

**Description:** SonTek Acoustic Doppler Profilers (ADPs) were deployed at two locations in Lake Arrowhead to develop an understanding of reservoir currents during periods of thermal stratification from April 2019 through January 2020. The ADP data sets provided information to develop an understanding of reservoir current patterns during mixing events caused by wind, inflows, and pumping station withdrawals. Temperature profiles were also collected during the ADP deployments using temperature profiling strings attached to the ADP mooring lines. The ADP deployments and data analyses are described in Appendix 2 of the Science and Technology (S&T) 7100 Final Report. The ADP data files can be opened with SonTek ViewADP® Standard v4.03, which is a Windows-based data display and analysis program. It was designed specifically for use with SonTek ADP data. The program can be downloaded at: <https://www.sontek.com/software-downloads>. An instrument serial number is needed to download the program. The serial number for the mid-lake ADP is C34, and the serial number for the Meadow Bay PC-ADP is H33.

The ADP data is organized as follows:

- PC-ADP Data
  - LAHMB003 – this data file is for the first Meadow Bay PC-ADP deployment from 4/24/2019 to 8/13/2019.
  - LAHMB004 – this data file is for the second Meadow Bay PC-ADP deployment from 8/13/2019 to 1/15/2020.
  - Other PC-ADP data files include: LAH002, PCADPcombo, PCADP1812111554\_2PRF&HDR, PCADP1002250329binlog, PCADP1002250329, PCADP4274prof, PCADP\_4274log.
- Mid-lake ADP Data – Note: The mid-lake ADP is an older SonTek model with firmware that has the “2011 clock bug” where the ADP’s internal clock gets reset to a default value if the year is later than 2011 (2019 in this case) and the ADP enters AutoSleep mode. Raw ADP data will have time-stamped profiles with the year 2009 in place of 2019.
  - LKARW007 – this data file is for the mid-lake ADP deployment from 8/13/2019 to 1/9/2020. Although the second deployment was started on 8/13/2019, the ADP wasn’t in the lake until 9/26/2019 since divers were needed to properly deploy the ADP and the first available date was 9/26 after the ADP was restarted. As a result, the first 4220 velocity profiles were measured in air and are meaningless.
  - LKAR\_drifter sites1-5 – this data is from a test deployment of the ADP on 4/25/2019 and was used during a preliminary test of the UNLV drifters. Drifter-related ADP data were not used in the hydrodynamic model or to develop the guidance manual.
  - Other mid-lake data files include: LKARW001, LKARW002, LKARW003, and LKARW004
- Other ADP data files include LOG1232PRF, LOG1232PRFCOMBO, and LAB\_DEC17\_HDR