

MEMORANDUM FOR THE RECORD 15 LMN 005 MFR Implementation of FPP change form 15 LMN 004 Low Flow Spill Patterns w/ No RSW

SUBJECT: 1. Intermittent RSW operation from August 8 to present.
 2. Low flow spill without RSW. Table LMN -9. Spill Patterns w/ No RSW.

Current spill levels now are at an extremely low flow period, requiring a change to existing spill pattern.

RSW operations have been intermittent for the past few days. This is due to the critical low flows in the Lower Snake River. These critically low flows the project decided to operate at minimum generation and remove the RSW intermittently from operation as displayed in the immediate table below:

	RSW out of service		
Date	8-Aug	9-Aug	10-Aug
Standby from	0200	0100	0900
Return to Operation	2100	1800	

When spill is less than 6.8 kcfs at Lower Monumental dam, the RSW in Bay 8 must be closed and spill passed to the other bays. This was discussed at FPOM on July 8, 2015. FPOM supported the need for a lower spill patterns than that described in the FPP. The table presented in 15 LMN 004 first displayed a bulk spill to FPOM without the RSW and was left pending. FPOM requested to change this form to a uniform spill without the RSW. Table LMN -9, Lower Monumental Dam Spill Patterns with No RSW has been modified with coordination from NOAA for a uniform spill as displayed below.

Table LMN-9. 2015 Lower Monumental Dam Low Flow Spill Patterns with no RSW. (Revised 8/11/15)^a

LMN Bulk Spill Patterns - Gate Stops (#) per Spillbay								Total Stops	Total Spill
Bay 1	Bay 2	Bay 3	Bay 4	Bay 5	Bay 6	Bay 7	Bay 8 ^b	(#)	(kcfs)
						1	CLOSE	1	1.8
1						1	CLOSE	2	3.3
1					1	1	CLOSE	3	4.8
1					1	2	CLOSE	4	6.6

LMN Bulk Spill Patterns - Gate Stops (#) per Spillbay								Total Stops	Total Spill
Bay 1	Bay 2	Bay 3	Bay 4	Bay 5	Bay 6	Bay 7	Bay 8 ^b	(#)	(kcfs)
1					2	2	CLOSE	5	6.8
2					2	2	CLOSE	6	9.6
2					2	3	CLOSE	7	11.3
2				1	2	3	CLOSE	8	13.1
2			1	1	2	3	CLOSE	9	14.7
2		1	1	1	2	3	CLOSE	10	16.3
2	1	1	1	1	2	3	CLOSE	11	17.9
3	1	1	1	1	2	3	CLOSE	12	19.5
3	1	1	1	1	3	3	CLOSE	13	21.6
3	1	1	1	1	3	4	CLOSE	14	22.7
3	1	1	1	1	4	4	CLOSE	15	24.3
3	1	1	1	2	4	4	CLOSE	16	25.9

Comments from others:

7/9/2015 FPOM: There were concerns about not having model data at these low spill rates to evaluate the proposed changes. Hevlin proposed a model trip in October. Wright asked for comments. FPOM was reasonably willing to test something this summer but wanted a commitment to a model trip in October. Van Dyke would like to see a flat pattern. He will send comments to Wright.

7/15/15 email to FPOM:

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

From: Wright, Lisa NWD

Sent: Wednesday, July 15, 2015 8:26 AM

Subject: FPOM: FPP Change Forms - Update on LWG, LMN, IHR low flow spill patterns

Good morning FPOM -

At last week's FPOM meeting, we discussed three FPP change forms to add lower spill patterns at Ice Harbor (15IHR008), Lower Monumental (15LMN004), and Lower Granite (15LWG004). FPOM supported the need for these lower spill patterns given this year's low flow conditions, and were in general agreement with the uniform patterns proposed for Lower Granite. There were concerns that the patterns proposed for IHR and LMN may need to be more uniform, but there are no

modeling data to evaluate patterns at these low spill rates (1.7-6.8 kcfs). FPOM requested more time to review and provide comments on the low flow spill patterns for IHR and LMN in the event they need to be implemented this year.

Currently, low flow conditions are requiring Lower Granite spill below 10.3 kcfs. As such, the low flow spill patterns defined in change form 15LWG004 are being implemented during those hours when Lower Granite total outflow is less than approximately 28.6 kcfs (assuming Unit 1 min gen is ~18.3 kcfs). These flow conditions were first met yesterday, July 14, at 10:00.

The lower spill patterns for IHR and LMN will be required if total project outflow drops below ~20 kcfs. The current STP indicates inflow in the range of 20-23 kcfs in late August, so there may be some hours when these lower spill patterns are required. Therefore, it is requested that FPOM representatives review the low flow spill patterns proposed in change forms 15IHR008 and 15LMN004, and provide comments for discussion and finalization at the August 13th FPOM meeting.

7/15/15 email from Bill Hevlin:

Hi Lisa, With regard to LoMo and Ice projects, the RSWs should be closed at these low flows, and spill spread evenly across the spillway, that is unless Trevor has a different opinion. And like at granite we could really benefit from looking at these models at ERDC with river flow at 25 kcfs, I don't think we ever have. Bill Hevlin

August 10 and 11.

Sincerely,
Project Fisheries