



FISH PASSAGE CENTER

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MEMORANDUM

To: Fish Passage Advisory Committee (FPAC)

From: FPC Staff

Date: May 18, 2017

Subject: Action Notes from May 18, 2017, Special FPAC meeting

On May 18, 2017, FPAC met via conference call for a meeting regarding adult fallback at McNary Dam. The following people participated in the meeting:

Paul Wagner (FPAC Co-Chair NOAA)
Brandon Chockley (FPC)
Charlie Morrill (WDFW)
Dave Benner (FPC)
Dave Swank (USFWS)
Dave Statler (Nez Perce Tribe)
Erick Van Dyke (ODFW)
Erin Cooper (FPC)
Jay Hesse (Nez Perce Tribe)
Jennifer Graham (Warm Springs Tribe)
Margaret Filardo (FPC)
Russ Kiefer (IDFG)
Trevor Conder (NOAA)
Tucker Jones (ODFW)

AGENDA ITEMS

At TMT on Wednesday, May 17, Paul Wagner (NOAA) presented concerns that adult fallback issues at McNary Dam are potentially related to spill levels and spill percentages, particularly for the May 9 through May 12 period. This meeting was called to discuss the relationship between spill and fallback and if a recommendation regarding operations should be made. Prior to this meeting, Paul Wagner distributed information regarding fallback rates and spill (see attached). These documents included a summary table from DART on estimated fallback rates at McNary in 2017, graphs of fallback rates vs flow and spill at McNary in 2011 from May 1 through June 21, and spill efficiency curves.

Paul Wagner pointed out that MC1, the powerhouse (Oregon) side, seems to be the ladder with more reascensions, particularly with spill levels above 60%. Brandon Chockley (FPC) pointed out that a large proportion of the fish passage occurs at MC1. Additionally, fish counted as a reascension in one ladder may be reascending in a different ladder from their first attempt, so it is impossible to distinguish from these data if one ladder is worse or better for passage.

Paul Wagner showed that under 60% spill at McNary, fish passage efficiency (FPE) is 80%.

Russ Kiefer (IDFG) asked about the time between the first ladder ascent and the time to reascension. Trevor Conder (NOAA) stated that most occurred within one half to one third of a day. Brandon Chockley (FPC) and Margaret Filardo (FPC) pointed out that, according to the DART methodology, two detections with 6 or more hours in between are considered separate passes and, therefore, may be considered a reascension. Brandon also pointed out that, when trying to recreate the DART analysis, he was noticing a lot of fish that were detected at the first group of coils near the entrance and then go undetected for >6 hours before being detected at the detection system near the counting window. The concern is that the DART methodology may be considering these separate ascensions and, therefore, overestimating reascension rates.

Paul Wagner stated that he feels there is an increase in fallback rate when spill is above 60%, and asked if there was a spill volume or percentage at which managers would support turbine operations above the 1% to reduce spill. An additional unit should be operational later today, which will provide additional powerhouse flow without operations above the 1%.

Margaret Filardo described the analysis that the FPC is currently working on. Using reascension data from DART, it appears that there is high variability in fallback rates, even in years where BiOp spill levels were provided, as in 2009, 2010, 2015, and 2016. Additionally, according to a 2016 NOAA analysis (Crozier et al. 2016), Chinook that are transported as juveniles have a higher probability of fallback at all dams. The migration history of fish making reascensions needs to be part of the analysis. A full analysis from FPC will take some time, but should be considered necessary before operations are modified.

Russ Kiefer (IDFG) stated that because reascensions are occurring on the powerhouse side, he feels that the main issue is not spill or spill proportion, but total flows. Because flows are autocorrelated with spill, the appearance of a relationship between fallback and spill may be false. Therefore, an operation that changes spill volumes will not help the overall fallback issue.

Margaret Filardo presented a table from Dave Benner (FPC)(see attached) projecting powerhouse flows given the most recent STP and units soon to become operational. This table shows lower flows and reduced spill in the next few weeks. This should address NOAA's concerns and provides time for a full analysis by the FPC to inform future recommendations. Jennifer Graham (Warm Springs Tribe) suggested that timing be included in the analysis, to examine if fallback rates increase across the season.

Paul Wagner reviewed fallback rates throughout the hydrosystem. In the Snake, tag numbers are very low so fallback rates are hard to assess.

Margaret Filardo explained that FPC will work on our analysis and distribute it to FPAC. This analysis will include the relationship between fallback, flow, spill, and transportation. The two units coming in at McNary will operate within in the 1% efficiency range, which is required under these flows. However, when managers are considering operations outside of what is already in the FPP, it is important to complete a full analysis before making recommendations.

