



FISH PASSAGE CENTER

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MEMORANDUM

TO: FPAC

Margaret Filardo

FROM: Margaret Filardo

DATE: April 23, 2007

RE: Summary Memo on Spring Creek

On April 12, 2007 approximately 4.2 million subyearling tule fall Chinook were released from the Spring Creek National Fish Hatchery. The subyearlings began to arrive at Bonneville Dam sampling facility at about 6:45 am on April 13, about 21 hours after release. At that time, according to SMP personnel at the site, moribund and dead fish were immediately apparent in the sample tank. A sub-sample taken after two hours (two hours of collection 7 am to 9 am), found 10% mortality in the 1,232 fish sample. An emergency FPAC conference call was held on the afternoon of Friday the 13th and included the assistant manager of the hatchery, SMP personnel at Bonneville Dam, as well as Fish Health personnel from the Abernathy laboratory. Based on observations of the fish the Fish Health lab was concerned that the mortality was likely due to mechanical or physical injury. There have only been two modifications to Bonneville dam this year, the turbine intake extensions (TIES) were not installed due to a broken crane and, there were turbine modifications made to some units at Powerhouse 2.

There were limited management changes that could be made to the Bonneville project to address the mortality, since the project was already spilling and the PH2 corner collector was in operation. After discussing the potential negative effects, it was decided to request that the flow through the modified units in PH 2 be decreased to the lower end of the 1% peak efficiency range. The salmon managers also requested that spill be increased slightly to offset the reduction in flow through PH 2, before adding units at PH 1. At the time, there was some room to increase spill and not exceed the 120% TDG gas cap. BPA and the COE agreed and made the change in turbine loading, but there was some question as to whether Jim Adams, COE-RCC, could be contacted to change the spill cap he had established at BVL for the weekend.

The following table shows the daily and sub sample mortality rates. Mortality dropped substantially the next sample day and continued to drop with SMP monitors reporting 2.7% mortality for the sample ending on April 15, and 0% mortality on April 16.

Spring Creek Mortality/Descaling Summary, 4/13 - 4/16 2007

Date/Time	Spring Creek sample total	Mortality (%)	Descaling (%)	Comments
4/13 0700-0900	1232	10.10%	1.60%	The Spring Creek run began arriving at the facility around 0645 on 13 April, approximately 21 hours after release. Mortality and moribund fish were immediately apparent. No mortality and minimal descaling was observed in non-Spring Creek fish
4/13 - 4/14 0900-0700	564	3.20%	0.90%	Mortality numbers decreased substantially after operational change the evening of 4/13. No mortality and minimal descaling was observed in non-Spring Creek fish
Totals for sample period 4/13-4/14	1796	7.90%	1.40%	Majority of Spring Creek run passed the facility evening of 4/13
4/14 - 4/15 totals	113	2.70%	0%	No mortality and minimal descaling was observed in non-Spring Creek fish
4/15 - 4/16 totals	69	0%	0%	No mortality and minimal descaling was observed in non-Spring Creek fish

In summary, what we do know is that there was a decrease in mortality that was coincident with the operational changes made at the project. Spill was not increased, even though the TDG was below the gas cap. Apparently, the COE was not able to coordinate the change. This information will be taken into consideration for the upcoming May Spring Creek Hatchery release.