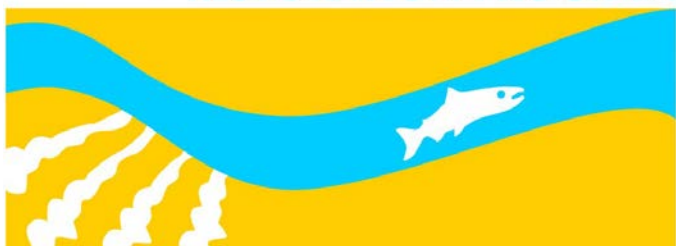


# Additional Water Level Recorders

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RESTORATION PROGRAM





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

## Introduction

The data reported in this section is related to the study “Additional Water Level Recorders” that specifically address needs related to **Proposal 32** in the RA recommendations, 2013 Monitoring and Assessment Plan (MAP), and indirectly address certain aspects of other problem statements by providing a continuous record of water surface elevations to calibrate hydraulic models being used for many other aspects of Restoration Planning and Design.

## Methods

Stage data are collected by the recorders (**Figure 1**) at every 15 minutes interval. These data are periodically down loaded and converted as water surface elevations. The necessary calculation methods were described in 2010 ATR in detail.



**Figure 1. Water Level Recorder**

## Results

Water surface elevation data obtained from all six recorders during January 2013 through the middle of June 2013 are presented in an excel data file as well as in Figures 1, 2, and 4 in **Appendix A** along with the data from US Geological Survey (USGS) and US Bureau of Reclamation (USBR) gauges for comparison purposes (Figures 3 and 5).

Recorder 5 indicates water level fluctuations starting from the second week of April 2013 (Figure 2). As a result, the data collected by Recorder 5 during this period is unreliable. The fluctuations in water level readings may be due to loosened anchors located next to the pressure transducer. This issue will be rectified this summer after identifying the actual reason.

The data collected from other recorders match well with the permanent gauges in that region that are maintained by USGS and USBR.