Erick Van Dyke (ODFW) expressed concern that TMT was the first time FPAC members heard about the concerns about fallbacks at MCN, even though the issue of operating the units at MCN outside the 1% range was discussed at the FPAC meeting the day before. Paul Wagner and Trevor Conder (NOAA) explained that the concern was first noticed by them on Tuesday afternoon, after the FPAC meeting. Several FPAC members requested that, if these types of concerns come up after the FPAC meeting and are going to be raised at TMT, an e-mail should be sent to FPAC members describing the issue and letting them know that the issue will be brought up at TMT. This will allow FPAC members to be more prepared to make recommendations, or delay recommendations, at TMT.

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

FPAC Agenda for Thursday May 18, 2017
Meeting time: 10:00 AM

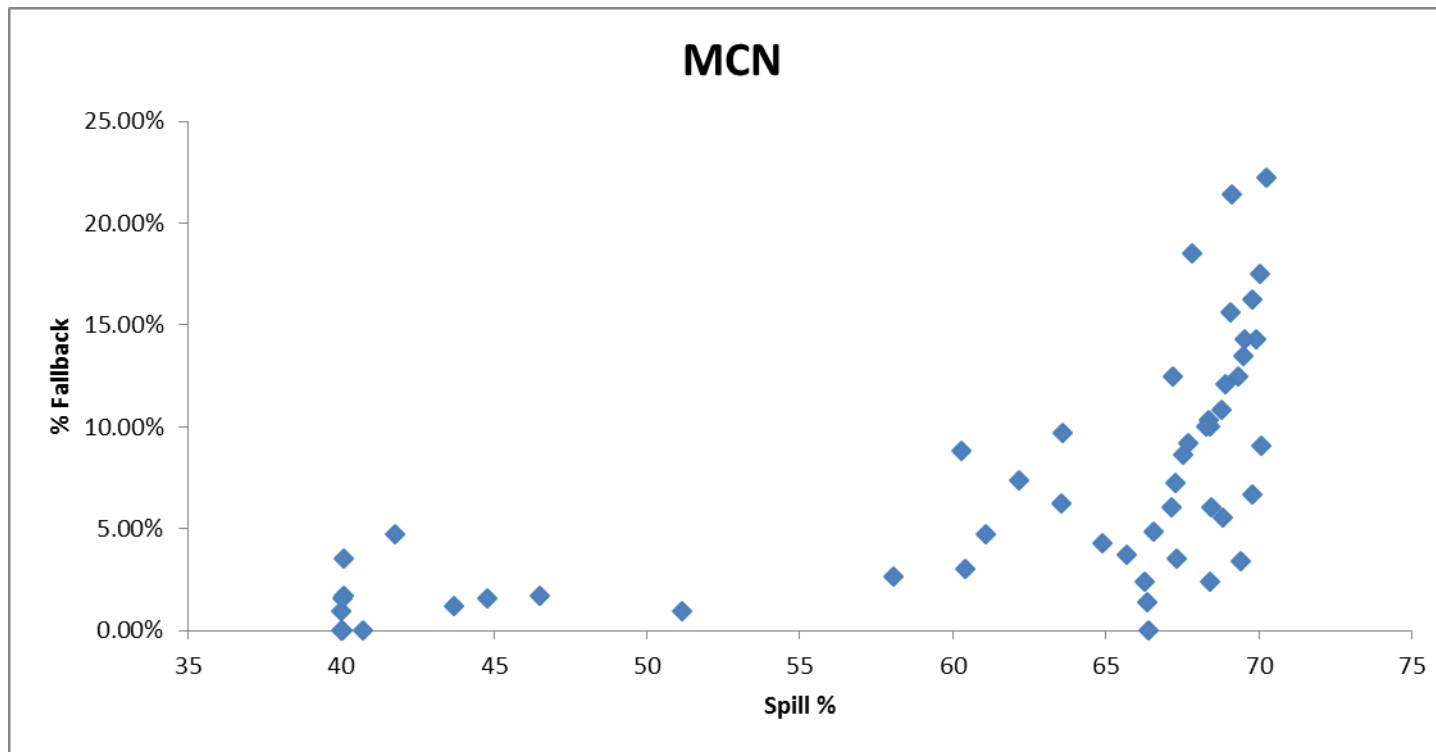
1. Consider adopting operation at McNary to lessen the degree of adult fallback

