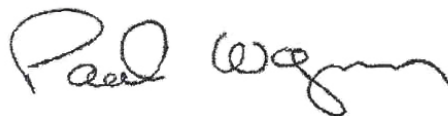


SYSTEM OPERATIONAL REQUEST: #2016-2

WALLA WALLA DISTRICT

The following State, Federal, and Tribal Salmon Managers have participated in the preparation and support this SOR: NOAA National Fisheries Service, Idaho Department of Fish and Game, U.S. Fish and Wildlife Service, Washington Department of Fish and Wildlife, Oregon Department of Fish and Wildlife, the Nez Perce Tribe, and the Columbia River Inter-Tribal Fish Commission.

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FROM: Paul Wagner, FPAC Chair

DATE: June 15, 2016

SUBJECT: Termination of Transportation on August 1, 2016

SPECIFICATIONS

Objective: Terminate transportation operations at all three Snake River collector projects on August 1, 2016.

JUSTIFICATION

As a result of the juvenile fish bypass system upgrade construction at Lower Granite Dam (LGR), all fish screens in the LGR bypass facility will be removed beginning August 1, 2016, thus terminating the ability to collect fish for transportation at this project. During the construction period spill will be provided (up to the gas cap) to compensate for the loss of guidance efficiency, as fish passing via the powerhouse will only be able to pass through turbines.

Given that transportation at LGR will not be possible after August 1, 2016, barging would be limited to Little Goose (LGS) and Lower Monumental (LMN) dams until mid-August. According to the COE, barge transportation from LGS and LMN would logistically be difficult to accomplish. One alternative that was discussed is to switch to truck transport from LGS and LMN on August 1, 2016 (instead of the intended date of August 15, 2016). A second alternative operation would be to terminate transportation from all three collector projects on August 1, 2016.

With respect to the first alternative (switching to truck transportation at LGS and LMN on August 1st) there remains concern regarding the use of trucks to transport juveniles during this period (ISAB 1998). Relative to the second alternative (terminate transportation from all three collector projects on August 1st), the following information is provided as background. Based on PIT-tag detections, juvenile fall Chinook are present at LGR through the end of sampling on October 31st each year. In the past five years, these PIT-tag detections have been composed mainly of wild/natural Clearwater River subyearling Chinook as well as a few late released hatchery origin fish—also from the Clearwater Basin. In addition, small numbers of PIT-tagged Snake River wild/natural fall Chinook have been detected at LGR after August 1st.

In reviewing the available information on transportation of fall Chinook during the late summer period (August-October) it appears that there is not a great risk to forgo transport from LGS or LMN in 2016. The numbers of subyearling Chinook collected at both LGS and LMN are expected to be relatively low and fish collected at this time at LMN often exhibit signs of the disease *Columnaris*.

There are two analyses of data available for review regarding the benefits of transportation to subyearling fall Chinook. In 2014, the collaborative fall Chinook transportation study issued a draft report that contained ratios of Transport: Bypass Smolt-to-Adult Return Rates (SARs) for migration years 2006 and 2008 (Smith et al. 2014). In addition, NOAA

provided results for migration years 2009 and 2010 at the 2014 AFEP review (via PowerPoint). These analyses are based on a comparison of transported versus bypassed fish and contained some data for experimental fall Chinook surrogates (releases of surrogate study fish were discontinued after 2012) and limited data for production and wild/natural fall Chinook juveniles during the late summer period (August to October). The NOAA analyses on surrogates indicate there is a transport benefit, over bypassed fish, during the late summer period.

The other set of information evaluating the transportation of fall Chinook juveniles comes from the Comparative Survival Study (CSS). The CSS is not limited to a comparison of bypassed versus transported fish, as it includes fish that were not detected (no bypass detection) at any of the three transportation collector projects. The CSS has found that in-river SARs of subyearling fall Chinook were higher than those of transported fish in most recent years (McCann et al. 2015). According to McCann et al. (2015), of the fall Chinook production PIT-tag cohorts released from 2006 to 2012, twelve study cohorts showed significant benefit to adult returns from migrating in-river while only five cohorts showed a significant transport benefit. However, it is worth noting that the juvenile fish in the McCann et al. (2015) analysis typically migrated past the Snake River collector dams (LGR, LGS, and LMN) from mid-May to July.

Given the planned cessation of transportation at LGR, the lack of information demonstrating a consistent benefit to transportation from LGS and LMN after August 1st, and the proposed use of trucking in early August, we believe it is reasonable to allow these fish to migrate in-river. The collaborative fall Chinook transportation study should be final in 2017, at which time it will add to the present information available for making management decisions on this issue for future years.

Literature Cited:

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- McCann, J., B. Chockley, E. Cooper, H. Schaller, S. Haeseker, R. Lessard, C. Petrosky, E. Tinus, E. Van Dyke, R. Ehlke. 2015. Comparative Survival Study of PIT-tagged Spring/Summer/Fall Chinook, Summer Steelhead, and Sockeye: 2015 Annual Report. BPA Project 1996-020-00.
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