



Water, wastewater and stormwater

Population growth, industrial development and aging water assets have put pressure on conventional water, wastewater, and stormwater technologies and infrastructure and created new challenges in both quantity and quality management. Added to this pressure are the new realities of adapting to climate change—from vulnerabilities to rising sea levels, severe coastal storms and inland flooding, to severe drought conditions that threaten potable water supplies. Public agencies, owners and operators need long-term solutions, and a means of paying for them.



WSP USA is helping our clients find the right solutions to their challenges through innovative planning and design, deep knowledge of the federal and local regulatory environments, and a unique understanding of the alternative delivery mechanisms available in today's tough economic climate.

WSP takes a lifecycle approach to managing water resources. Our professionals consider the impacts and implications of trends in climate, society, technology and resources across the entire water cycle, to provide a complete perspective and develop Future Ready strategies for a sustainable, water-secure future

OUR TEAM

We are a talented group of individuals with advanced degrees in science, engineering and business, as well as professional work experience in industry, consulting and federal and state regulatory agencies. We are problem-solvers who explore new ideas and we are driven to find the ideal solutions.

OUR SERVICES

We provide a full range of services from strategy development through project implementation. Working alongside our clients, we serve as trusted advisors providing in-depth and objective advice.



Water supply/reuse

We have significant experience in integrated water resources planning, design, and management, and provide optimized solutions for water supply, alternative sources, wastewater management, and reuse of reclaimed wastewater. We also have experience in advanced water treatment technologies, including desalination of seawater and brackish water, and in zero-effluent discharge systems for power facilities.

Water/wastewater treatment and conveyance systems

We have completed planning, design and permitting of numerous municipally owned wastewater systems for new, rehabilitated, or expanded wastewater treatment plants. Wastewater treatment design has involved current technologies in biological nutrient removal (BNR) and advanced wastewater treatment (AWT) from relatively small systems to regional wastewater treatment systems.

For water and wastewater conveyance systems, our experience includes planning, condition assessment, new and rehabilitation design, and construction management of water transmission and sanitary sewer pipeline systems, as well as outfalls, pump station and other major flow control related to the transmission and conveyance of water, wastewater, and reclaimed wastewater. Our extensive experience in solving combined sewer overflow (CSO) and sanitary sewer overflow (SSO) problems using state-of-the-art gray and green infrastructure technologies is one of our differentiators.

Stormwater, watershed and ecosystem management

We provide solutions that help protect surface water resources and manage them sustainably in the long term. Our services include environmental resources assessment; water quality monitoring; watershed management planning; NPDES/TMDL program support; stormwater management and water quality best management practices (BMPs); low impact development and green infrastructure; fluvial geomorphology; river and stream restoration; bio-engineering; wetlands creation; bridge and highway drainage; scour analysis; shoreline protection; coastal engineering; and waterway computer modeling.



Sterling Natural Resource Center, CA | The 14-acre advanced wastewater treatment plant that will produce up to 10 million gallons of disinfected recycled water per day. WSP is supporting the design-build project team with design of the 31,700 linear feet, off-site collection/conveyance pipelines.



Waterworks Park Transmission Main, MI | WSP designed 4.2 miles of water main which transmits treated, finished drinking water from the Water Works Park Water Treatment Plant (WTP) to the Northeast WTP. Through a progressive design build contract, WSP has assisted the PDB builder and the owner in developing a reduced risk design that repurposes an existing tunnel for a major interstate crossing and developed trenchless solutions for critical crossings in other congested areas.



National Park Service Watergate Wetlands Restoration Project, NJ | WSP provided engineering design and permit approval for this 114-acre wetland restoration. The project includes removing artificial dams and human-made ponds, re-establishing palustrine wetland habitat, and restoring the connection between Van Campens Brook and its floodplain.



Flood control and hydraulic structures

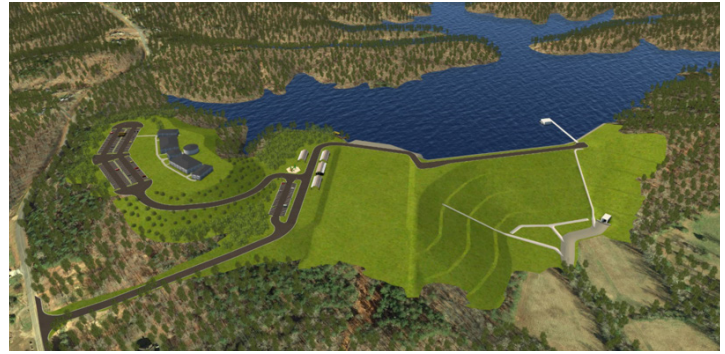
Our flood control and major hydraulic structures engineering expertise includes flood risk assessment and flood protection program support; floodplain analysis and flood forecasting; one- and multi-dimensional hydrologic, hydraulic, scour and sedimentation analyses; FEMA mapping, and CLOMR/LOMR preparation; levees, dams and canals; pump stations; intake, flow diversion and outlet structures; and large detention basins and impoundments.

Climate adaptation and resiliency

We help our clients prepare for the risks of climate change and increased uncertainty by creating resilient systems and communities through the development of integrated engineering, planning, and policy solutions. Our services include community-wide vulnerability assessments and hazard planning; risk assessments; cost and benefit analyses; coastal and fresh water flood protection systems design; climate adaptive engineering and asset management; post-extreme event recovery projects; and development of capital improvement plans and integrated funding programs.

Facility and asset management

We integrate technical excellence, financial management, and business knowledge to provide the management strategies and tools to optimize the life and value of our clients' infrastructure assets. We work with clients to prepare asset management plans; develop asset management strategies; establish service level indicators; conduct life cycle asset valuation, performance modeling and cost analysis; conduct condition assessment and monitoring; design maintenance and repair strategies; advise on asset management information systems; and monetize assets.



Russell Creek Reservoir, GA | WSP designed a 110 ft. tall earthen dam that will impound approximately 1.4 billion gallons of water. The project includes a raw water intake & pump station with a firm capacity of 15MGD to fill the reservoir; a raw water pipeline between river intake and Russell Creek Reservoir; upgrades at existing Hightower Water Treatment Plant Raw Water Intake & Pump Station and environmental assessment and permitting.



Pinellas County Resilience Planning, FL | WSP built a custom probabilistic risk model that reflected impacts to county assets/infrastructure from sea level rise, tidal and storm surge concerns to 2100. WSP identified critical elevations for infrastructure; a cost/risk assessment that identified potential costs facing the county; and the introduction of a design model that incorporates a scenarios assessment, technical determination of damage/user consequences, and a cost-effectiveness framework to a recommended design that is both adaptive to future conditions and cost-effective.

City of Baltimore Asset Management, MD | WSP implemented an enterprise asset management program across water, wastewater and stormwater infrastructure, including organization structure and staffing, asset condition and risk methodologies, maintenance programs, technology and data strategy, business processes, financial strategies, and implementation planning.

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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