



FISH PASSAGE CENTER

847 NE 19th Avenue, #250, Portland, OR 97232

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www.fpc.org/

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MEMORANDUM

TO: FPAC

FROM: FPC Staff

DATE: June 18, 2015

RE: Action Notes from June 16, 2015, FPAC face-to-face meeting

On June 16, 2015, FPAC met for their monthly face-to-face meeting at the Fish Passage Center office in Portland, Oregon. Present for the meeting were: Tom Lorz (FPAC Co-Chair, CRITFC), Charlie Morrill (WDFW), Russ Kiefer (IDFG, via phone), Erick Van Dyke (ODFW), Tom Skiles (CRITFC, via phone), Kyle Dittmer (CRITFC, via phone), Brent Nichols (Spokane Tribe, via phone), Dave Statler (Nez Perce Tribe, via phone), Trevor Condor (NOAA, via phone), Brandon Chockley (FPC), Erin Cooper (FPC), Tommy Garrison (FPC), Dave Benner (FPC), Michele DeHart (FPC), and Margaret Filardo (FPC).

Agenda Items

Meeting Notes

- Action notes from the June 9, 2015 FPAC meeting were approved without comments.
- Edits to notes from April 29 were provided by Paul Wagner and Margaret Filardo. These will be discussed when Paul Wagner returns from vacation.
- Edits to notes from April 17 were provided by Paul Wagner. These edits were approved.
- Edits to notes from May 5 were provided by Paul Wagner. These edits reference a document provided by Pam Kingsbury after the conclusion of the FPAC meeting. This document will be attached to the notes, but the text of the notes will not be changed.

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. See the attached document.
- Currently, projected releases from Brownlee Dam are available only in 3-day forecasts. A longer forecast may be useful for modeling temperature and volume releases from

Dworshak. Tom Lorz will follow up with Steve Hall (COE) to see what information from Brownlee would be useful for modeling efforts. FPAC discussed that current FERC relicensing effort may be opportunity to get better coordination from Idaho Power.

Weather

- Kyle Dittmer (CRITFC) provided a summary of current weather conditions for the month and the water year (see attached).

Juvenile Fish Passage Status

- For passage indices on June 16, 2015, please see the attached document. For updated indices, use the FPC website.
- SMP personnel at JDA have noted elevated mortality levels for subyearling Chinook. Mortalities have been in 1.2%–2.6% range over last week. There is no clear indication of cause yet but COE is checking.
- Subyearling hatchery fall Chinook releases in the Snake scheduled for early to mid-June were released between May 27 and June 5. Subyearling fall Chinook releases in the Snake River Zone are finished for 2015.
- Priest Rapids Hatchery began release of ~7.0 million subyearling fall Chinook on June 12. Passage at MCN will likely increase soon.
 - Tom Lorz will ask at TMT to make sure there is a plan to clean screens at McNary, since a spike of subyearling Chinook passage is expected soon.

Adult Fish Passage Status

- For adult counts on June 16, 2015, please see the attached document. For updated counts, use the FPC website.
- Two of the pumps at the McNary south ladder are currently out of operation and will be for the next five days. Dave Benner (FPC) reports that ladder conditions are less than optimal but should still be functional.

Spill Update

- For spill and TDG values for June 9 through June 15, 2015, please see the attached document. For updated information, use the FPC website.
- Summer spill levels at Snake River projects will begin on June 21st.
- Flows at Lower Monumental are too low to reach spill to the gas cap. All flow excluding powerhouse minimum is being spilled.
- Flows at Little Goose Dam have fallen below the 32 Kcfs limit outlined in the FOP. Per the 2015 FOP, fixed spill volume of 7–11 Kcfs will be implemented.
- McNary summer spill of 50% started today, June 16th.
- Bonneville summer spill started today, June 16th. Summer spill at Bonneville is 2-day blocks of 95 Kcfs and 85 Kcfs day/121 Kcfs night.

Dworshak Outflow Temperatures

- Russ Kiefer (IDFG) expressed concern that although the Dworshak reservoir is full, inflows to Dworshak will be lower and therefore less water will be available for flow augmentation.

- Currently outflows at Dworshak are 42°. According to the most recent STP, flows out of Dworshak will increase to 5.5 Kcfs on June 17 and remain through the July 4 weekend for flow augmentation and temperature regulation.
- Tom Lorz will ask Steve Hall for options for managing temperatures at Lower Granite with Dworshak releases throughout the season.

Grand Coulee Operations and Columbia Flow

- The most recent STP does not include the drops in Columbia flows that FPAC members previously objected to. Filling of Coulee will begin the weekend before the 4th of July.
- Dave Benner will review the flows from Grand Coulee and the timing of fish passage to provide an opportunity for FPAC members to see if flow outcomes matched the objectives.
- Erick van Dyke (ODFW) requested that FPC investigate whether the additional 0.5 Maf of flow from Canadian operations was used to refill Grand Coulee, or if it was used to augment flows in the Columbia. FPC replied that this might be difficult to deduce from the implementation of weekly average flows that occurred, but will make an effort.

FPOM Condition Monitoring Subcommittee Review

- At last week's meeting of the FPOM subcommittee on condition monitoring, NOAA presented "straw man" proposal, with the minimum sampling requirements that NOAA will require at FCRPS bypass facilities that do not have an SMP program. This proposal will be circulated to FPAC.
- Comments on this proposal should be submitted to Tom Lorz (CRITFC) for discussion at the next meeting of the subcommittee on July 9th. FPC will make comments and distribute them to FPAC members.
- Dave Statler (Nez Perce) asked if this review process would address the limitations of past monitoring efforts. Tom Lorz clarified that it will not, and will just address the future of condition monitoring requirements at FCRPS bypass facilities that are not part of the SMP (e.g., Ice Harbor).
- Erick van Dyke (ODFW) pointed out that perhaps the subcommittee should be focused on what an appropriate level of sampling is, rather than establishing the minimum.
 - Michele DeHart (FPC) pointed out that establishing the appropriate trade-off between excessive handling and monitoring would be easier to establish if there were some data from every day sampling. However, these data do not exist.
- Trevor Condor (NOAA) clarified that NOAA will accept FPC standards and protocols for condition monitoring if the COE will agree.
 - Charlie Morrill (WDFW) pointed out that the current condition monitoring program was established after extensive work between FPC, FPAC, and the COE.
- Trevor Condor will share Ice Harbor condition data that NOAA received from the COE with other FPAC members, once he gets approval from the COE.

Avian Predation Draft Report

- Tom Lorz (CRITFC) provided a draft report documenting avian predation using JSATS tags. Tom will check on the comment deadline for this report.

Grant County Performance Testing

- FPC will provide comments on performance testing for FPAC for discussion at the June 23rd meeting. FPAC members have requested a JTSM draft based on these comments.

Administrative Note

- FPC informed FPAC that, beginning June 23rd, FPC will use a conference line provided by GoToMeeting. Link and the call-in number will be circulated to FPAC prior to each meeting, with or without an agenda.
 - This will provide more lines to eliminate past issues of too many people calling in for the existing number.
 - Using GoToMeeting will also provide better audio recording of meetings. Please be aware that recording will begin when the first FPAC member calls in, not when FPC joins the call.

Coordination

- The next FPAC meeting will be on June 23rd at 9:00 AM.
 - The call in number for this meeting will be:

1 (312) 757-3121

Access Code: 395-311-069

After connecting you may be instructed to press the # key.

