

Water Level Recorders (2013 MAP Study #24) 2013 ATR Summary

Introduction

The data reported in this section are related to the study “Additional Water Level Recorders”, 2014 Monitoring and Assessment Plan (MAP) Study #24, and indirectly addresses certain aspects of other problem statements by providing a continuous record of water surface elevations to validate hydraulic models being used for many other aspects of Restoration Planning and Design.

Methods

Stage data are collected by the recorders (Figure 1) at 15 minute intervals. These data are periodically downloaded and converted to water surface elevations. The necessary calculation methods were described in the 2010 ATR in detail.



Figure 1. Water Level Recorder

Results

Locations of the recorders and other permanent gages operated by other agencies are shown in Figure 2. Water surface elevation data obtained from all six recorders from the beginning of November 2013 through May 2014 are presented in an Excel data file as well as in Figures 1, 2, and 5 in Appendix A along with the data from US Geological Survey (USGS) and US Bureau of Reclamation (USBR) gages for comparison purposes (Appendix A Figures 3, 4, 6 and 7).

Recorder 4 showed some extremely low water surface elevations in the middle of February and the beginning of March 2014 (see Figure 2 in Appendix A) due to very low flow in the channel. This particular transducer gets dry during very low flows in the channel (approximately 100 cfs flow) because it is located at a relatively high elevation. This issue occurred before in February 2012 (see 2012 mid-year and final ATRs). A similar pattern was observed in the USBR gage located at Gravelly Ford when there was no flow at the channel (see Figure 7 in Appendix A). Other than this issue, the data collected from all recorders match well with the permanent gages in that region that are maintained by USGS and USBR.

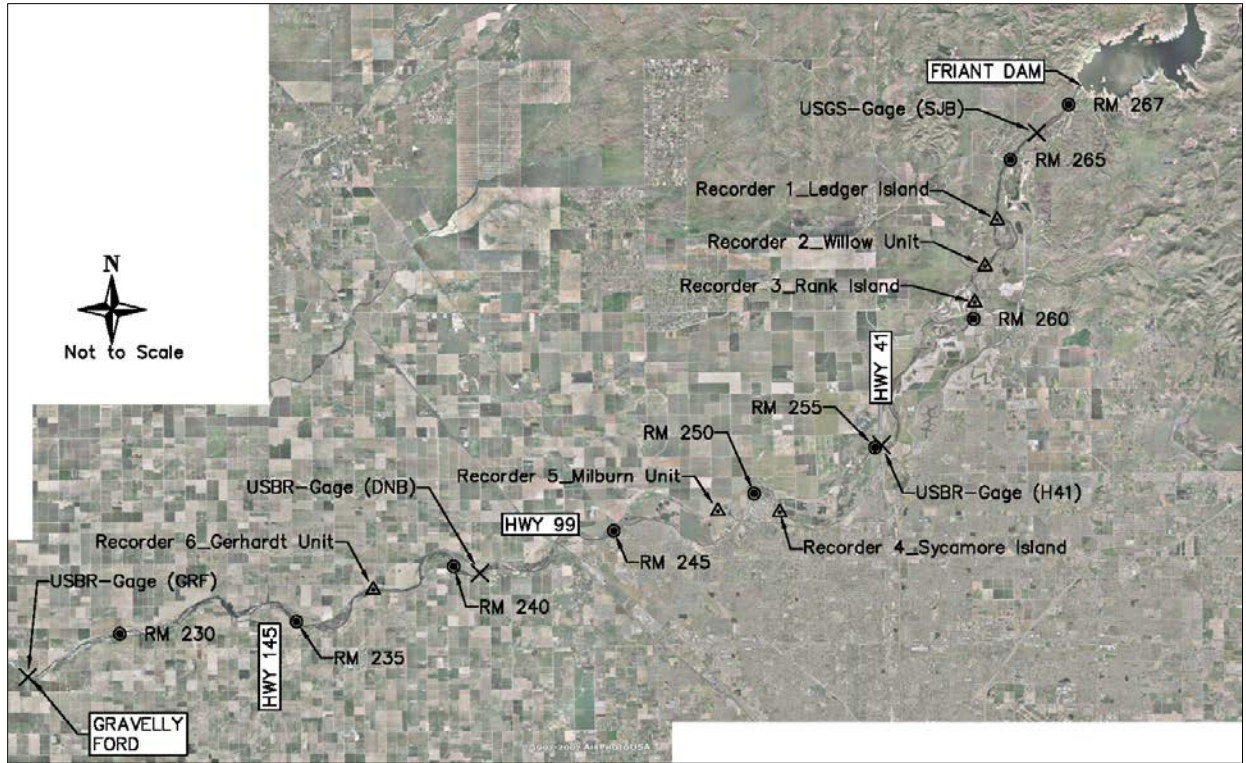


Figure 2. Water Level Recorder and Permanent Gage Locations