

## Project Dossier



PROJECT DOSSIER

## SUGAR PINE DAM PROJECT

### PROJECT OVERVIEW

Sugar Pine Dam is an earthfill embankment dam in Placer County, California, ~7 miles (11 km) north of Foresthill. It impounds North Shirttail Creek, a tributary of the North Fork American River, and serves as the primary municipal water supply for the Foresthill community.

The Sugar Pine Dam Project involved monitoring of a zoned earthfill dam that consists of a central clay core and rockfill shell. The dam is of 205 ft (62 m) height, 689 ft (210 m) length and 984 ft (300 m) width (base). This was an existing dam, with old instrumentation that was out of date. The project required new piezometers to collect some long-term monitoring data.

<b>Project</b>	<b>SUGAR PINE DAM PROJECT</b>
<b>Location</b>	Placer County, CA, USA
<b>Owner</b>	Foresthill Public Utility District
<b>Client</b>	Blackburn Consulting
<b>Year</b>	2021



## WHY MONITORING?

The Sugar Pine Dam was completed in 1982 and the existing twin tube piezometers installed were reaching the end of their design life and were to be replaced by new piezometers to provide accurate water level and water pressure readings within the dam from which the client could pull annual reports.

## MONITORING SOLUTION

Rite Geosystems Inc. was entrusted to provide complete instrumentation and real time monitoring results for the project.

### Scope of works include:

- Supply of geotechnical instruments
- Automated monitoring with advanced datalogger



## RESULT

Installation of all the instruments was executed successfully, giving the client necessary information required for smooth and uncomplicated installation. The data will be manually collected from the data loggers monthly with 6 hours intervals and shall run until the end of its design life. The data logger was best suitable for standalone operations (data collection and storing) for long duration as it used LION batteries and had weather proof enclosure. It was a successful update of instrumentation and augmentation to the current instrumentation in place.



## INSTRUMENT USED

**Heavy duty piezometers** Were used for the monitoring the water level and water pressures within the dam. Model EPP-30V piezometers were selected because they are the most durable and suitable for a long design life such as for dam applications.

**Datalogger** Our advanced data logger model ESDL-30 was used to collect and store the data from piezometers automatically at required frequency.



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