For Web access go to: <https://global.gotomeeting.com/join/395311069>

Meeting ID: 395-311-069

- The next FPAC face-to-face meeting will be on either July 14 or July 21.
- There will be an FPOM meeting on July 9 that will include a meeting of the subcommittee on condition monitoring.
- There will be a TMT tomorrow, June 17.
- There will be a FFDRWG on June 19.



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MEMORANDUM

TO: FPAC

FROM: David Benner

DATE: June 16, 2015

RE: Reservoir Operations/Flows/Water Supply

Grand Coulee Reservoir is at 1,271.4 feet (6-14-15) and has refilled 6.6 feet over the last week. Outflows at Grand Coulee have ranged between 97.3 and 119.4 Kcfs over the last week.

The Libby Reservoir is currently at elevation 2,439.7 feet (6-14-15) and has refilled 4.6 feet over the previous week. Daily average outflows at Libby Dam have decreased from 16.8 Kcfs to 14.7 Kcfs over the last week.

Hungry Horse is currently at an elevation of 3,549.4 feet (6-14-15) and refilled 2.0 feet over the last week. Outflows at Hungry Horse have been reduced from 2.5 to 3.2 Kcfs over the last week.

Dworshak is currently at an elevation of 1,599.7 feet (6-14-15) and held steady over the last week. Outflows have ranged from 2.9 to 4.5 Kcfs over the last week. Inflows to Dworshak have ranged between 2.6 and 3.6 Kcfs last week.

The Brownlee Reservoir was at an elevation of 2,075.8 feet on June 14, 2015, and has held steady over the last week. Hells Canyon outflows have ranged between 7.1 and 16.1 Kcfs over the last four days.

The Biological Opinion flow period began on April 3rd in the lower Snake River (Lower Granite). According to the April Final Water Supply Forecast (April 8, 2015), the flow objective this spring will be 85 Kcfs at Lower Granite. Flows at Lower Granite Dam have averaged 54.9 Kcfs over the spring season and 47.1 Kcfs last week.

Based on the April Final Water Supply Forecast, the Spring Biological Opinion Flow Objectives (which began April 10th) will be 220 Kcfs at McNary Dam and 135 Kcfs at

Priest Rapids Dam. Over the spring season, flows at McNary Dam have averaged 179.5 Kcfs and Priest Rapids Dam flows have averaged 117.0 Kcfs. Over the last week, flows at McNary have averaged 175.5 Kcfs and averaged 120.2 Kcfs at Priest Rapids.

Location	June 15, 2015 5-day QPF ESP	
	% Average (1981–2010)	Runoff Volume (Kaf)
The Dalles (Apr–Aug)	68	59,610
Grand Coulee (Apr–Aug)	75	42,825
Libby Res. Inflow, MT (Apr–Aug)	78 86*	4,581 5,090*
Hungry Horse Res. Inflow, MT (Apr–Aug)	67	1,298
Lower Granite Res. Inflow (Apr–July)	51	10,133
Brownlee Res. Inflow (Apr–July)	42	2,314
Dworshak Res. Inflow (Apr–July)	47 42*	1,139 1,113*