### Recorders 1, 2, & 3

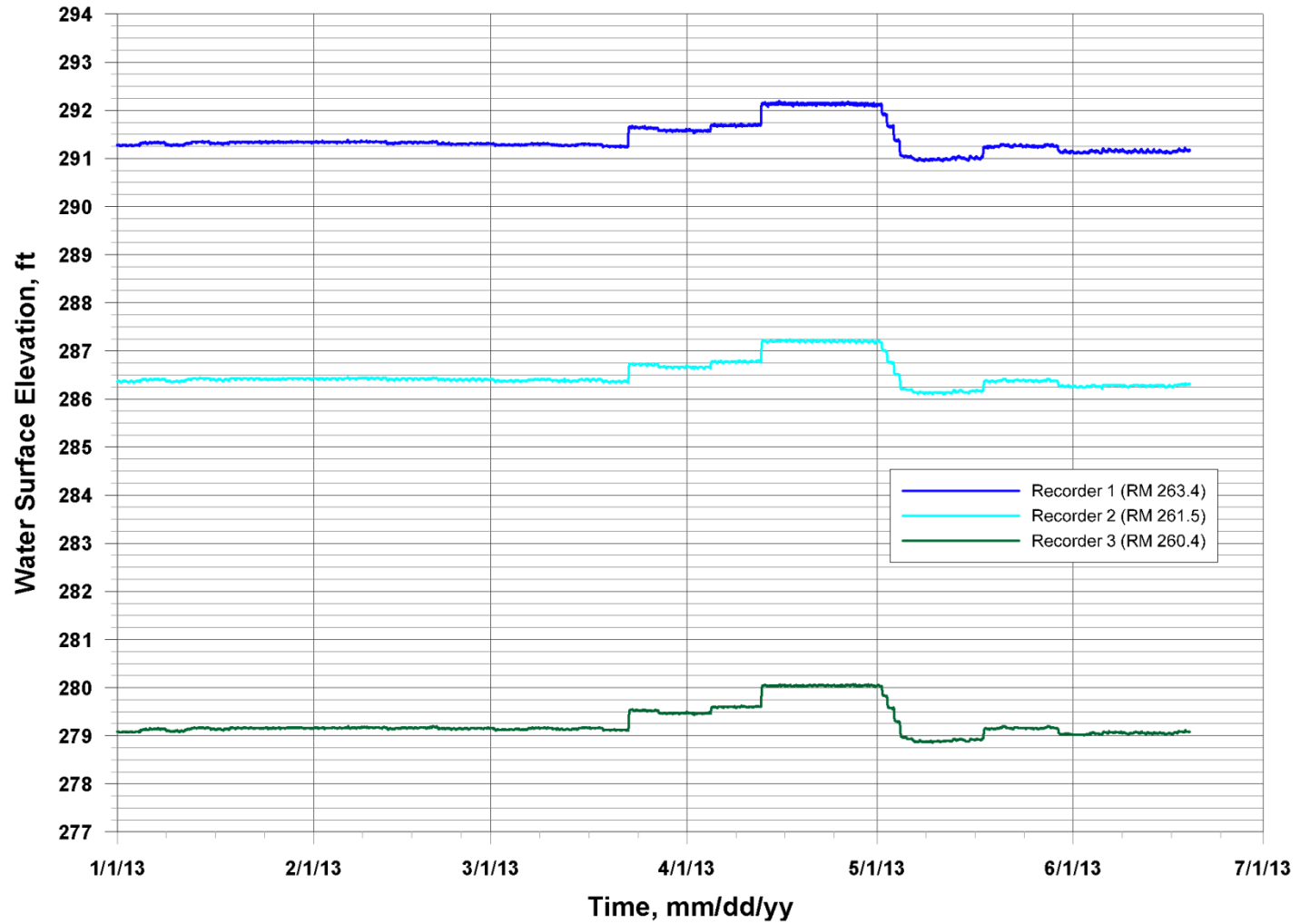


Figure 2. Water Level Recorders 1, 2, & 3 Water Surface Elevation Data

