



# FISH PASSAGE CENTER

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## MEMORANDUM

TO: Tim Dykstra, Walla Walla District COE  
Bernie Klatte, Portland District COE  
FPAC

FROM: Michele DeHart

DATE: March 31, 2009

RE: Standardized Sample Size requirements for SMP condition sampling and transportation Barge loading data requirements and weight calculations

The FPC has invested considerable effort over the past year in standardizing the Smolt Monitoring Program (SMP) data collection and recording procedures among the SMP sites. In addition, in response to requests from the fishery management agencies and tribes the FPC has worked with the region to develop a standard fish condition monitoring protocol for data collection and reporting. The COE and site personnel requested that their data bases for COE sampling of facility fish impacts and barge loading remain unchanged in this process. The FPC staff expended considerable efforts to build individual tools for each site to maintain their present COE data and procedures. As a result of this process we have noted several issues that can only be addressed by the COE and the fishery management agencies regarding inconsistencies in data collection for COE facility monitoring and transportation program barge loading. We believe that there are opportunities to standardize these efforts among sites and reduce fish handling and fish impact. Since this is the last year of the COE three year contract for sampling for facility impacts and transportation implementation, it may be appropriate to address these issues at this time. There are opportunities to reduce sampling and handling impacts. Specifically:

- Although the management question of barge loading is the same at each transportation site, different data are collected at each site to determine barge loading. For example at LGR poundage is reported for barge loading by species type, and clip type, whereas LGS reports poundage by steelhead clip type and salmon combined. These different

procedures require different sample sizes. The management application is the same, and sample size requirements could be reviewed in terms of reducing sampling and handling and standardization among sites.

- Currently the condition monitoring protocol, as determined by the FPOM subgroup on fish condition monitoring, was set at 100 fish of each species and clip type. This means that during the spring, when potentially four species (clipped and unclipped) of juvenile migrants are present, up to 800 juvenile salmon could be examined on a daily basis for injury and disease information. There may be ways to reduce this amount of handling for detailed condition information and still get necessary information on fish condition.
- Neither rationale nor calculations of sample size requirements for fish condition data collection at individual sites is available. As mentioned above, these sample sizes for each site are currently not consistent. The COE and fishery agencies should consider and review guidelines used to select the target sample sizes, relative to the management application of the data. This should include consideration of the 100 fish criteria per clip type objective, such as detecting a particular incidence of occurrence of injuries or descaling.
- The rationale for different condition sampling at transportation sites versus non-transportation sites is unclear. The rationale for collecting injury information on clipped and non-clipped fish is unclear, specifically as it relates to the resulting management action and whether or not the existing data suggest that injury levels are different enough to warrant the additional sampling and handling.
- Procedures and codes differ among sites. For example, MCN collects weight and length data on incidental fish, but other sites do not. Sample codes differ among sites.

cc. Charlie Morrill, WDFW  
Rick Martinson, PSMFC  
Pat Kinery, ODFW