* Denotes COE June Forecast

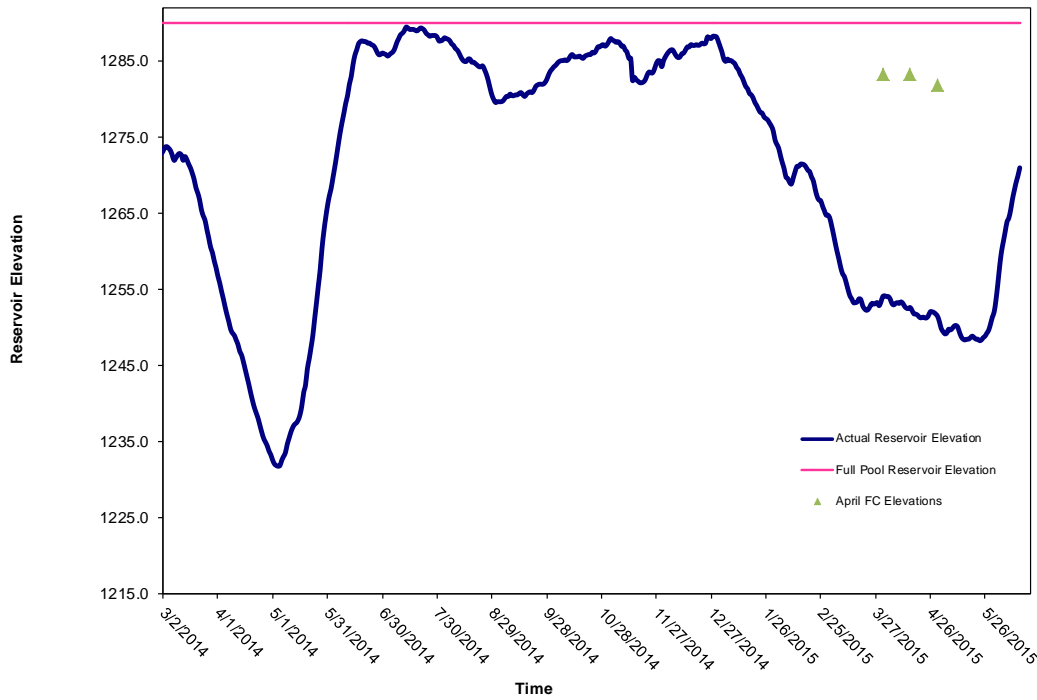


Figure 1. Grand Coulee

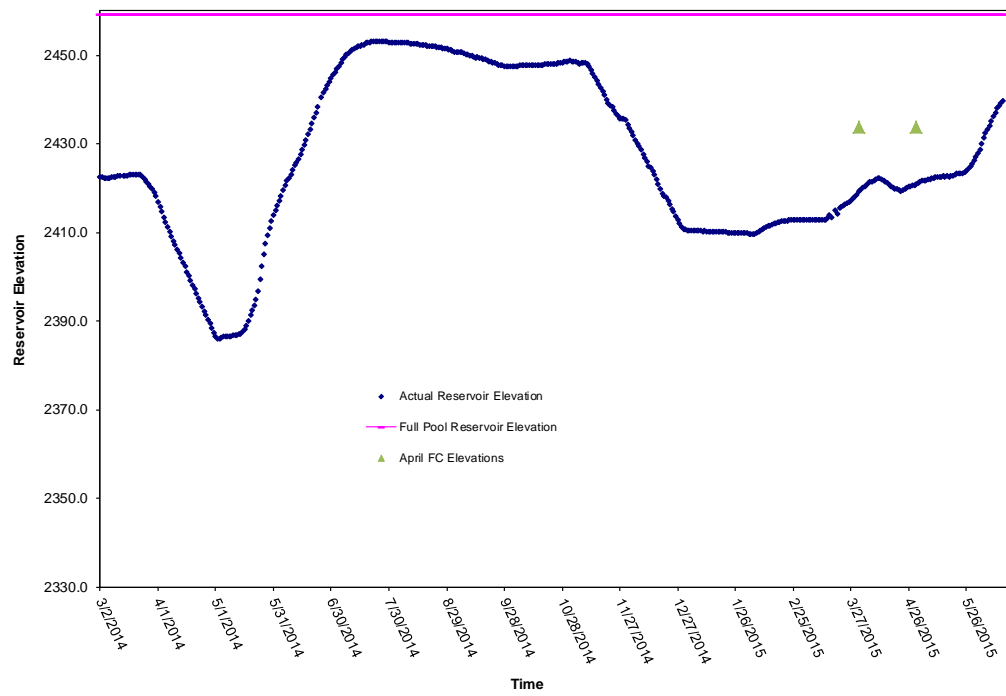


Figure 2. Libby

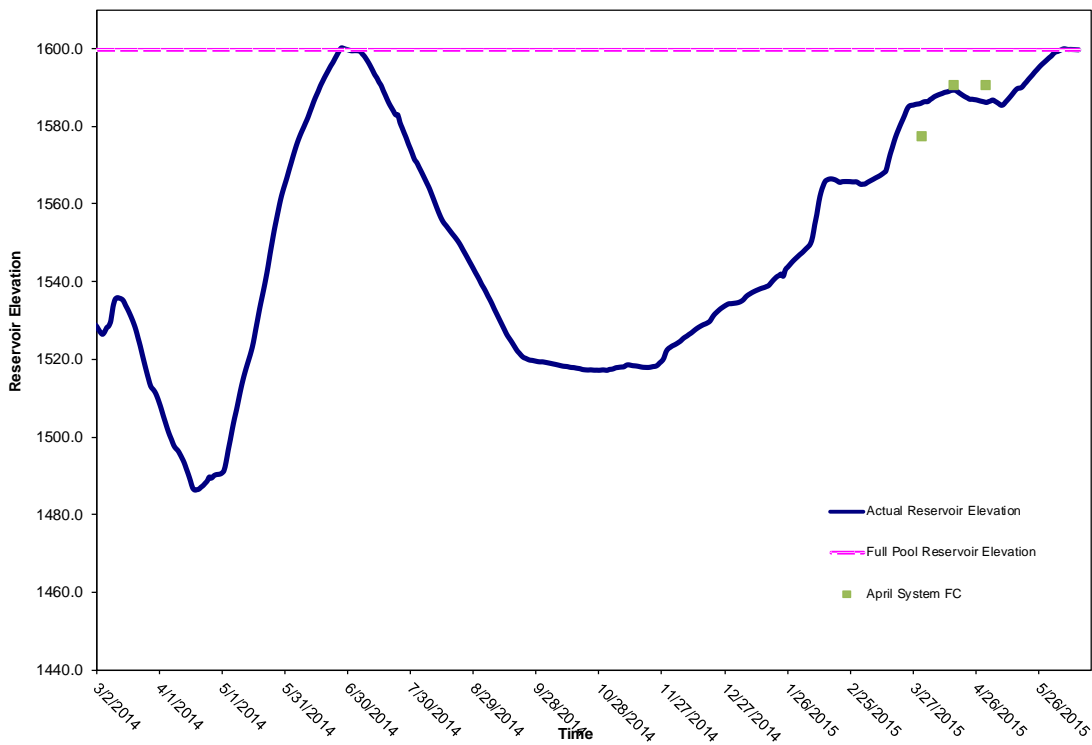


Figure 3. Dworshak

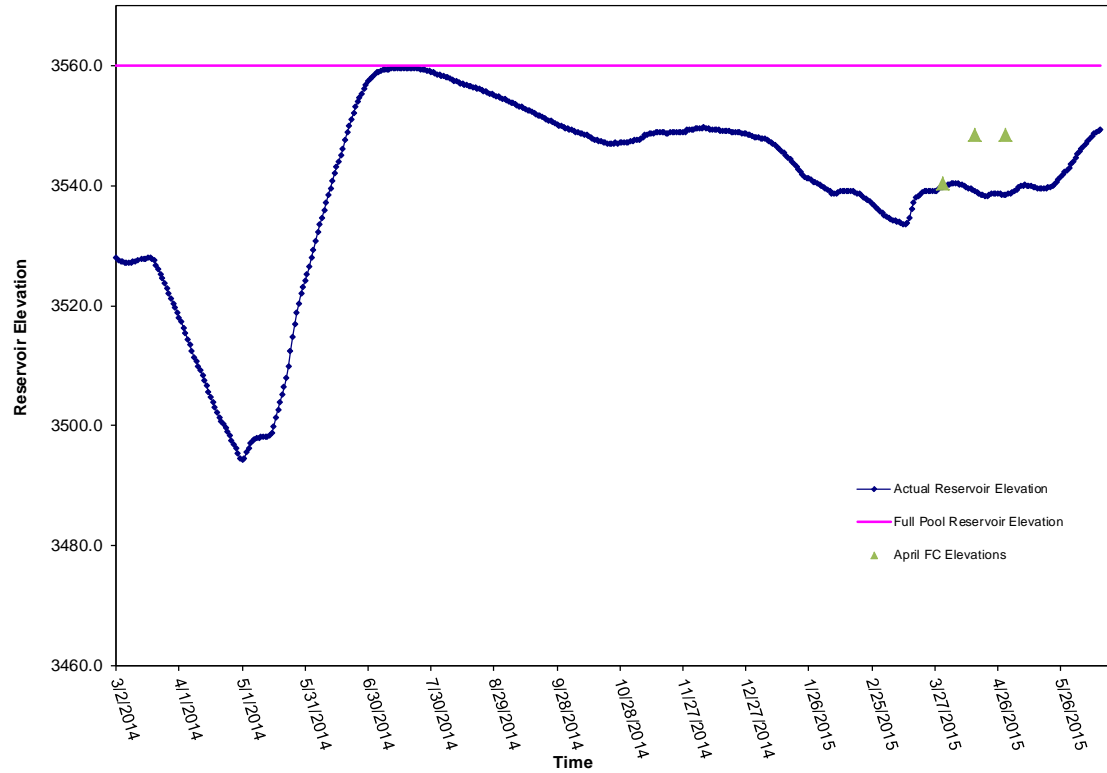


Figure 4. Hungry Horse

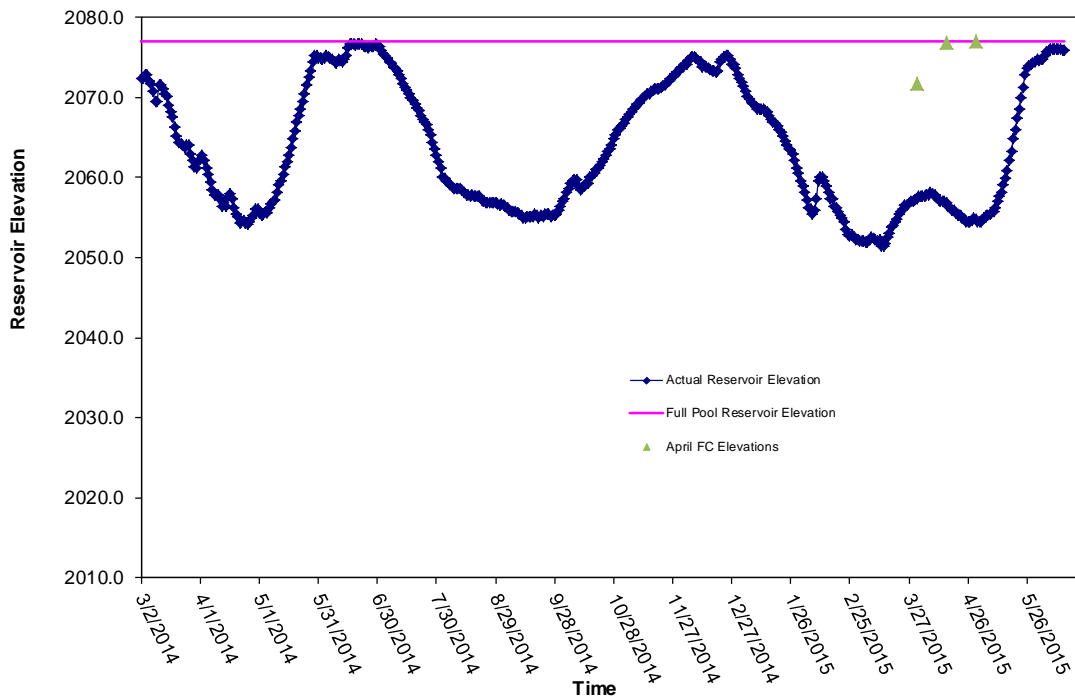


Figure 5. Brownlee

Water Year 2015
Clim Norm 1981-2010

Precipitation

Monthly
Temp. (degF)
(pro-rated)

	Monthly June 1 - 15	Seasonal (Oct. 1 - now)	Monthly Temp. (degF) (pro-rated)
Portland	38%	90%	5.8

UPPER-COLUMBIA:

Kamloops	147%	119%	3.4
Revelstoke	19%	80%	4.0
Cranbrook	60%	112%	4.1
Creston	38%	92%	6.1
average:	66%	101%	4.4
Normal:	1.08	14.11	61.4

MIDDLE-COLUMBIA:

Pendleton	8%	88%	6.1
Redmond	28%	116%	5.6
Yakima	0%	89%	10.2
Wenatchee AP	0%	99%	9.8
Omak	69%	91%	5.9
Spokane	8%	82%	7.7
average:	19%	94%	7.6
Normal:	0.51	9.79	63.9

LOWER SNAKE:

Lewiston	172%	105%	7.4
Pullman	79%	113%	5.4
Stanley	135%	110%	6.5
Challis	25%	61%	5
average:	103%	97%	6.1
Normal:	0.75	11.30	59.5

UPPER and MIDDLE SNAKE:

McCall	30%	107%	8.6
Ontario	49%	98%	8.2
Boise	40%	105%	6.8
Twin Falls	26%	81%	6.4
Burley	0%	84%	5.1
Pocatello	32%	75%	4.9
Idaho Falls	18%	84%	4.5
average:	28%	91%	6.4
Normal:	0.64	10.26	56.6

Air Temperature forecast (NOAA- NWS Forecast)		
Clarkston, WA	Low	High
16-Jun		91
17-Jun	59	90
18-Jun	58	88
19-Jun	59	84
20-Jun	55	84
21-Jun	56	89
22-Jun	60	87
"normal"	53	78

Two-Week Summary of Passage Indices

* One or more of the sites on this date had an incomplete or biased sample.

See Sampling Comments: <http://www.fpc.org/currentDaily/smpcomments.htm>For clip information see: <http://www.fpc.org/CurrentDaily/catch.htm>For sockeye and yearling chinook (Snake only) race information see: <http://www.fpc.org/smoltqueries/currentsmptsubmitdata.asp>

COMBINED YEARLING CHINOOK												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
06/02/2015	*	---	54	---	---	74	146	318	146	6,184	1,027	4,053
06/03/2015	*	---	35	---	---	222	322	504	25	---	1,081	5,960
06/04/2015	*	---	61	---	---	144	466	151	16	4,795	932	3,694
06/05/2015	*	---	---	---	---	0	217	0	9	---	1,117	2,956
06/06/2015		---	---	---	---	163	144	0	15	4,095	821	1,319
