



Bathymetric Survey Frequently Asked Questions

Q: What is “bathymetry”?

A: Bathymetry relates to, or to the study of, the terrain and contours of the land underwater, such as a river or lake bottom or the seafloor. Much like topography is the study of land elevation above sea level, bathymetry focuses on depth of land under a body of water as measured from the water’s surface. Bathymetry influences the speed, temperature, and other characteristics of a river’s flow, as water reacts to the river channel’s underwater “landscape.” Bathymetric surveys provide information about the unique shape and features of submerged terrain, which can be used to develop detailed maps of the riverbed, lakebed, or seafloor.

Q: How will the California Department of Water Resources (DWR) perform this bathymetric survey?

A: This bathymetric survey will be performed in Reach 3 of the San Joaquin River (Mendota Dam to Sack Dam) using sonar equipment mounted to a small aluminum boat and assisted by a ground crew who transmit geographic data from nearby surveyor monuments. Surveyor monuments are small brass plaques embedded in structures such as bridges and canal headwalls. Each day of the survey, the crews will hand-carry the boat to a launch facility and launch the boat into the river. The boat will be staffed with two DWR employees who will measure the riverbed using the boat’s sonar equipment. Ground crews of one or two people will use GPS base-station radio transmitters at the surveyor monuments to provide the boat crew with geographic control corrections for the measurements. Other DWR staff may be in the area for support and oversight.

Q: How will the data collected in this survey be used?

A: The data collected during the bathymetric survey will be used by DWR and the San Joaquin River Restoration Program (SJRRP) to assess the river’s channel capacity and ability to convey flows. Programs that are part of DWR’s FloodSAFE California Initiative will use this information to better understand the area’s risk of flooding and to improve the quality of flood hazard data and maps available to local communities.

Q: Will DWR staff collect data about my property near the river?

A: No. Although by California law (Calif. Civil Code § 846.5(a)), professional land surveyors are afforded unique rights of entry to perform surveys unobstructed on public or private property, DWR will collect data only in the river channel. Unless required for staff safety or an emergency situation, no unrequested access to private property along the river channel will occur.