

HydroSuction Dredge

El General Hydropower Plant, Costa Rica

Challenge

El General is a 40 MW run-of-river hydropower plant with an hourly peaking reservoir. Daily water level fluctuations caused sediment compaction across the reservoir bottom, making conventional sediment removal both difficult and time-consuming.

An efficient dredging solution was required to restore reservoir capacity while minimizing operational impacts.



El General reservoir



Sediment discharge during HydroSuction dredging

Solution

SediCon supplied a HydroSuction Dredge for efficient removal of sand and cohesive sediments from the reservoir. To increase dredging capacity, the floating platform was equipped with a motorized positioning system while maintaining the simple and reliable gravity-driven operating principle.

The upgraded solution enabled efficient sediment removal under varying reservoir conditions with low water consumption and minimal impact on plant operation.



Project Location

Project facts

Client: Hidroenergía del General S.R.L.
Project: El General HPP
Location: Costa Rica
Technology: HydroSuction Dredge
Installed capacity: 40 MW
Annual production: 198 GWh
Net head: 246 m
Reservoir volume: 225,000 m³

Results and benefits

- More than 18,000 m³ removed
- Removes sand and cohesive sediments
- Efficient reservoir dredging
- Low water consumption
- Restored reservoir capacity
- Minimal operational impact

For more than 30 years, SediCon has developed and supplied proprietary sediment handling technologies from Trondheim, Norway. Our solutions for reservoirs, intakes, desanders and tunnels have been successfully implemented in hydropower projects in more than 20 countries across five continents.