Buckhorn Dam Removal and Stream Restoration

Darrell Westmoreland, North State Environmental Inc.

The Buckhorn Dam was constructed as part of integrated (dam, powerhouse, control room) hydroelectric project in 1908. The facility which included an integrated dam, powerhouse and control room, was decommissioned in 19Xx. It was removed in 200X to eliminate public safety issues. Challenges on the project included the absence of any design drawings (no one knew what was inside the complex), more than a metre of sediment on the floor of the drained reservoir, and a relatively short timeframe for project removal. North State partnered with Stantec to carry out the project as a design build. The design called for the removal of the generating station, the creation of an offline wetland to improve water quality, the stabilization of sediment in situ and the restoration of more than X metres of Buckhorn Creek. The construction involved the construction of a bypass channel, the removal of the structure, the appropriate disposal of tonnes of creosote treated timbers, the recycling of tonnes of steel and the reuse of crushed concrete and rock to improve access roads. The project was completed in less than X months from start of design, thru permitting to completion of construction. Stantec worked with the utility to bank the stream restoration credits allowing them to recover 80% of the $1.1 million dollars spent on the project.