

# Hells Canyon MIKE 11 Hydrodynamic Model (E.1-4, Chapter 5, Appendix A)

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## I. Introduction

*“Water surface elevation data were collected at 35 sites in the Hells Canyon study area (Hells Canyon Dam, RM 247.6 to near Asotin, WA, RM 145.6) to calibrate hydraulic models developed for the Hells Canyon reach of the Snake River.”.... IPC operated 34 of 35 stations with the other operated by the BLM.... “Sixteen IPC pressure transducers were initially deployed in February 1998, with an additional 16 sites added in March 1999 or May 2000. All of the transducers were maintained until November 2000. The two stations at the Hastings Bar two-dimensional (2-D) site were installed in March 2001 and maintained for three months. This appendix addresses the type of equipment (Table 1), its deployment, data collection, data quality, and available data used in calibrating the Hells Canyon hydraulic models.” (Page 49, Paragraph 1)*

## II. Conclusions

1. *“The data collection effort resulted in measurements of water surface elevation that covered the full range of Hells Canyon Dam’s daily average discharge operations from 5,699 to 93,400 cfs.” (Page 56, Paragraph 1)*

Response: BLM agrees with this statement.

2. *“Elevation data were adjusted to correct for physical movement but not for sensor errors. However, any sensor errors that affected data quality are noted in Table 3 and left in the data set for researchers to use at their discretion.” (Page 56, Paragraph 1)*

Response: BLM agrees with this statement.

3. *“In general, the water surface elevation data represent the water surface profile for the Snake River below Hells Canyon Dam with an accuracy of  $\pm 0.1$  ft., except as noted in Table 3. Table 3 contains data quality and data availability on a monthly time step for the 34 sites. Also included in Table 3 is the information about monthly discharges from Hells Canyon Dam.”.... “Following Table 3 are definitions for quality valuations and colors used.” (Page 49, Paragraph 1-2)*

Response: BLM agrees with this statement.

### **III. Study Adequacy**

The equipment used is state-of-the-art technology. The data collection appears to be adequate. The data collected is well documented in Table 3. The table clearly presents the quality of the data. Most of the data is good and that which is not is well documented.

### **IV. BLM Conclusions and Recommendations**

#### Conclusions

1. The data collected followed scientific procedures and is adequate to meet the needs of the hydraulic study.
2. This data has been analyzed by the applicant and incorporated into the MIKE 11 model. Any discrepancies in the data were taken into account by the researchers who calibrated the model.

#### Recommendations

The BLM has no additional recommendations.