

System Configuration Team (SCT)

Reasonable & Prudent Measure #26

Meeting Notes

May 17, 2000

Greetings and Introductions.

The May 17 meeting of the System Configuration Team was held at the Bonneville Dam auditorium. The meeting was chaired by Bill Hevlin of NMFS and facilitated by Donna Silverberg. The agenda and a list of attendees for the May 17 meeting are attached as Enclosures A and B.

The following is a distillation (not a verbatim transcript) of items discussed at the meeting, together with actions taken on those items. Please note that some enclosures referenced may be too lengthy to routinely include with the meeting notes; copies of all enclosures referred to in the minutes are available upon request from Kathy Ceballos of NMFS at 503/230-5420.

I. Presentation of Results of the Minimum Gap Runner Turbine Survival Study; Plans for FY'01 Study.

Rock Peters said two minimum-gap-runner turbines have been installed at Bonneville, Units 4 and 6; Unit 4 is now being tested, he said, and everything is going well so far. The next unit to receive the minimum-gap-runner technology is Unit 3; the installation is scheduled for August.

Peters went through a series of overheads (copies of which are available upon request from Peters at 503/808-4777) showing the new blade configuration in the MGR units, the redesign of the cone and spherical discharge ring, release points within the intake (top, middle, bottom), the goals and objectives of the MGR test (improve survival and condition of fish passing the turbine units, verify that fish survival and condition is as good or better than survival and condition of fish passing through existing units, better understand fish injury through various release sites and power levels), the test design (five 12-day test blocks, 120 tagged fish released per day, 7,200 fish released total, yielding 24 independent estimates of survival through two units – one existing, one minimum-gap-runner – four power levels and four release points).

As far as results, said Peters,

- ! For the MGR unit, everything seemed to tighten up at about Power Level 3, Peters said; we're not sure why that is, and we're in the process of investigating that. Overall, however, very consistent results were seen throughout the operating range.
- ! For the MGR unit, survival through the hub release varied between 98% and 101% (compared to the control group) – much higher survival than expected.
- ! For the tip release groups, the MGR unit yielded consistently higher survival than the existing unit.
- ! Overall, the MGR showed consistently higher survival than the existing unit.
- ! Of the 7,200 fish released during the test, 4,900 went through the three routes of passage; the remainder passed the project through the control unit. Only 2% of the 7,200 fish exhibited signs of injury – 2.5% of the fish passing through Unit 5 and 1.5% of the fish passing through Unit 6.
- ! Overall, the researchers saw significantly less injury in the fish passing through the new tip design in the MGR unit.
- ! The hub appears to be a relatively safe area for fish passing both the MGR unit and the existing unit.
- ! Of the fish passing the MGR unit, 96% passed with no visible injury.
- ! Eye damage and external hemorrhaging was significantly less in the fish passing through the MGR unit compared to those passing the existing unit.
- ! Descaling results are not yet available.
- ! A significant number – 121 of 4,974 – of the tip and mid-blade release fish wound up in the tail log slots, a very turbulent area. The researchers concluded that there is a need to cover the tail-log slot to restrict access to this area.
- ! Overall, said Peters, what the test shows is that the MGR provides a better environment for fish passage than the existing unit, on the order of a 2.5% increase in turbine passage survival. Overall, survival through the MGR varied by treatment between 90% and 101%.
- ! Future tasks include investigations of indirect survival, the biological effects of unit efficiency and the passage routes taken by run-of-the-river fish.

2. New Items to be Added to FY'01 CRFM Project List.

Hevlin distributed the most recent version of the FY'01 CRFM spreadsheet (Enclosure C). The group devoted a few minutes of discussion to this item; Lorz said CRITFC will be proposing several additions to the FY'01 project list. The tribal additions are currently being approved by the Commission, and should be available for distribution to the SCT by Thursday or Friday of this week.

Rebecca Kalamasz suggested the addition of Lower Granite juvenile facility PIT-tag improvements (approximate cost \$285,000). Steve Rainey said he has several minor items he would like to see added to existing projects, including the John Day Spill Bay 1 flow deflector, numerical modeling for the spillway surface bypass and others; he said he will provide a list of these items to the

federal, state and tribal caucuses by next Wednesday, May 24.

Marv Yoshinaka added that the Fish and Wildlife Service is in the process of developing a Biological Opinion for bull trout and other listed non-salmonid species; it is possible that some structural measures may be required for these species, which could add some items to the spreadsheet as well. Certainly any structural measures at the lower river projects need to be added to the FY'01 CRFM list, Hevlin agreed; there has also been some discussion of the SCT becoming the coordination body for structural changes to some of the upper river projects, such as Libby, Hungry Horse, Dworshak and Albeni Falls. Hevlin and Yoshinaka said they will investigate what structural measures, if any, will be required by the USFWS BiOp, and will make any necessary additions to the spreadsheet prior to next month's meeting.

Kranda said a serious problem has been identified with the levies surrounding Lewiston; the levies apparently were damaged during the 1992 drawdown test at Lower Granite, and are now leaking. Kranda said repairing the levies may require another drawdown; it is likely that the Corps will add a Lower Granite levy repair line-item to the FY'01 CRFM spreadsheet, at a cost of somewhere between \$500,000 and \$2 million.

