

Mechanical Engineering

SERVICES / STRUCTURES AND FACILITIES



Palisades Turbine Overhaul Support



Rock Slough Intake and Fish Screens

DAM AND LEVEE
GEOPROFESSIONAL
STRUCTURES AND FACILITIES
TUNNEL AND UNDERGROUND
WATER SUPPLY, CONVEYANCE,
AND DISTRIBUTION
CONSTRUCTION PHASE SERVICES
ENVIRONMENTAL
INFRASTRUCTURE MONITORING
SERVICES (IMS)
RISK

Schnabel Engineering DC, Inc. is an affiliate of Schnabel Engineering, Inc.

Engineering services in the following states are performed by Schnabel's respective affiliated entity: Michigan: Schnabel Engineering of Michigan, Inc.; New York/Connecticut: Schnabel Engineering of New York; North Carolina: Schnabel Engineering South, P.C.

Mechanical engineering design is integral to Schnabel's hydropower, fish facilities, and surface water engineering work. We've designed many custom gates, valves, and operators/actuators for hydropower facilities, large surface water diversions, and fish passage facilities. We routinely specify and design around standard manufactured equipment when it's available and most economical for the project.

We've designed pumping stations with combined head and flow characteristics of 275 psi and 300 cfs using multistage vertical turbines as well as large and small axial flow installations, submersible and solids handling pumps. Our custom machine design experience ranges from continuous belt screens to a variety of large-scale screen cleaning systems and unique machines, including photovoltaic-powered automatic fish feeders with helical spline shaft feed delivery. We also have extensive experience in the inspection, analysis, and design of large diameter pipelines and penstocks with working pressures in excess of 400 psi. This experience includes both buried and exposed steel pipelines, valves, and custom fittings such as fabricated bifurcations.

Materials selection is critical to all engineering projects, especially in the design of bearings, submerged works and equipment in corrosive environments. We have a thorough working knowledge of traditional materials for bearings, shafting, and steel structures in addition to state-of-the-art sintered materials. Corrosion protection and prevention using anode systems or various stainless alloys, aluminum, and titanium is common in our design as well as corrosion protection using plastics, ceramics, 440C stainless steel, and cast iron.