### Recorders 4 & 5

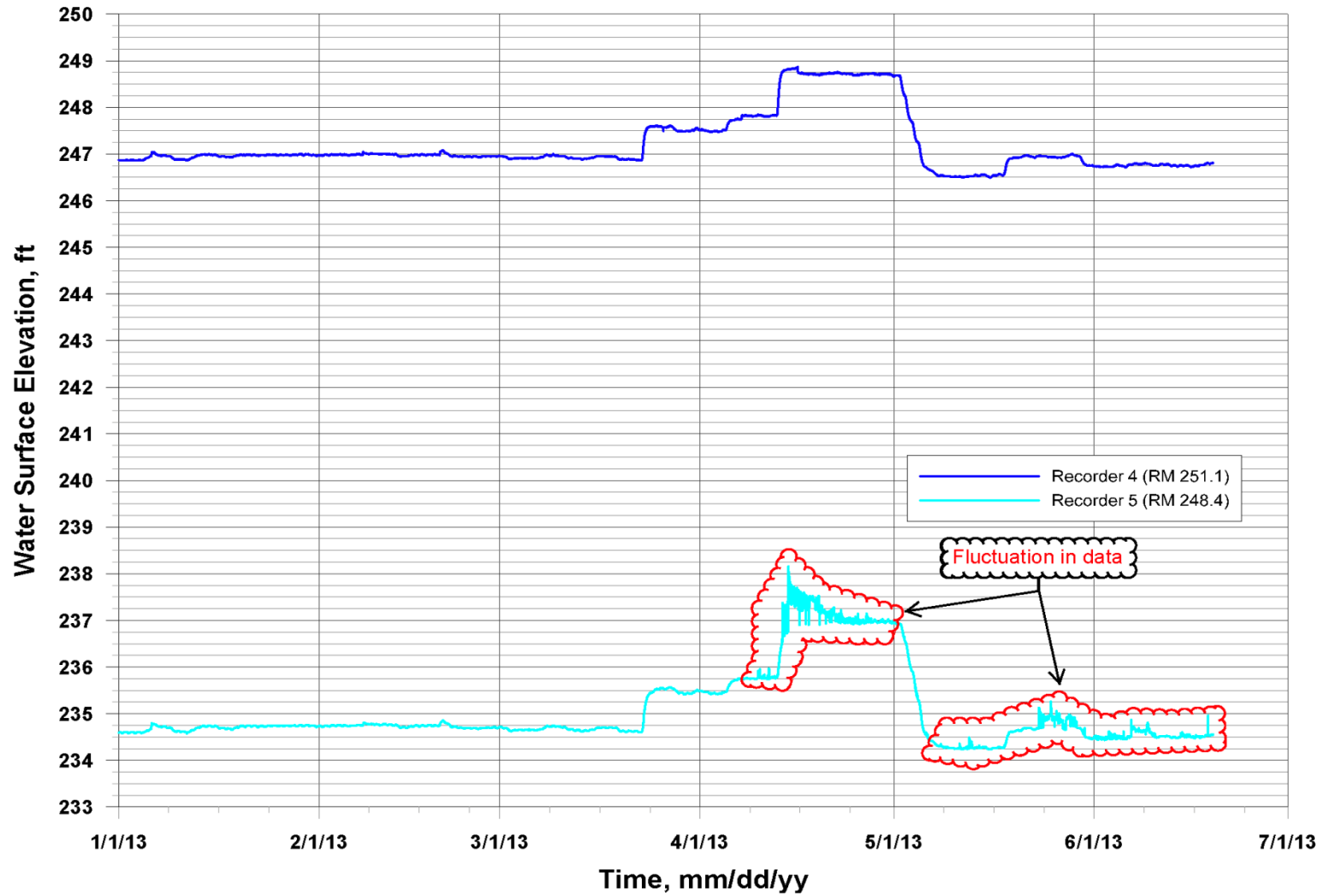
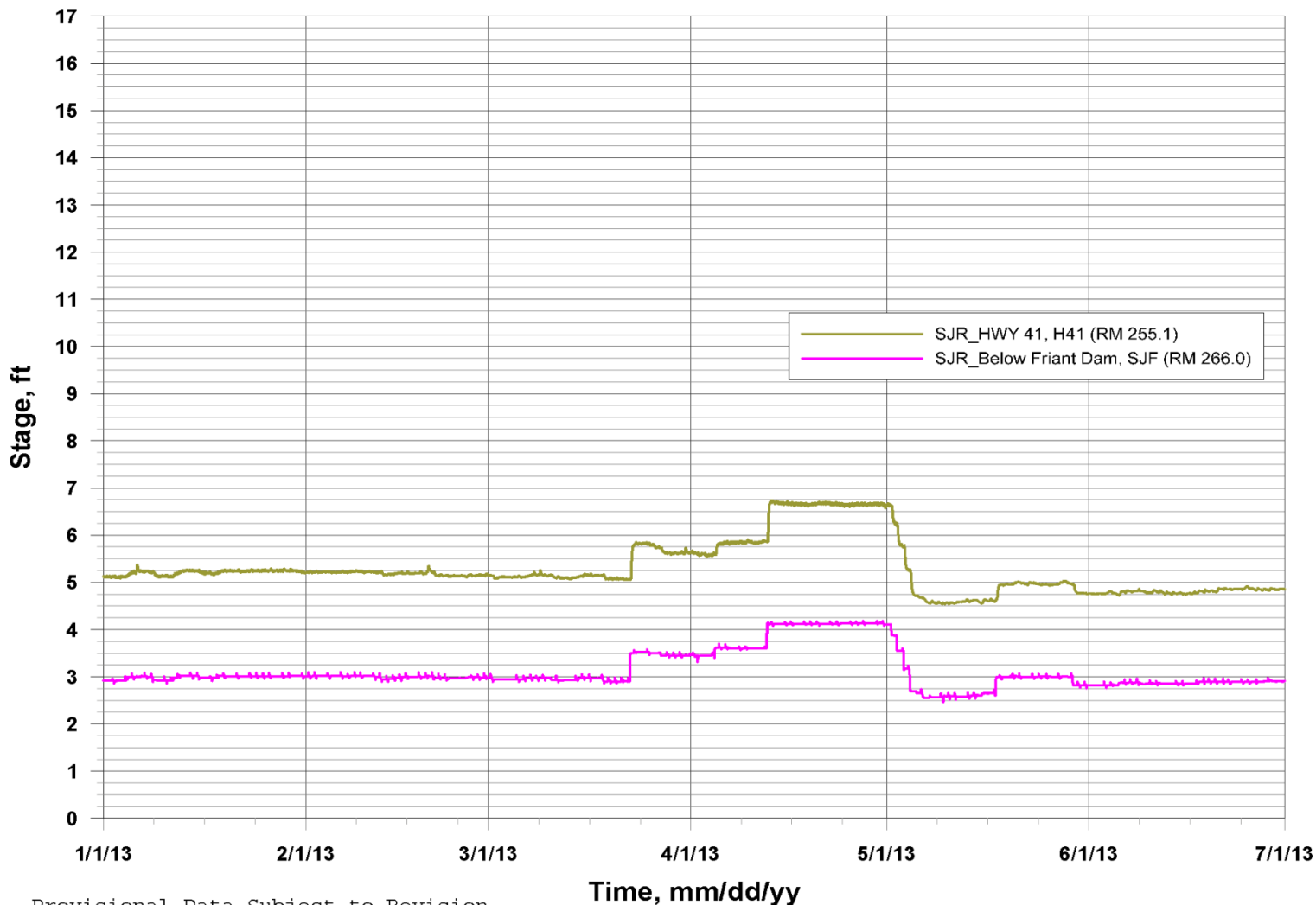


