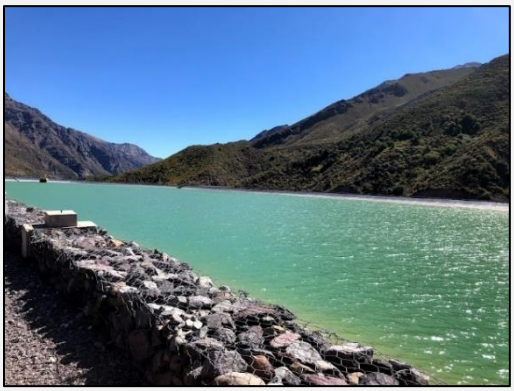
SediCon®
Removing sediments

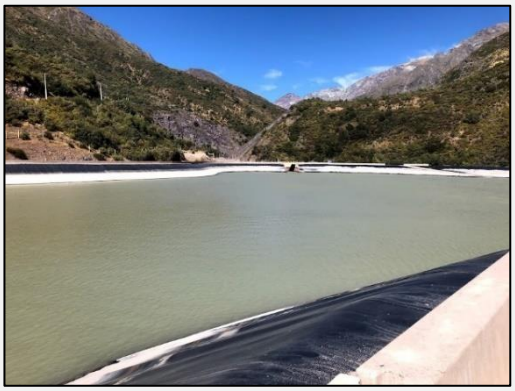
Reference Project 2021

SediCon Dredge for Tinguiririca, Chile

A SediCon Dredge was successfully supplied to remove the sediments in Tricahue and Tinguiririca reservoirs.



Tinguiririca reservoir



Tricahue reservoir

Project Description:

The SediCon dredge will operate in two reservoirs located in Los Andes mountain range: Tricahue and Tinguiririca.
Tricahue reservoir belongs to Hidroeléctrica La Higuera, which is a 170 MW power plant commissioned in 2011. La Higuera has 750 GWh of annual production and a reservoir with a total capacity of 150,000m^3.
Tinguiririca reservoir belongs to Hidroeléctrica La Confluencia, which is a 155 MW power plant commissioned in 2010. La Confluencia has 600 GWh of annual production with a reservoir with a total capacity of 1.200.000 m^3.

Location:

Tinguiririca river, Chile.
Tinguiririca reservoir: 34° 54.692'S 70° 30.747'O, Tricahue reservoir: 34° 50.110'S 70° 33.308'O

Sediment Challenge:

The customer required a piece of equipment able to operate in both reservoirs, where each reservoir has different conditions. The amount of sediments expected in Tinguiririca and Tricahue is very high due to the location of the projects in Los Andes mountain range.

Solution:

SediCon supplied a SediCon Dredge with nominal capacity of 80 m3/ hour, capable of removing rocks and debris up to 200mm and cohesive sediments up to 20kPa of undrained shear stress.
The equipment can operate in both reservoirs, for that propose, 3 siphons will be installed in Tinguiririca and one in Trichaue. The dredging equipment includes a flow and concentration measurement system, integrate with a remote operation system.

Remote operation

The remote operation system allows:

- Mobilization of the raft within a specific area.
- Suction head operation.
- Start and stop of the dredging system and jetting system. GPS tracking of the dredging position.
- GPS limited operating area.
- Monitoring cameras for dredging and discharge operations.

SediCon is the leading supplier of sediment handling worldwide and provides reliable solutions with low water consumption and uninterrupted power production.