06/07/2015	*	---	---	---	---	0	0	366	10	---	781	1,389
06/08/2015		---	---	---	---	165	72	0	1	2,894	610	1,663
06/09/2015	*	---	---	---	---	162	0	87	1	---	1,510	1,027
06/10/2015		---	---	---	---	81	358	2	0	3,184	1,574	1,039
06/11/2015	*	---	---	---	---	0	179	0	4	---	1,318	621
06/12/2015		---	---	---	---	0	143	135	0	1,725	946	758
06/13/2015	*	---	---	---	---	187	143	0	0	---	773	402
06/14/2015		---	---	---	---	98	72	0	2	2,043	335	408
06/15/2015	*	---	---	---	---	0	36	0	0	---	438	130
06/16/2015		---	---	---	---	---	---	---	---	---	---	---
Total:		0	150	0	0	1,296	2,298	1,563	229	24,920	13,263	25,419
# Days:		0	3	0	0	14	14	14	14	7	14	14
Average:		0	50	0	0	93	164	112	16	3,560	947	1,816
YTD		40,054	65,499	7,458	1,081	1,768,967	1,156,228	1,126,437	16,454	1,337,689	660,627	1,710,909

COMBINED SUBYEARLING CHINOOK												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
06/02/2015	*	---	4	---	---	47,285	14,872	14,587	463	6,227	3,854	5,641
06/03/2015	*	---	0	---	---	72,581	24,327	11,723	312	---	3,095	6,078
06/04/2015	*	---	0	---	---	36,232	26,362	18,321	233	3,611	3,802	5,239
06/05/2015	*	---	---	---	---	100,439	41,944	24,416	268	---	5,373	5,291
06/06/2015		---	---	---	---	35,547	27,061	20,845	268	10,579	6,174	4,273
06/07/2015	*	---	---	---	---	37,099	21,098	13,541	253	---	3,165	3,949
06/08/2015		---	---	---	---	14,236	21,765	13,066	311	13,192	4,227	3,850
06/09/2015	*	---	---	---	---	10,518	14,223	15,346	333	---	6,420	4,009
06/10/2015		---	---	---	---	12,429	9,743	8,735	193	26,433	8,707	5,078
06/11/2015	*	---	---	---	---	12,409	10,583	2,658	299	---	8,444	4,108
06/12/2015		---	---	---	---	16,326	13,618	4,618	164	49,461	15,023	4,384
06/13/2015	*	---	---	---	---	19,393	13,520	1,088	342	---	18,695	3,977
06/14/2015		---	---	---	---	25,415	4,948	728	355	35,924	25,362	5,760
06/15/2015	*	---	---	---	---	9,577	12,707	5,458	207	---	29,188	6,138
06/16/2015		---	---	---	---	---	---	---	---	---	---	---
Total:		0	4	0	0	449,486	256,771	155,130	4,001	145,427	141,529	67,775
# Days:		0	3	0	0	14	14	14	14	7	14	14
Average:		0	1	0	0	32,106	18,341	11,081	286	20,775	10,109	4,841
YTD		1	60	1,292	2,077	735,791	407,418	196,715	9,533	162,688	182,486	1,581,407