The group discussed whether CRFM is actually the most appropriate source of funding for this item. One participant said that, at minimum, the Lewiston levy project probably needs to go through the FFDRWG review process; Hevlin suggested that an SCT subgroup review the problem and develop a recommended approach for presentation at the June SCT meeting. Kranda said he will coordinate the subgroup meeting and will provide a progress report at next month's meeting.

3. Progress Update from State, Tribal and Federal Caucuses on Scoring FY'01 Spreadsheet Items .

Hevlin said the federal caucus will be meeting to develop their prioritized list during the week of June 5, and should have the list ready for presentation at the June SCT meeting. The state caucus will be meeting soon, as will the tribal caucus. It was agreed that further discussion of the caucus' scoring efforts will occur at the June SCT meeting.

4. Update on Current Performance of John Day Flow Deflectors .

Rainey reminded the SCT that most of the John Day deflectors were installed in 1998; since then, NMFS has carefully monitored the fixed monitoring station readings to get a sense of how the deflectors are performing. There has been some inconsistency in the fixed monitoring station readings, he said; as a result, at times, the spill cap at the project has been as low as 100 Kcfs during the spring period. The Corps, NMFS and others have been trying to figure out what's going on at John Day, so that we can increase the spill cap and pass a greater percentage of juveniles over the spillway, Rainey said; it was decided to do a near-field test in February.

About a month ago, there was a FFDRWG meeting at which the results from the near-field dissolved gas test were presented, said Rainey. The bottom line is that, early in the season, after looking at the results from the test, the spill cap at John Day was set at 110 Kcfs; there was some indication that the operation of Spill Bay 1 at John Day, which is non-deflected, has a huge impact on readings at the fixed monitoring station; in effect, it appears to be creating higher gas readings in a narrow band along the north shore of the river.

After receiving this information, the Corps decided to cut Spill Bay 1 back by two stops, said Rainey; as a result, the spill cap at John Day is now at 145 Kcfs, with TDG readings at about 118%. The bottom line is that, as a result of this change, many of our concerns about the performance of the flow deflectors at John Day has been mitigated, Rainey said.

5. Summary of Walla Walla District FFDRWG Meeting.

Kalamasz said the Walla Walla District FFDRWG met April 26-27, discussing the Lower Granite surface collector, the Lower Granite adult weir, the Lower Granite juvenile PIT-tag facility and concerns about the effects of the RSW on the spread-the-risk strategy. The group discussed various test strategies for the RSW; Kalamasz said the test is still under discussion, and Walla Walla District is developing a plan which will be distributed to the region as soon as it is available.

Passage through the sluiceways at Wanapum and The Dalles show that wide, shallow surface-oriented flow can be highly efficient in passing juvenile fish, said Rainey. The question then becomes, why Lower Granite? My thinking is that we already have a curtain there which controls, to some extent, the horizontal distribution of juvenile fish; also, the upper intake occlusions at that project reduce the entrainment of juvenile fish. The expectation is that, given these other factors, at moderate to low spill levels, the RSW will provide a greater contribution to spillway passage efficiency than the existing SBC.

Steve Pettit said he is concerned about the impact of the RSW test on listed species; IDFG would prefer to see full implementation of the BiOp spill program at Lower Granite. In my view, he said, it makes more sense to test the device at another dam, where fewer endangered species are present. It is a major issue, to us, and I would prefer to discuss and resolve it sooner, rather than later, Pettit said.

After a few minutes of discussion, Pettit suggested that this issue merits a special SCT meeting in Walla Walla in July, to combine further discussion of this item with a site visit to Lower Granite. Kalamasz said she will work with Hevlin to set this meeting up.

Kalamasz also referenced the University of Washington's request for \$53,000 in funding for an investigation of the role of micronutrient loss (copper, zinc, selenium, Vitamins A and C) in the survival of transported fish. Previously, she said, there were some questions about this project; I hope those questions have now been answered. If not, said Kalamasz, please let me know. If there are no more

questions, she said, if we can find \$53,000 in funding within this year's budget, I think it would be beneficial to fund this study, and would like to get a decision from SCT today. After a brief discussion, no SCT objections were raised to funding the University of Washington study if funds can be found. Bruce Suzumoto, Tom Lorz and Marv Yoshinaka requested copies of the study design; Kalamasz said she will provide that.

6. Summary of Portland District FFDRWG Meetings.

Peters distributed a summary of the items discussed at the May 1 Portland District FFDRWG meeting (Enc. D); they included The Dalles adult dewatering, adult PIT-tag detection at Bonneville, blocked trashracks at The Dalles, the Bonneville 2 DSM and outfall, Bonneville rehab, Bonneville surface collection, the Bonneville 2 AWS, the Bonneville 1 JBS system and John Day modeling. Please refer to Enclosure D for details.

7. Progress Update on FY'01 AFEP Study Development Process.

Peters said the current plan is to hold at least a two-day AFEP meeting to prioritize the FY'01 research summaries; by early next week, a master list of proposed research summaries should be available. Time is short, he said, so if there are any more SCT comments forthcoming on the FY'01 study package, they need to be submitted to me as soon as possible. Hevlin added that any issues associated with the FY'01 studies need to be identified no later than early October, so that any potential issues or conflicts can be resolved in advance of the research season.

8. Next SCT Meeting Date.

The next meeting of the System Configuration Team was set for Friday, June 16, from 9 a.m. to 4 p.m. at NMFS' Portland offices. Meeting notes prepared by Jeff Kuechle, BPA contractor.