



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

April 29, 2005

Charlie Walls
City and Borough of Sitka
100 Lincoln Drive
Sitka, AK 99835

Dear Mr. Walls,

The National Marine Fisheries Service Alaska Region is reviewing the Sitka Hydroelectric Project Operations Model as presented in the April 2005 paper and during the April 22, 2005 Instream Flow Negotiation Meeting. Because of difficulties with telephone reception during the meeting, we were unable to raise the following issue during the conference call and unable to determine if this issue was addressed during the presentations or questions.

The paper states that accretion in the bypass reach is calculated by comparing average monthly flows during non-spill events and averaging these results to obtain an annual accretion rate of 6cfs. The paper further states that accretion during storm events and rapid snowmelt has been measured at over 100 percent of the fish valve unit flow (50cfs).

We are concerned that the approach used is not a good representation of accretion at different, perhaps critical, points in the life cycle of anadromous salmon. One of the requests that the City of Sitka made to the resource agencies during the meeting was to evaluate potential changes to the instream flow reservation requirement. We also understand that you intend to develop a habitat time series by overlaying the PHABSIM WUA curves over the outputs from the Operations Model under different scenarios. Both these tasks require more accurate information on how accretion contributes to flow during the year.

Averaging flattens data curves and overemphasizes outliers in the data. A dataset with high values around 50 cfs and a mean value of 6 cfs indicates that the data are skewed. In this case using the median value would be more appropriate as a conservative prediction of accretion. Furthermore, because the approach being used averages data that is already an average of daily data per month, the resulting number is not representative of typical flows. The size of extreme flows and when they occur also are important ecological considerations.

Having only three years of accretion data limits the data manipulation that can be undertaken to arrive at more representative accretion values. However, we recommend calculating monthly accretion values from the three years of daily data available by combining the data and calculating a median, minimum and maximum value for each month. The monthly median value will allow a more accurate evaluation of the contribution of accretion to monthly flows during key points in the anadromous cycle than the annual mean proposed. The minimum and

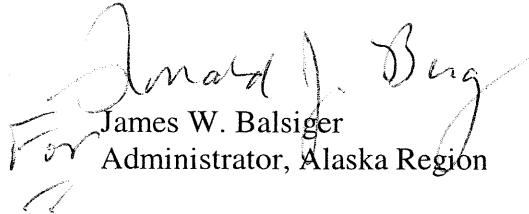


maximum values can be used to provide information on outliers and the shape of the monthly data curve.

We are reviewing the model, as requested, and may have additional comments once that review is complete.

Please contact Katharine Miller (907) 586-7643 if you have any questions regarding this letter.

Sincerely,

A handwritten signature in cursive script, appearing to read "James W. Balsiger". The signature is written in dark ink and is positioned above the printed name and title.

James W. Balsiger
Administrator, Alaska Region