COMBINED COHO												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
06/02/2015	*	---	0	---	---	74	0	350	561	2,037	253	4,382
06/03/2015	*	---	0	---	---	148	72	166	175	---	177	4,045
06/04/2015	*	---	0	---	---	0	179	0	128	1,363	215	2,821
06/05/2015	*	---	---	---	---	0	430	336	151	---	276	2,682
06/06/2015	*	---	---	---	---	0	0	200	158	1,024	215	1,922
06/07/2015	*	---	---	---	---	0	72	0	95	---	548	1,368
06/08/2015	*	---	---	---	---	0	72	0	99	1,958	627	2,757
06/09/2015	*	---	---	---	---	81	0	0	72	---	669	2,105
06/10/2015	*	---	---	---	---	0	36	0	49	1,444	670	2,217
06/11/2015	*	---	---	---	---	0	0	0	55	---	753	857
06/12/2015	*	---	---	---	---	0	36	0	33	171	401	866
06/13/2015	*	---	---	---	---	0	36	0	25	---	433	522
06/14/2015	*	---	---	---	---	0	36	0	26	170	402	731
06/15/2015	*	---	---	---	---	0	36	0	33	---	125	265
06/16/2015	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	303	1,005	1,052	1,660	8,167	5,764	27,540
# Days:		0	3	0	0	14	14	14	14	7	14	14
Average:		0	0	0	0	22	72	75	119	1,167	412	1,967
YTD		0	0	0	47	40,131	59,857	37,558	14,436	64,634	68,369	689,679

COMBINED STEELHEAD												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
06/02/2015	*	---	148	---	---	3,750	2,743	795	140	2,103	1,510	2,520
06/03/2015	*	---	161	---	---	3,027	1,288	207	94	---	541	3,612
06/04/2015	*	---	123	---	---	866	1,540	603	76	2,074	660	2,351
06/05/2015	*	---	---	---	---	2,038	2,079	1,091	61	---	582	3,280
06/06/2015	*	---	---	---	---	5,381	789	802	39	3,071	635	1,139
06/07/2015	*	---	---	---	---	1,822	789	183	24	---	608	1,510
06/08/2015	*	---	---	---	---	4,197	501	97	39	2,809	467	1,687
06/09/2015	*	---	---	---	---	3,479	1,182	260	44	---	535	2,806
06/10/2015	*	---	---	---	---	2,018	2,042	186	22	2,662	502	1,834
06/11/2015	*	---	---	---	---	1,215	1,973	183	22	---	314	1,034
06/12/2015	*	---	---	---	---	618	1,112	674	27	348	57	1,083
06/13/2015	*	---	---	---	---	281	1,148	282	15	---	31	402
06/14/2015	*	---	---	---	---	0	287	162	17	511	0	302
06/15/2015	*	---	---	---	---	225	1,187	375	16	---	0	79
06/16/2015	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	432	0	0	28,917	18,660	5,900	636	13,578	6,442	23,639
# Days:		0	3	0	0	14	14	14	14	7	14	14
Average:		0	144	0	0	2,066	1,333	421	45	1,940	460	1,689
YTD		2,567	40,127	672	11,678	1,297,495	1,058,611	574,820	12,385	448,510	200,057	1,018,125

COMBINED SOCKEYE												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR (INDEX)	LGS (INDEX)	LMN (INDEX)	RIS (INDEX)	MCN (INDEX)	JDA (INDEX)	BO2 (INDEX)	
06/02/2015	*	---	0	---	---	0	72	0	8	2,207	586	1,315
06/03/2015	*	---	0	---	---	0	0	0	1	---	224	1,556
06/04/2015	*	---	0	---	---	0	0	0	6	1,022	273	1,075
06/05/2015	*	---	---	---	---	0	0	0	6	---	352	678
06/06/2015	*	---	---	---	---	0	0	0	2	938	365	499
06/07/2015	*	---	---	---	---	0	0	0	1	---	353	439
06/08/2015	*	---	---	---	---	0	0	0	0	511	358	689
06/09/2015	*	---	---	---	---	81	0	0	1	---	344	401
06/10/2015	*	---	---	---	---	0	0	0	0	255	402	350
06/11/2015	*	---	---	---	---	0	0	0	0	---	283	177
06/12/2015	*	---	---	---	---	0	0	0	3	0	172	325
06/13/2015	*	---	---	---	---	0	0	0	5	---	0	40
06/14/2015	*	---	---	---	---	0	0	0	1	341	0	18
06/15/2015	*	---	---	---	---	0	0	0	0	---	125	28
06/16/2015	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	81	72	0	34	5,274	3,837	7,590
# Days:		0	3	0	0	14	14	14	14	7	14	14
Average:		0	0	0	0	6	5	0	2	753	274	542
YTD		74	0	4	47	16,119	19,815	11,030	3,811	128,863	103,656	148,460

COMBINED LAMPREY JUVENILES												
Date	WTB (Coll)	IMN (Coll)	GRN (Coll)	LEW (Coll)	LGR ⁺ (Samp)	LGS (Coll)	LMN (Coll)	RIS (Coll)	MCN (Coll)	JDA (Coll)	BO2 (Coll)	
06/02/2015	*	---	0	---	---	0	100	20	0	200	375	100
06/03/2015	*	---	0	---	---	0	100	600	2	---	613	78
06/04/2015	*	---	0	---	---	0	100	0	0	150	320	0
06/05/2015	*	---	---	---	---	1	50	100	0	---	360	14
06/06/2015	*	---	---	---	---	0	100	0	1	700	408	0
06/07/2015	*	---	---	---	---	0	50	100	0	---	250	34
06/08/2015	*	---	---	---	---	2	100	0	0	800	13	30
06/09/2015	*	---	---	---	---	0	500	0	2	---	325	110
06/10/2015	*	---	---	---	---	0	300	100	0	450	320	48
06/11/2015	*	---	---	---	---	0	300	50	0	---	260	50
06/12/2015	*	---	---	---	---	0	100	60	2	200	540	50
06/13/2015	*	---	---	---	---	0	375	160	1	---	1,060	10
06/14/2015	*	---	---	---	---	0	250	140	2	600	120	60
06/15/2015	*	---	---	---	---	1	150	10	1	---	80	0
06/16/2015	*	---	---	---	---	---	---	---	---	---	---	---
Total:		0	0	0	0	4	2,575	1,340	11	3,100	5,044	584
# Days:		0	3	0	0	14	14	14	14	7	14	14
Average:		0	0	0	0	0	184	96	1	443	360	42
YTD		0	1	0	0	17	7,081	1,970	28	5,115	18,348	3,785

* See sampling comments

<http://www.fpc.org/currentDaily/smpcomments.htm>

Smolt indices, clipped & unclipped or combined, are presented in the following order: yearling chinook (chinook 1's), subyearling chinook (chinook 0's), steelhead, coho, sockeye, and lamprey juveniles. Two classes of fish counts are shown in these tables:

Two classes of fish counts are shown in these tables:

Sample counts (Samp) are provided for juvenile lamprey at LGR. See note below for details †.

Collection counts (Coll), which account for sample rates but are not adjusted for flow;

Passage indices (INDEX), which are collection counts divided by the proportion of water passing through the sampled powerhouse.

Passage indices are not population estimates, but are used to adjust collection counts for daily fluctuations in the site's or project's operations.

The classes of counts presented in the report are defined below for each site. Most samples occur over a 24-hr period

that spans two calendar days. In this report, the date shown corresponds with the sample end date.

Combined lamprey juvenile collection counts are provided for all sites. Combined lamprey juveniles is a combination of pacific lamprey ammocoetes, brook lamprey ammocoetes, unknown lamprey ammocoetes, pacific lamprey macrophthalmia, and unidentified lamprey species.