Figure 3. Water Level Recorders 4 & 5 Water Surface Elevation Data

### USGS/USBR Gauges - SJR Reach 1A (from CDEC)



- Provisional Data Subject to Revision -

Figure 4. USGS/USBR Gauges at Reach 1A Stage Data

## Recorder 6

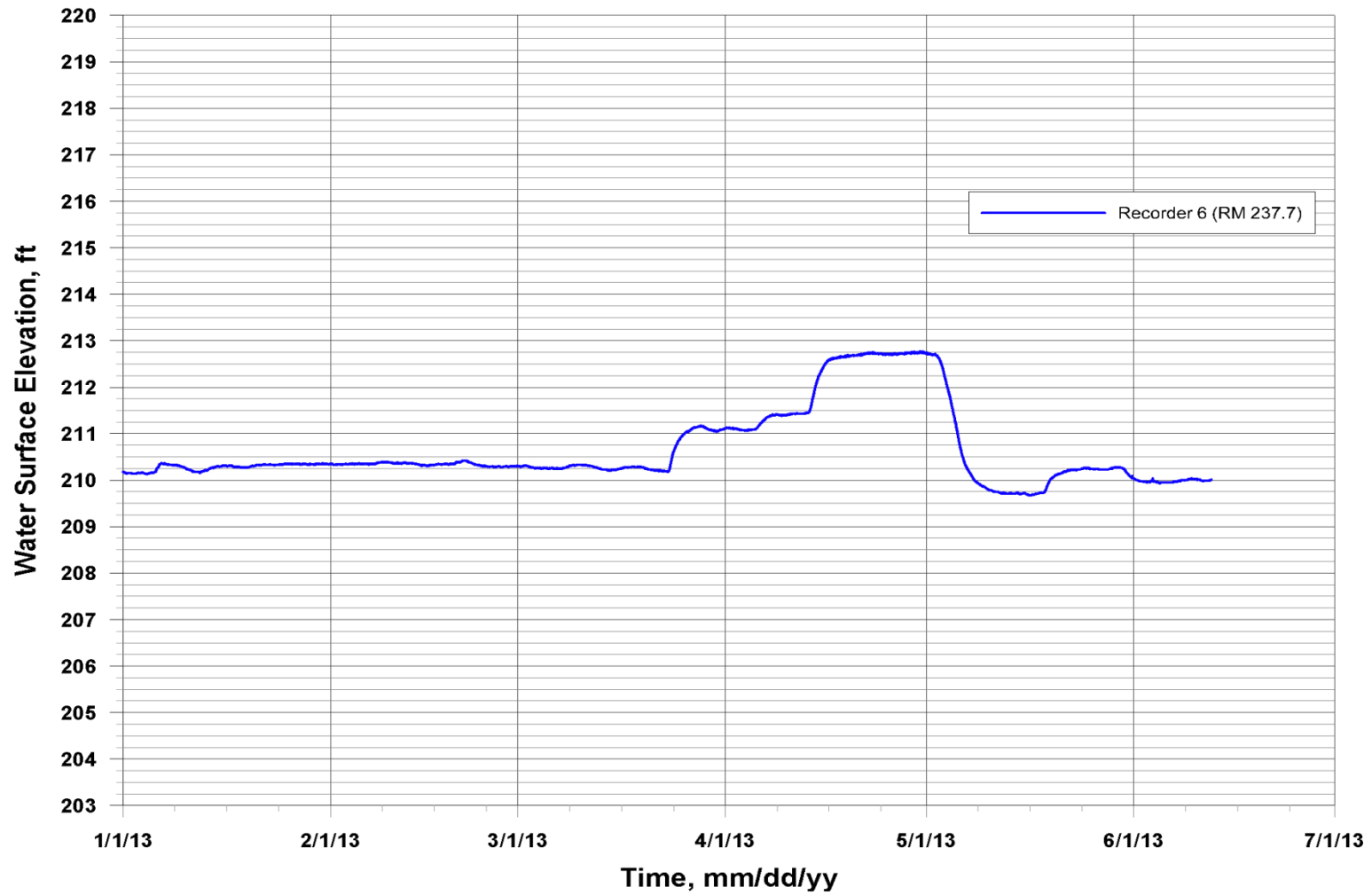


Figure 5. Water Level Recorder 6 Water Surface Elevation Data

### USBR Gauge - SJR Reach 1A (from CDEC)

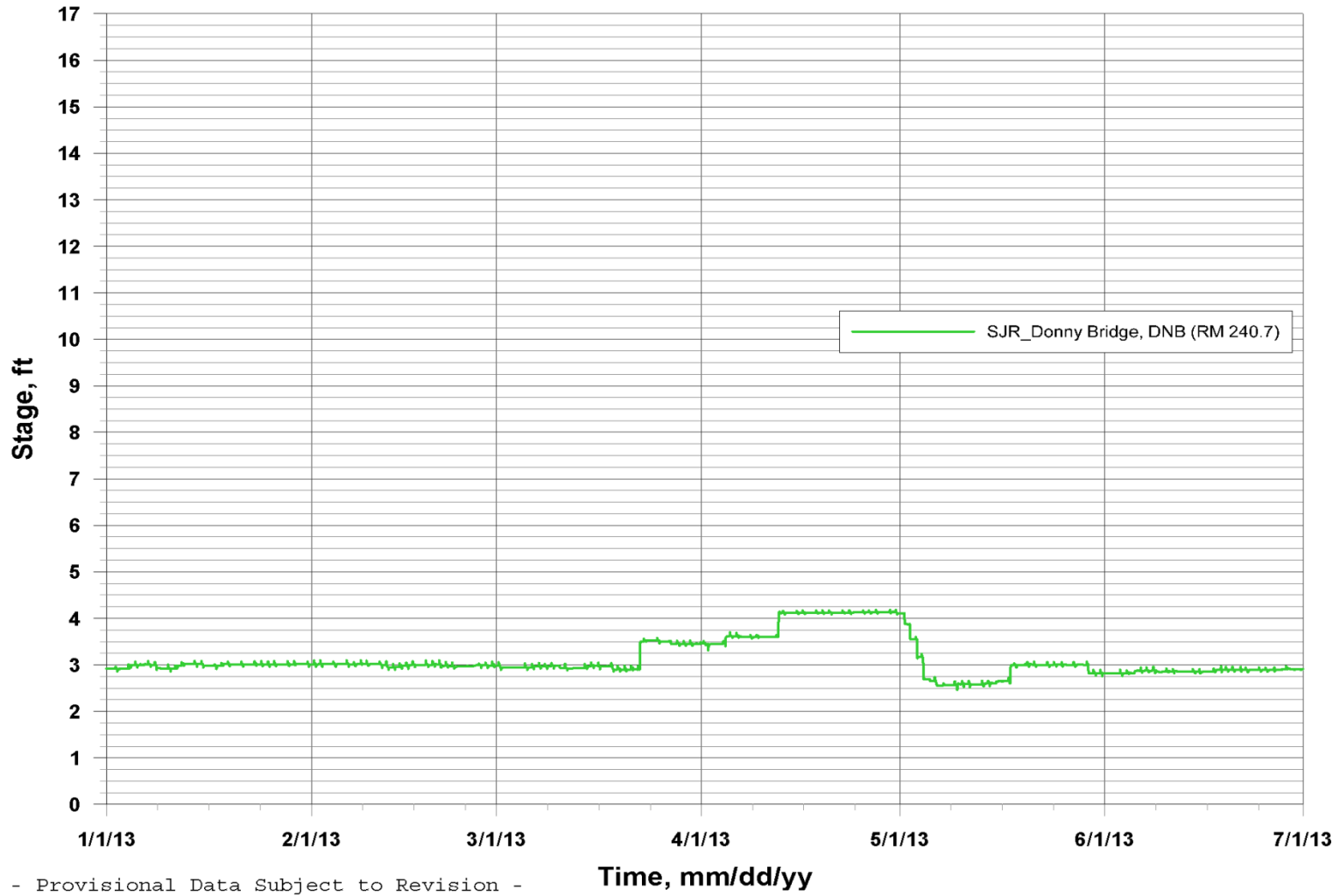


Figure 6. USBR Gauge at Reach 1B Stage Data