

Feasibility Study for Sustainable Sediment Management

Capillucas Reservoir, Peru

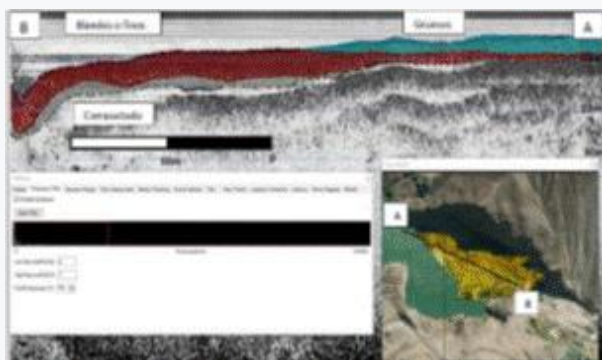
Challenge

Capillucas Reservoir has experienced significant sediment accumulation since commissioning in 2010. Reservoir flushing depended on high-flow events and could not be performed regularly.

CELEPSA therefore required a sustainable long-term sediment management strategy to preserve reservoir capacity.



Conceptual sediment management solution for Capillucas



Sediment profile showing accumulated deposits within the reservoir

Solution

SediCon conducted a feasibility study to identify the most suitable long-term sediment management strategy for Capillucas Reservoir. The work included sediment investigations, technical and environmental assessments, and comparison of three sediment removal concepts.

Based on the evaluation, SediCon developed a feasibility-level design for a HydroSuction and ejector dredging system, providing the technical basis for future implementation and long-term preservation of reservoir capacity.



Project Location

Project facts

Client: CELEPSA
Project: Capillucas
Location: Peru
Power Plant: El Platanal HPP
Installed capacity: 227 MW
Sediment deposition: 191,000 m³/year

Results and benefits

- Three alternatives evaluated
- Sediment risks quantified
- Preferred technology identified
- Environmental impacts assessed
- Feasibility design completed
- Basis for investment decisions

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.