† In 2013 it was confirmed that juvenile lamprey can escape the sample tank at LGR which would lead to unreliable estimates of collection.

Therefore, only sample counts are provided in this report.

Definitions for Smolt Index Counts

WTB (Collection) = Salmon River Trap at Whitebird : Collection Counts

IMN (Collection) = Imnaha River Trap : Collection Counts

GRN (Collection) = Grande Ronde River Trap : Collection Counts

LEW (Collection) = Snake River Trap at Lewiston : Collection Counts

LGR (Index) = Lower Granite Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

LGS (Index) = Little Goose Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

LMN (Index) = Lower Monumental Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

RIS (Index) = Rock Island Dam Second Powerhouse Bypass Trap : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 2 Flow / (Powerhouse 1 & 2 Flow + Spill)}

MCN (Index) = McNary Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

JDA (Index) = John Day Dam Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse Flow / (Powerhouse Flow + Spill)}

BO2 (Index) = Bonneville Dam Second Powerhouse Bypass Collection System : Passage Index Counts

Passage Index = Collection Counts / {Powerhouse 2 Flow / (Powerhouse 1 & 2 Flow + Spill)}

JDA and BO2 data collected for the FPC by Pacific States Marine Fisheries Commission.

RIS data collected for the FPC by Chelan Co. PUD.

LGR, LMN, and MCN data collected for the FPC by Washington Dept. of Fish and Wildlife.

LGS and GRN data collected for the FPC by Oregon Dept. of Fish and Wildlife.

IMN data collected for the FPC by the Nez Perce Tribe.

Fall (post SMP season) trapping at the Imnaha River Fish Trap (IMN) is funded by the Lower Snake River Compensation Program (LSRCP)

WTB and LEW data collected for the FPC by Idaho Dept. of Fish and Game.

YTD 167545 9836 156151 8767 11394 1069 0 0 8 4 998 428 274590 6162 53 0 1

ICE HARBOR DAM

DATE	CHINOOK ADULT	CHINOOK JACK	SPRING CHINOOK ADULT	SPRING CHINOOK JACK	SUMMER CHINOOK ADULT	SUMMER CHINOOK JACK	FALL CHINOOK ADULT	FALL CHINOOK JACK	COHO ADULT	COHO JACK	STEELHEAD	WILD 5) STEELHEAD	SHAD	SOCKEYE	LAMPREY	CHUM	PINK	SOURCE
06/09/15	735	84	735	84	0	0	0	0	0	0	5	4	6242	0	0	0	0	USACE
06/10/15	878	86	878	86	0	0	0	0	0	0	19	15	6608	2	1	0	0	USACE
06/11/15	969	88	969	88	0	0	0	0	0	0	17	7	7074	0	2	0	0	USACE
06/12/15	730	116	0	0	730	116	0	0	0	0	4	2	7772	0	0	0	0	USACE
06/13/15	824	96	0	0	824	96	0	0	0	0	20	3	8321	0	4	0	0	USACE
06/14/15	1134	114	0	0	1134	114	0	0	0	0	19	3	9595	0	4	0	0	USACE
06/15/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
YTD	119150	6071	116462	5745	2688	326	0	0	0	0	1359	735	83193	6	26	0	0	

LOWER MONUMENTAL DAM 2)

DATE	CHINOOK ADULT	CHINOOK JACK	SPRING CHINOOK ADULT	SPRING CHINOOK JACK	SUMMER CHINOOK ADULT	SUMMER CHINOOK JACK	FALL CHINOOK ADULT	FALL CHINOOK JACK	COHO ADULT	COHO JACK	STEELHEAD	WILD 5) STEELHEAD	SHAD	SOCKEYE	LAMPREY	CHUM	PINK	SOURCE
06/09/15	721	149	721	149	0	0	0	0	0	0	10	2	n/a	1	0	0	0	USACE
06/10/15	727	157	727	157	0	0	0	0	0	0	21	3	n/a	0	0	0	0	USACE
06/11/15	689	146	689	146	0	0	0	0	0	0	7	1	n/a	1	0	0	0	USACE
06/12/15	852	134	852	134	0	0	0	0	0	0	11	2	n/a	1	0	0	0	USACE
06/13/15	502	109	502	109	0	0	0	0	0	0	16	7	n/a	0	1	0	0	USACE
06/14/15	296	65	0	0	296	65	0	0	0	0	1	0	n/a	1	0	0	0	USACE
06/15/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
YTD	111807	8762	111511	8697	296	65	0	0	0	0	3541	1866	n/a	10	8	0	0	

LITTLE GOOSE DAM 2)

DATE	CHINOOK ADULT	CHINOOK JACK	SPRING CHINOOK ADULT	SPRING CHINOOK JACK	SUMMER CHINOOK ADULT	SUMMER CHINOOK JACK	FALL CHINOOK ADULT	FALL CHINOOK JACK	COHO ADULT	COHO JACK	STEELHEAD	WILD 5) STEELHEAD	SHAD	SOCKEYE	LAMPREY	CHUM	PINK	SOURCE
06/09/15	823	148	823	148	0	0	0	0	0	0	5	1	n/a	6	0	0	0	USACE
06/10/15	673	131	673	131	0	0	0	0	0	0	5	0	n/a	2	1	0	0	USACE
06/11/15	655	161	655	161	0	0	0	0	0	0	2	0	n/a	0	1	0	0	USACE
06/12/15	552	138	552	138	0	0	0	0	0	0	11	1	n/a	2	0	0	0	USACE
06/13/15	761	133	761	133	0	0	0	0	0	0	3	1	n/a	2	1	0	0	USACE
06/14/15	436	110	436	110	0	0	0	0	0	0	6	2	n/a	0	1	0	0	USACE
06/15/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
YTD	104807	8476	104807	8476	0	0	0	0	0	0	1531	1006	n/a	17	3	0	0	

LOWER GRANITE DAM 3)

DATE	CHINOOK ADULT	CHINOOK JACK	SPRING CHINOOK ADULT	SPRING CHINOOK JACK	SUMMER CHINOOK ADULT	SUMMER CHINOOK JACK	FALL CHINOOK ADULT	FALL CHINOOK JACK	COHO ADULT	COHO JACK	STEELHEAD	WILD 5) STEELHEAD	SHAD 6)	SOCKEYE	LAMPREY	CHUM	PINK	SOURCE
06/09/15	668	108	668	108	0	0	0	0	0	0	1	1	112	0	0	0	0	USACE
06/10/15	638	133	638	133	0	0	0	0	0	0	2	1	96	0	0	0	0	USACE
06/11/15	857	148	857	148	0	0	0	0	0	0	2	0	85	0	0	0	0	USACE
06/12/15	721	145	721	145	0	0	0	0	0	0	7	2	0	0	0	0	0	USACE
06/13/15	526	131	526	131	0	0	0	0	0	0	4	0	0	0	0	0	0	USACE
06/14/15	430	104	430	104	0	0	0	0	0	0	4	0	0	0	0	0	0	USACE
06/15/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
YTD	103708	8062	103708	8062	0	0	0	0	0	0	9212	4352	447	13	0	0	0	

PRIEST RAPIDS DAM 1) 4)

