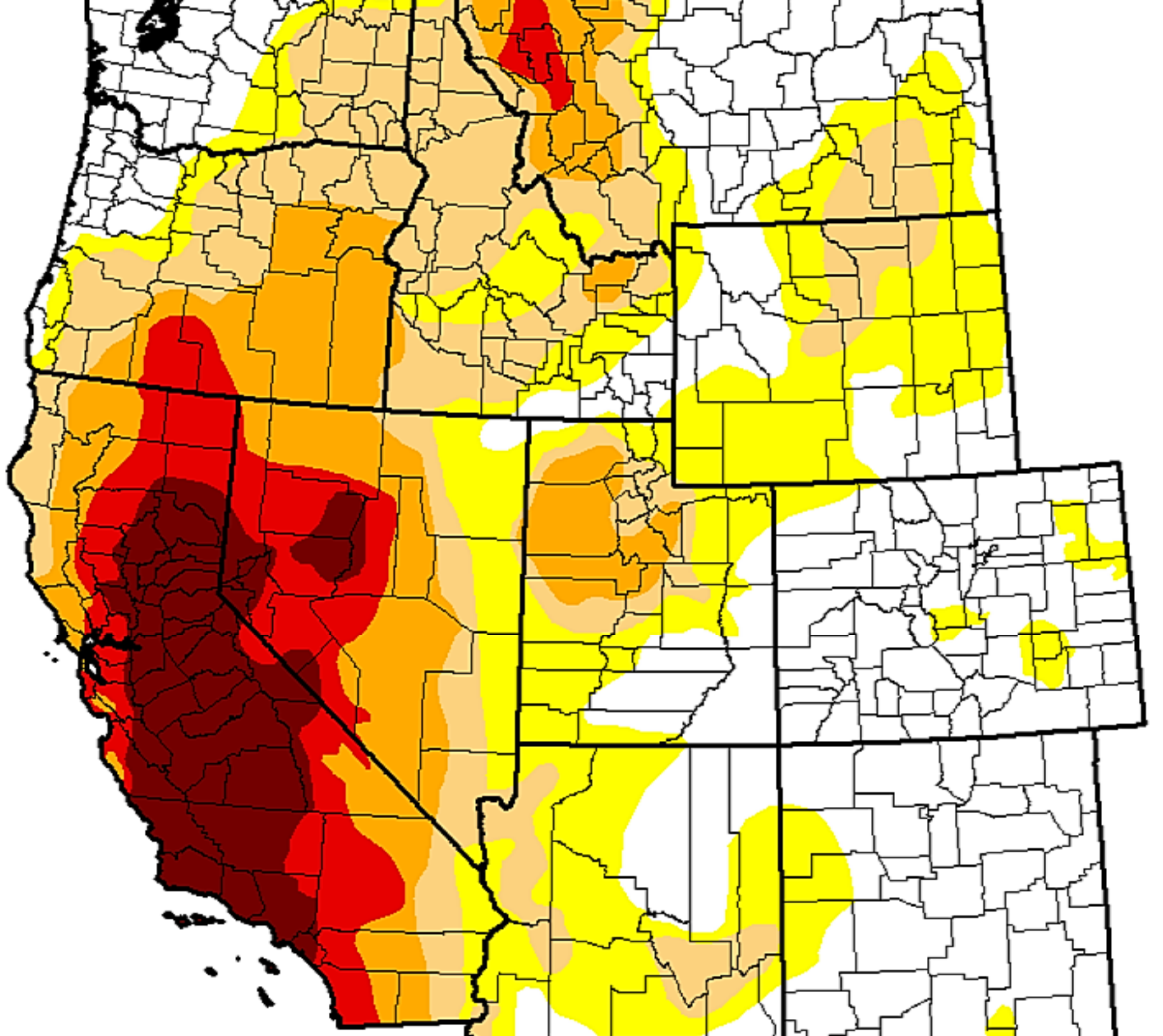


Stevens Pass, Washington (central Washington Cascades). Elevation 3950 feet.

Station (650) WATERYEAR=2016 (Daily) NRCS National Water and Climate Center - Provisional Data - subject to revision
Tue Jan 19 08:34:57 GMT-08:00 2016



Mountain Meadows, Idaho (Panhandle, Salmon River drainage). Elevation 6360 feet.



Non-Treaty Storage and Short-term Libby Agreement Update
FPAC Meeting 1/19/2016

Background: The Short-term Libby Agreement (STLA) and the Non-Treaty Storage Agreement (NTSA) are operational agreements between the U.S. and Canada (STLA) or BPA and BC Hydro (NTSA) designed to achieve power and other benefits by shaping flows at Arrow within existing downstream requirements to create power and non-power benefits. NTSA operations are limited by the Treaty to actions that do not reduce the power and flood control benefits of the Treaty Operating Plans. Under both agreements, benefits for Canada/BC Hydro are the energy value of generation changes at downstream U.S. federal hydro projects resulting from their water transactions. In the U.S., BPA achieves power benefits from the flow changes from BPA water transactions and associated generation changes on the federal system downstream. In addition, the NTSA helps meet Biological Opinion objectives to shape flows for fish benefits in the April-August period and provides release of up to 0.5 Maf of water in the spring during dry water conditions. The U.S. does not receive any direct benefits from the STLA, but the agreement is considered no-cost to BPA.

