

HydroSuction Dredge

Nagoro Reservoir, Japan

Challenge

Nagoro Reservoir is a 1.3 MW hydropower reservoir on Shikoku Island, Japan. Over many years, compacted sediments and woody debris accumulated in front of the bottom outlet, preventing normal gate operation.

Due to sensitive downstream fisheries, conventional sediment flushing was not permitted, requiring an alternative method for safe sediment management.



HydroSuction Dredge relocating sediments within the reservoir



Floating work platform during dredging operation

Solution

SediCon, together with its Japanese partner Khowa Engineering Co., designed and supplied a customized HydroSuction Dredge equipped with high-efficiency water jetting and debris cutting. An integrated ejector system prevented clogging while enabling continuous transport of compacted sediments and debris.

Rather than discharging sediments downstream, the system safely relocated the material to a confined area within the reservoir, preserving downstream water quality while protecting sensitive fisheries.



Project Location

Project facts

Client: Shikoku Electric Power Co. Inc. (YONDEN)
Project: Nagoro Reservoir
Location: Shikoku Island, Japan
Technology: HydroSuction Dredge
Installed capacity: 1.3 MW
Reservoir capacity: 1.37 million m³
Application: Bottom outlet rehabilitation

Results and benefits

- Restored bottom outlet operation
- Removes compacted sediments
- Handles woody debris
- No downstream sediment discharge
- Reliable sediment transport
- Protect downstream fisheries

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.