



Hydropower services – hydrology and hydraulic engineering

Harnessing the power of water

Whether it's time to perform upgrades or develop new infrastructure, meet regulatory requirements or address new operational requirements of a license, or conduct natural resource studies during relicensing, WSP USA has years of experience in addressing the challenges hydropower managers face on a daily basis.

We help you resolve hydrology and hydraulic challenges through advanced technologies and expertise, deploying teams of highly skilled technical experts to lead the way in technological innovation and efficient project delivery. From field investigations to numerical modeling and simulation, we give clients the flexibility to apply our expertise at virtually any phase of a project. We provide our clients unparalleled experience and technological proficiency.



OUR SERVICES

- 1D, 2D and 3D modeling
- Inflow design flood studies
- Dam breach analysis and inundation mapping
- PMP/PMF studies
- Spillway, gate and outlet works capacity
- Hydraulic design of intakes, penstocks and tunnels
- Feasibility assessments
- Flood plain inundation studies
- Regulatory environments
- Environmental flow regimes
- Flood routing studies
- Flood frequency analysis
- Backwater analyses
- Reservoir operations and water allocation
- Penstock sizing and evaluation of head losses
- Penstock transient analysis (magnitude, location and duration)
- Reservoir freeboard, wave set-up and run-up
- Plunge pool scour analysis and countermeasure design
- Sedimentation and transport modeling



ABOUT WSP

WSP USA is the U.S. operating company of WSP, one of the world's leading engineering, environment and professional services firms. Recognized on [Fast Company's Brands that Matter List for 2022](#) as a top Community-Minded Business, WSP USA brings together engineers, planners, technical experts, strategic advisors and construction management professionals who are dedicated to collaborate in the best interests of serving local communities. WSP USA designs lasting solutions in the buildings, transportation, energy, water and environment markets. With more than 15,500 employees in 300 offices across the U.S., WSP partners with its clients to help communities prosper.



CONTACT US

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