Fall Back Adjustment for McNary Dam 2017

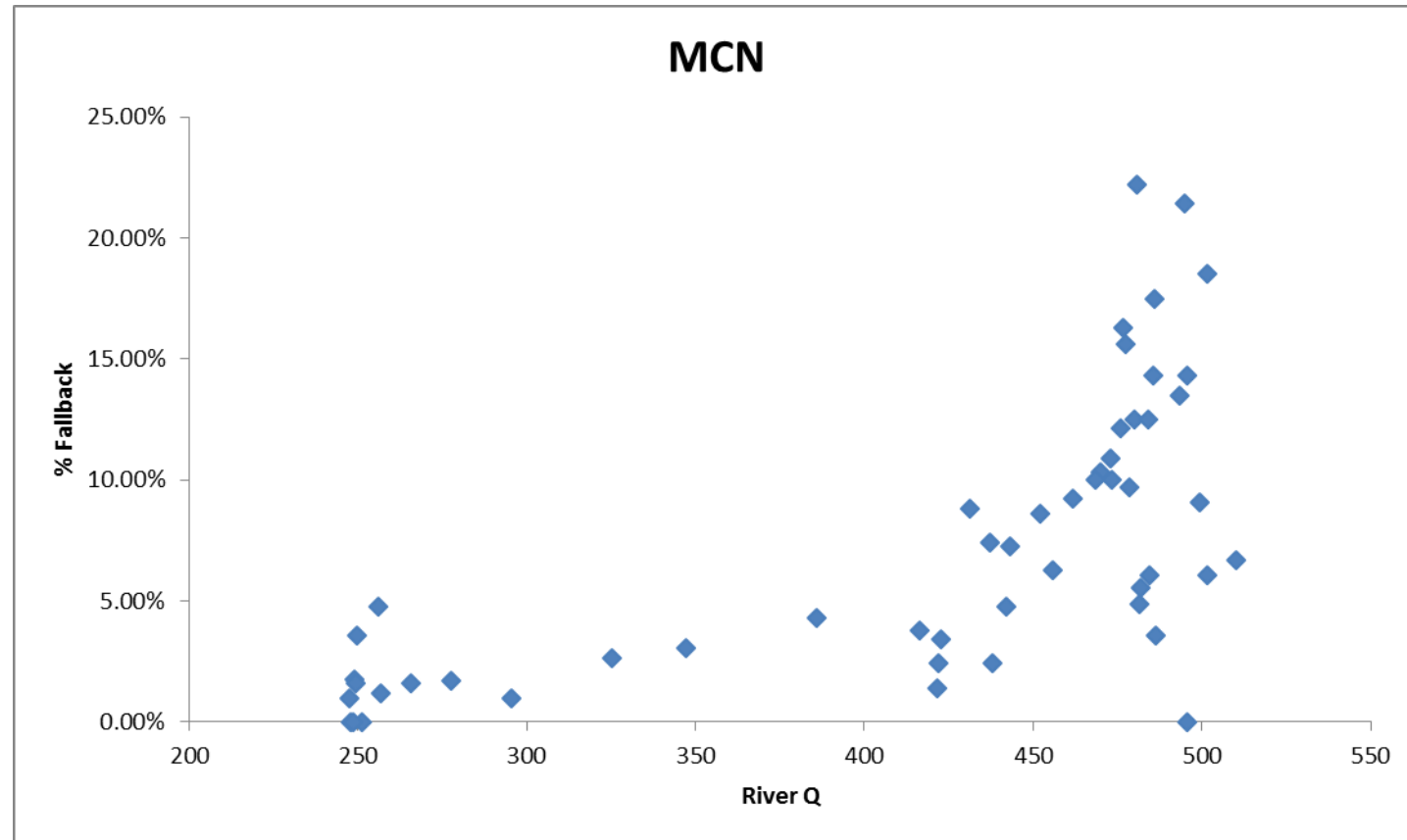
source: <http://www.cbr.washington.edu/fallback/fallback.php>

Site	First Date	Last Date	Unique Fish	Total Ascents	Proportion	SE											
					Unique												
MC1	1-May-17	15-May-17	73	89	0.8202	0.0407											
MC2	7-May-17	15-May-17	31	33	0.9394	0.0415											
Pooled:	1-May-17	15-May-17	104	122	0.8525	0.047											
Daily Ascents and Fallback Adjustment Rates:																	
		MC1						MC2						Pooled			
Date		Unique	Total	Proportion	SE			Unique	Total	Proportion	SE			Unique	Total	Proportion	SE
				Unique						Unique						Unique	
15-May-17			7	7	1	0		9	10	0.9	0.0949			16	17	0.9412	0.0484
14-May-17			11	11	1	0		1	1	1	0			12	12	1	0
13-May-17			11	12	0.9167	0.0798		4	4	1	0			15	16	0.9375	0.0312
12-May-17			9	15	0.6	0.1265		9	10	0.9	0.0949			18	25	0.72	0.144
11-May-17			11	15	0.7333	0.1142		5	5	1	0			16	20	0.8	0.1
10-May-17			10	13	0.7692	0.1169		1	1	1	0			11	14	0.7857	0.0306
9-May-17			3	4	0.75	0.2165		1	1	1	0			4	5	0.8	0.08
8-May-17			2	2	1	0		0	0	NA	NA			2	2	1	0
7-May-17			4	4	1	0		1	1	1	0			5	5	1	0
5-May-17			4	4	1	0		0	0	NA	NA			4	4	1	0
1-May-17			1	1	1	0		0	0	NA	NA			1	1	1	0
Pooled:			73	88	0.8295	0.0401		31	33	0.9394	0.0415			104	121	0.8595	0.0436

2011 Spill and Fallback at McNary



2011 Flow and Fallback at McNary



2011 Spill Flow and Fallback at McNary