DATE	CHINOOK ADULT	CHINOOK JACK	SPRING CHINOOK ADULT	SPRING CHINOOK JACK	SUMMER CHINOOK ADULT	SUMMER CHINOOK JACK	FALL CHINOOK ADULT	FALL CHINOOK JACK	COHO ADULT	COHO JACK	STEELHEAD	WILD 5) STEELHEAD	SHAD	SOCKEYE	LAMPREY	CHUM	PINK	SOURCE
06/09/15	772	44	772	44	0	0	0	0	0	0	5	0	0	95	9	0	0	GCPUD
06/10/15	403	21	403	21	0	0	0	0	0	0	0	0	1	73	8	0	0	GCPUD
06/11/15	520	30	520	30	0	0	0	0	0	0	2	0	1	129	10	0	0	GCPUD
06/12/15	567	38	567	38	0	0	0	0	0	0	3	0	0	392	8	0	0	GCPUD
06/13/15	1057	9	1057	9	0	0	0	0	0	0	4	0	3	520	6	0	0	GCPUD
06/14/15	618	26	0	0	618	26	0	0	0	0	1	0	3	614	7	0	0	GCPUD
06/15/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
YTD	28334	1596	27716	1570	618	26	0	0	0	0	62	0	14	2095	115	0	0	

WANAPUM DAM

DATE	CHINOOK ADULT	CHINOOK JACK	SPRING CHINOOK ADULT	SPRING CHINOOK JACK	SUMMER CHINOOK ADULT	SUMMER CHINOOK JACK	FALL CHINOOK ADULT	FALL CHINOOK JACK	COHO ADULT	COHO JACK	STEELHEAD	WILD 5) STEELHEAD	SHAD	SOCKEYE	LAMPREY	CHUM	PINK	SOURCE
06/09/15	807	9	807	9	0	0	0	0	0	0	0	0	0	106	5	0	0	GCPUD
06/10/15	640	32	640	32	0	0	0	0	0	0	1	0	0	62	4	0	0	GCPUD
06/11/15	419	14	419	14	0	0	0	0	0	0	0	0	0	72	8	0	0	GCPUD
06/12/15	480	9	480	9	0	0	0	0	0	0	1	0	0	96	3	0	0	GCPUD
06/13/15	335	47	335	47	0	0	0	0	0	0	2	0	0	154	8	0	0	GCPUD
06/14/15	856	15	0	0	856	15	0	0	0	0	4	0	0	494	6	0	0	GCPUD
06/15/15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
YTD	26838	1092	25982	1077	856	15	0	0	0	0	71	0	15	1072	74	0	0	

ROCK ISLAND DAM 2) 4) 7)

DATE	CHINOOK ADULT	CHINOOK JACK	SPRING CHINOOK ADULT	SPRING CHINOOK JACK	SUMMER CHINOOK ADULT	SUMMER CHINOOK JACK	FALL CHINOOK ADULT	FALL CHINOOK JACK	COHO ADULT	COHO JACK	STEELHEAD	WILD 5) STEELHEAD	SHAD	SOCKEYE	LAMPREY	CHUM	PINK	SOURCE
06/08/15	600	12	600	12	n/a	n/a	0	0	0	0	1	0	n/a	11	0	0	0	CHPUD
06/09/15	560	17	560	17	n/a	n/a	0	0	0	0	0	0	n/a	31	1	0	0	CHPUD

06/10/15	649	7	649	7	n/a	n/a	0	0	0	0	0	0	n/a	40	0	0	0	0	CHPUD
06/11/15	547	14	547	14	n/a	n/a	0	0	0	0	0	0	n/a	80	0	0	0	0	CHPUD
06/12/15	726	9	726	9	n/a	n/a	0	0	0	0	1	0	n/a	72	1	0	0	0	CHPUD
06/13/15	551	3	551	3	n/a	n/a	0	0	0	0	1	1	n/a	71	0	0	0	0	CHPUD
06/14/15	539	6	539	6	n/a	n/a	0	0	0	0	1	0	n/a	150	0	0	0	0	CHPUD
YTD	29148	1036	29148	1036	n/a	n/a	0	0	0	0	142	92	n/a	472	2	0	0	0	

ROCKY REACH DAM 2) 4)

DATE	CHINOOK ADULT	CHINOOK JACK	SPRING CHINOOK ADULT	SPRING CHINOOK JACK	SUMMER CHINOOK ADULT	SUMMER CHINOOK JACK	FALL CHINOOK ADULT	FALL CHINOOK JACK	COHO ADULT	COHO JACK	STEELHEAD	WILD 5) STEELHEAD	SHAD	SOCKEYE	LAMPREY	CHUM	PINK	SOURCE	
06/08/15	137	14	137	14	n/a	n/a	0	0	0	0	0	0	n/a	3	0	0	0	0	CHPUD
06/09/15	205	25	205	25	n/a	n/a	0	0	0	0	0	0	n/a	12	0	0	0	0	CHPUD
06/10/15	214	18	214	18	n/a	n/a	0	0	0	0	0	0	n/a	9	0	0	0	0	CHPUD
06/11/15	343	8	343	8	n/a	n/a	0	0	0	0	0	0	n/a	33	0	0	0	0	CHPUD
06/12/15	415	12	415	12	n/a	n/a	0	0	0	0	1	0	n/a	48	0	0	0	0	CHPUD
06/13/15	411	12	411	12	n/a	n/a	0	0	0	0	0	0	n/a	80	0	0	0	0	CHPUD
06/14/15	204	0	204	0	n/a	n/a	0	0	0	0	2	1	n/a	60	0	0	0	0	CHPUD
YTD	12143	577	12143	577	n/a	n/a	0	0	0	0	119	81	n/a	249	0	0	0	0	

WELLS DAM 2) 4)

DATE	CHINOOK ADULT	CHINOOK JACK	SPRING CHINOOK ADULT	SPRING CHINOOK JACK	SUMMER CHINOOK ADULT	SUMMER CHINOOK JACK	FALL CHINOOK ADULT	FALL CHINOOK JACK	COHO ADULT	COHO JACK	STEELHEAD	WILD 5) STEELHEAD	SHAD	SOCKEYE	LAMPREY	CHUM	PINK	SOURCE	
06/07/15	174	41	174	41	n/a	n/a	0	0	0	0	2	1	n/a	2	0	0	0	0	DART
06/08/15	175	33	175	33	n/a	n/a	0	0	0	0	2	2	n/a	0	0	0	0	0	DART
06/09/15	87	24	87	24	n/a	n/a	0	0	0	0	1	0	n/a	3	0	0	0	0	DART
06/10/15	80	26	80	26	n/a	n/a	0	0	0	0	0	0	n/a	1	0	0	0	0	DART
06/11/15	169	35	169	35	n/a	n/a	0	0	0	0	2	0	n/a	16	0	0	0	0	DART
06/12/15	272	17	272	17	n/a	n/a	0	0	0	0	2	1	n/a	17	0	0	0	0	DART
06/13/15	381	21	381	21	n/a	n/a	0	0	0	0	1	1	n/a	30	0	0	0	0	DART
YTD	9235	1100	9235	1100	n/a	n/a	0	0	0	0	53	37	n/a	69	0	0	0	0	

NOTES:

- At Willamette Falls Dam, it takes the staff most of the day to accurately review one day of fish passage on tape when the counts are high. The WFA staff make every attempt to keep the counts as up-to-date as possible. Note: at WFA Monday's are extremely busy, as the staff attempt to catch-up with the weekend counts.
- The Corp of Engineers has stopped shad counting at The Dalles, starting in 2011 on the advice of the Fish Passage Operations and Management (FPOM) committee, made up of NOAA, CRITFC, ODFW, WDFW, IDFW, BPA, and COE biologists.
- ¹⁾ Since the year 2006, Priest Rapids Dam and Wanapum Dam jack counts have included mini jacks.
- ²⁾ Shad are not counted at Willamette Falls, The Dalles, John Day, Lower Monumental, Little Goose, Rock Island, Rocky Reach and Wells Dams
- ³⁾ Steelhead counts appear higher at Lower Granite Dam because most years a group which migrated into the river system between October and December overwinters below LGR and continues its migration in early March. The fish ladder at Lower Granite will not be in operation until March 4, 2015. The first full day of counting in 2015 will be March 5, 2015.
- ⁴⁾ As the Army Corp of Engineers no longer collects adult counts from the PUDs, we now get data directly from Chelan, Douglas and Grant Co. PUDs and DART.
- ⁵⁾ Wild steelhead are a subset of steelhead. Wild steelhead are counted separately from hatchery steelhead at Corps dams on the Columbia and Snake Rivers. Wild steelhead are identified as fish with an intact adipose fin. However, a small number of hatchery fish may not have had their adipose fin removed.
- ⁶⁾ Shad are typically not counted at any of the Corps dams after August 31 each year and shad are not counted at all Corps dams. An n/a in the shad columns at Bonneville Dam and Lower Granite Dam after August 31st means that the shad are not being counted.
- ⁷⁾ In 2014, Grant County PUD trapped and transported hundreds of Lamprey above Rock Island Dam. Therefore, the ladder counts of Lamprey at Rock Island under estimate the true numbers of lamprey past the project.
- When the source column on this report reads 'unknown', 'ceftp', or 'TMT', it is because the counts have been gathered via the phone or ftp and are considered preliminary data. When the Corp of Engineers finalizes the counts and posts them on their website the source reads USACE.
- This report includes ALL available adult counts. The information in this report is preliminary.
- In 2012, the U.S. Army Corps of Engineers and NOAA Fisheries are currently developing automated counting systems for Lamprey Passage Structures (LPS) installed at Bonneville Dam. In the interest of publishing accurate counts, LPS counts will not be publicly posted in-season until the automated systems are fully operational.
- The adult counts in this report are based on reporting dates for dams recently established (2000). They are presented in the table below. A report with adult salmon counts based on historical dates (prior to 2000) can be found [here](#).
- The reporting dates table shows that several dams stop counting fish around November 15th each year. After a dam stops counting fish for the season, only the total number of fish are shown on this report.
- These data are updated periodically throughout the day. The FPC data retrieving robot searches the web for updated data every 30 minutes in the AM, and every hour in the PM.
- The last column " Source " shows where the data was imported from: NWACE is imported from the COE's Daily Fish Reports; USACE is from [US Army Corps of Engineers](#) fish count pages; CHPUD is from [Chelan PUD](#); GCPUD is from [Grant PUD](#) and DGPUD is from [Douglas PUD](#) and DART is from the [University of Washington's Data Access in Real Time](#). WFA is imported from [ODFW's Willamette Falls](#) website.
- Wild Steelhead counts are included in the Steelhead count.
- Some of the sites are several days behind in reporting, but is reported by the COE as zero, so where zeros appear across all rows, the data should be considered as "not yet reported".
- Video counts can cause a delay in posting the data to the web, because the staff at the projects have to review the tapes.

2014-15 Adult Salmon Dam Count Monitoring Dates

Dam	Video Monitoring Dates		Direct Monitoring Dates
	Day	Night	
Bonneville Dam	November 1 - February 28, 2015 March 1 - March 31, 2015	June 15 - September 30, 2015	April 1 to October 31, 2015
**The Dalles Dam		June 15 - September 30, 2015	April 1 to October 31, 2015
John Day Dam		June 15 - September 30, 2015	April 1 to October 31, 2015

McNary Dam	July 1 - September 30, 2015	April 1 to October 31, 2015
Ice Harbor Dam		April 1 to October 31, 2015
Lower Monumental Dam	November 1 - February 28, 2015	April 1 to October 31, 2015
Little Goose Dam		April 1 to October 31, 2015
Lower Granite Dam	November 1 - December 30, 2015 March 1 - March 31, 2015	June 15 - September 30, 2015 April 1 - October 31, 2015
Priest Rapids Dam	April 15 - November 15, 2015 (24 hr)	
Wanapum Dam	April 15 - November 15, 2015 (24 hr)	
Rock Island Dam	April 14 - November 15, 2015 (24 hr)	
Rocky Reach Dam	April 14 - November 15, 2015 (24 hr)	
Wells Dam	May 1 - November 15, 2015 (24 hr)	
Willamette Falls	Count year round (24 hr)	

2014-2015 Columbia and Snake River Fishway Outages

Dam	Dates Fishways are Closed
Bonneville Dam	<ul style="list-style-type: none"> Bradford Island Fishway: November 10, 2014 - November 24, 2014 Cascades Island Fishway (with UMT): December 3, 2014 to February 28, 2015 Washington Shore Fishway: December 8, 2014 to February 28, 2015
The Dalles Dam	<ul style="list-style-type: none"> East Fish Fishway: December 3, 2014 - January 27, 2015 North Fish Fishway: February 3, 2015 - February 26, 2015
John Day Dam	<ul style="list-style-type: none"> North Fish Fishway: November 29, 2014 - December 23, 2014 South Fish Fishway: January 4, 2015 - February 26, 2015
McNary Dam	<ul style="list-style-type: none"> Washington Shore Fishway: January 5, 2015 - January 15, 2015 Oregon Shore Fishway: January 17, 2015 - February 28, 2015
Ice Harbor Dam	<ul style="list-style-type: none"> North Shore Fishway: January 26, 2015 - February 24, 2015 South Shore Fishway: January 5 - January 22, 2015
Lower Monumental Dam	<ul style="list-style-type: none"> North Shore Fishway: January 5, 2015 - February 3, 2015 South Shore Fishway: February 4, 2015 - February 27, 2015
Little Goose Dam	<ul style="list-style-type: none"> January 7, 2015 - February 20, 2015
Lower Granite Dam	<ul style="list-style-type: none"> January 7, 2015 - March 4, 2015
Priest Rapids Dam	<ul style="list-style-type: none"> Left Bank Fishway: December 30, 2014 - February 24, 2015 Right Bank Fishway: December 1, 2014 - December 22, 2014
Wanapum Dam	<ul style="list-style-type: none"> Right Bank Fishway: January 26, 2015 - February 6, 2015 Left Bank Fishway: December 12, 2014 - January 22, 2015
Rock Island Dam	<ul style="list-style-type: none"> Right Bank Fishway: December 1, 2014 - February 20, 2015 Left Bank Fishway: January 12, 2015 - February 6, 2015 Middle Fishway: December 29, 2014 - January 9, 2015
Rocky Reach Dam	<ul style="list-style-type: none"> January 6, 2015 - February 28, 2015
Wells Dam	<ul style="list-style-type: none"> West Ladder: TBD East Ladder: December 9, 2014 to February 5, 2015

- Data source: Corp of Engineers, Dewatering Plans and Schedules. Available online at: <http://www.nwd-wc.usace.army.mil/tmt/documents/FPOM/2010/Plans%20lists%20charts/>