With few exceptions (dry water condition firm release rights), either party may decline requested water transactions under the NTSA, if the flow change cannot be accommodated downstream. Similarly, under the STLA, the U.S. is required to make reasonable efforts to accommodate requested Canadian transactions but can limit transactions for power or non-power reasons (including the ability to pass water through the system). However, in order to create the benefits expected under these agreements transactions must occur and flow changes need to pass through the system.

As a protection against unforeseen limitations or unreasonableness on either side, both agreements contain early termination provisions. In the case of STLA, termination may be made by either entity with 30-day written notice. While the NTSA has a longer lead time with an initial notice by September 1st of any year, once final notice has been given by January 15th, all transactions must go toward returning accounts to their initial balances and flexibility in use of accounts is lost.

A brief summary of each agreement may be found in Attachment 1.

Summary of Current Operations: STLA or NTSA releases during chum operations have been discussed in spring and fall coordination meetings with federal agencies, states and Tribes, however this is the first year in which releases have occurred when there may be concern about meeting minimum flow objectives for chum while achieving April elevation targets for Grand Coulee.

During the first year of the STLA, BPA denied Canadian requests for STLA releases in January and February 2014, when the federal system was operating to minimum chum flow requirements. This mystified the Canadians because, as they pointed out, passing the released water through the system would have no effect on Grand Coulee elevations. By denying the releases Arrow flows were not increased so flows through the system were lower than they would have been with the releases. This situation was discussed at the spring 2014 coordination meeting. While releases would be denied when they would result in setting a higher chum protection level, during the subsequent period of minimum chum flows, releasing and passing the additional flow through would not have an adverse consequence for chum or for Coulee elevations. It was clear from conversations with the Canadians that if releases under STLA or the NTSA could not occur during the winter months, significant benefits would be lost. This raises concerns for the viability of these agreements if benefits cannot be realized.

This year for the first time, releases from STLA and NTSA have been passed through the system during a time when minimum flows for chum were being reduced. This operation allows benefits to be derived

from the agreements, does not result in lower Coulee elevations than would occur without the releases, but has raised some concerns about conserving water for future chum needs.

Expected Near-term Canadian Operations: By the end of January, 1 Maf of flow augmentation water will have been stored under the Nonpower Uses Agreement. About half of the flow augmentation water was stored under the NTSA in the fall and was converted to flow augmentation in December and January under NTSA operating agreements. NTSA releases of 6 ksf/day are planned through 22 January, and are unknown beyond that point.

Attachment 1

Background on the Non-Treaty Storage Agreement: The 2012 Non-Treaty Storage Agreement (NTSA) provides for use of existing storage space on the Columbia River in Canada in addition to the 15.5 Maf of storage operated under the Columbia River Treaty. The Treaty limits use of non-Treaty storage to actions that do not reduce Treaty flood control and power benefits. Within that constraint, BC Hydro has used the storage space for its benefit by redistributing water among its reservoirs. BPA access to this storage is obtained only through negotiation of operational agreements that provide mutual benefits to the BPA and BC Hydro. Absent an agreement, the benefits of releasing water from Arrow across the Canada-U.S. border cannot be achieved.

Under NTSA Terms:

- BPA and BC Hydro each have continuing access to 1.5 MAF of active storage.
- BC Hydro may make available from time to time recallable accounts of 1 MAF each for BPA and BC Hydro.
- With the exception of limited firm release rights by both BPA and BC Hydro during dry water conditions, all water transactions are by mutual agreement, are coordinated on a weekly basis, and are subject to non-power requirements.
- BPA has firm release rights of up to 0.5 MAF of water releases in spring of years within the lowest 20 percent of water conditions if not used in the prior year.
- BC Hydro benefits from the energy value of generation changes at downstream U.S. federal hydro projects that result from its water transactions
- BC Hydro's benefits have been settled financially to date.

Background on the Libby Coordination Agreement: The Short-term Libby Agreement (STLA) has much the same structure as the NTSA, but utilizes Treaty storage, takes precedence over NTSA transactions, and Canada has the only storage/release rights. The purpose of the STLA is to address Canadian concerns regarding impacts of Libby's non-power operation on power production at Canadian projects downstream. The STLA is effective through August 2017 and is intended to allow the Canadian and U.S. Entities time to develop a longer term agreement. The STLA allows Canada to modify Arrow operations in order to achieve power/\$ benefits.

Under STLA Terms:

- Allows Canada to store up to 50 ksf of water in an Arrow Provisional account or draft up to 550 ksf from the account at rates defined in the agreement.
- Maximum rates of storage/release are specified in the agreement. No storage is allowed April-August and the maximum account balance is 0 at the end of March (to prevent forcing flow augmentation water out).
- Water transactions are coordinated on a weekly basis and are subject to non-power requirements.
- Canada benefits from the energy value of generation changes at downstream U.S. federal hydro projects that result from its water transactions
- Benefits are settled financially.