

## **Summary of 2019 Little Goose Dam Spring Spill Operations**

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### **2019 Spill Agreement and 2019 Fish Operations Plan (FOP) Table 3 – LGS Spring Spill:**

- 120% Gas Cap 16 hours/day and Performance Standard 30% 8 hours/day. The 8 hours of 30% spill will occur in two blocks per day of 4 AM hours/4 PM hours or 5 AM hours/3 PM hours (AM = “beginning near dawn”; PM = “generally near dusk”).
  - Operate within the 1.5-ft minimum operating pool (MOP) range of 633.0 – 634.5 ft.
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From April 3 through May 20, the Corps and BPA operated in accordance with the 2019 Spill Agreement and maintained 30% spill as flows allowed for either 4 AM hours/4 PM hours (0600-1100/1600-2000) or 5 AM hours/3 PM hours (0600-1100/1600-1900).

By May 20, the adult Chinook count differential between Lower Monumental and Little Goose was 4,775 (*see FPC and DART websites for information on adult counts and reach distribution*<sup>1</sup>).

Operational changes to address adult delay were coordinated as follows:

1. Tuesday, May 21 – Friday, May 24: Maintained 30% spill only as a 5 AM/3 PM operation as flows allowed (i.e., removed flexibility to do 4 AM/4 PM). Recommendation from IDFG received on May 20 and consensus (no objections) from TMT at the meeting on May 22.
2. Saturday, May 25 – Tuesday, May 28: Changed 30% spill to 6 AM hours (0600-1200), then 2 PM hours (1700-1900) as flows allowed. Consensus (no objections) from TMT at the meeting on Friday, May 24.
3. Wednesday, May 29 – Thursday, May 30: Changed 30% spill to 8 consecutive hours (0400-1200) as flows allowed. Consensus (no objections) from FPAC received on Tuesday, May 28.
4. Friday, May 31 – Tuesday, June 4: Continued 30% spill for 8 consecutive hours (0400-1200). If necessary due to flows above hydraulic capacity, water was stored in the forebay above MOP 633.0–634.5 feet then drafted out over the remaining hours by increasing spill to pass inflow from 1200-1600 hours, then increasing spill as necessary from 1600-0400 to draft the pool back to MOP. Consensus (no objections) from FPAC received on Thursday, May 30.

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<sup>1</sup> Adult Count Query: [www.fpc.org/adults/adult\\_queries/Q\\_adultcoequeries\\_adultrunsum\\_queryv2.php](http://www.fpc.org/adults/adult_queries/Q_adultcoequeries_adultrunsum_queryv2.php)  
DART PIT-Tag Adult Reach Distribution: [www.cbr.washington.edu/dart/query/pitadult\\_reachdist](http://www.cbr.washington.edu/dart/query/pitadult_reachdist)  
FPC Passage Indicator: [www.fpc.org/passageindicator\\_homepage.php](http://www.fpc.org/passageindicator_homepage.php)

5. Wednesday, June 5 – Wednesday, June 12: Continued operation in paragraph 4 above, with the additional request to change the Adjustable Spillway Weir (ASW) from low crest to high crest daily from 0400-2000 hours. Consensus (no objections) from FPAC received on Tuesday, June 4, and TMT on Wednesday, June 5.
  - a. The ASW crest change operation was discontinued Wed, 6/12, and the ASW was kept in High crest all hours per consensus (no objections) from TMT at the 6/12 meeting. Flows were nearly at the FPP trigger (< 85 kcfs): previous day average outflow = 86.4 kcfs; current day average outflow through 0900 = 75 kcfs; RFC inflow forecast dropping below 85 kcfs starting tomorrow, 6/13.
  
6. Thursday, June 13 – Thursday, June 20: Continued 30% spill for 8 hrs/day (0400-1200) and maintained ASW in high crest all hours. Consensus (no objections) from TMT on Wed 6/12.
  - a. On Tuesday, 6/18, the Corps and BPA received a consensus recommendation (no objections) from FPAC to modify unit priority to move Unit 6 to last in the order (1, 2, 3, 4, 5, 6) for the remainder of spring spill. Per FPP Table LGS-5, spring unit priority order is: 1, 6, 2, 3, 4, 5. Considering Unit 1 was forced out of service for repairs Mon, 6/17 at 15:00, the intent was prioritize units on the south side of the powerhouse and maintain attraction flow to the adult ladder entrance. When the request was received on 6/18, Unit 6 was already out of service due to a forced outage at 07:00 for an oil leak, so the project was already operating per the request (Units 2, 3, 4). It was anticipated Unit 6 would be out of service through the rest of spring spill; however, it was repaired and returned to service that day at 16:00. RCC issued project guidance to move Unit 6 to last priority on Wed, 6/19 at 10:00 for the remainder of spring spill.

> MOP 634.5'	# Hrs > MOP	24-hr Forebay Range (ft)	24-hr Avg (ft)
Sat 6/1	10	633.8 – 635.0	634.4
Sun 6/2	2	633.4 – 634.6	634.0
Mon 6/3	7	633.4 – 634.8	634.2
Tues 6/4	11	633.2 – 635.4	634.4
Wed 6/5	7	633.6 – 634.7	634.2

ASW High Crest	Hours	Comment
Wed 6/5	n/a	Unable to adjust to high crest due to equipment malfunction
Thu 6/6	1200 – 2400	Late start due to equipment malfunction. Did not switch back to Low crest at 2000 hours due to human error.
Fri 6/7	0000 – 2000	Stayed in high crest from previous day until 2000 hours (human error).
Sat 6/8	0400 – 2000	Starting on Wed, 6/12, the ASW was maintained in High crest all hours.
Sun 6/9		
Mon 6/10		
Tue 6/11		
Wed 6/12		