

ASCE Seattle Section Local Outstanding Civil Engineering Achievement (LOCEA) Awards 2023

Outstanding Water Resources Engineering Project:

GEORGETOWN WET WEATHER TREATMENT STATION

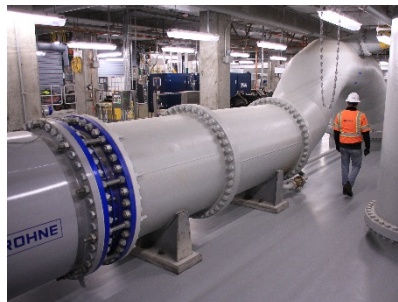
Owner: King County Department of Natural Resources Wastewater Treatment Division

Project Team: Jacobs Engineering | HDR Inc. | Bright Engineering | Miller Hull | Berger Partnership | ESA
| Signal Compass | Cosmopolitan | Roberts Engineering | Alden

In 2013, King County retained a Jacobs-led team to deliver the Georgetown WWTS project to control two existing combined sewer overflows (CSOs) into the Lower Duwamish Waterway. The Georgetown WWTS is a satellite treatment facility that will operate an average of 20 times per year, processing about 69 million gallons of combined sewer wastewater annually. This is the first new CSO treatment facility implemented under the County's CSO Consent Decree. Jacobs has successfully met Consent Decree requirements, including submittal of a Facility Plan ahead of the December 2015 milestone.



The project integrates site selection, process evaluations, environmental/cultural impacts, discharge regulatory requirements, financial analysis, and description of the recommended system to meet state and federal wastewater facility and CSO plan requirements. Early tasks included screening and selecting technologies for liquids treatment and disinfection, solids handling, and odor control; participating in wastewater characterization studies in support of process design; authoring a facility plan for the proposed project; developing treatment station, conveyance, and outfall layouts; and preparing schematic and preliminary design drawings of the new facility. The Jacobs team completed final design in mid-2017. Construction was completed in four phases. (Site preparation, Outfall, Conveyance, Treatment Station).



Honor Award Water Resources Engineering Project:

I-5 AND SR11 PADDEN CREEK FISH PASSAGE

Owner: WSDOT

Project Team: KPFF Consulting Engineers | Granit Construction | GeoEngineers | Transpo Group

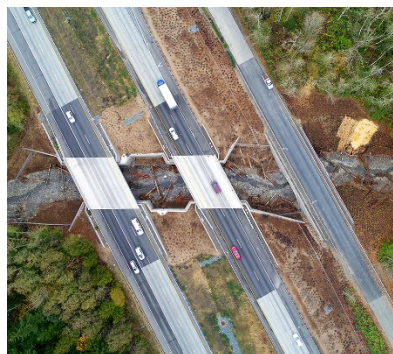
The Washington State Department of Transportation (WSDOT) faced a unique challenge; build fish habitat beneath an active interstate and near a busy intersection while minimizing traffic disruptions. To meet fish passage requirements, WSDOT had to replace Padden Creek crossings at I-5 and SR11 near Bellingham, Washington. The KPFF/Granite team used accelerated construction techniques to build 1,000 feet of new stream channel with more than 100 habitat features, two fish-friendly culverts and two bridges that restored fish passage to more than five miles of upstream habitat.



For the I-5 crossings, the team used top-down construction sequencing and innovative engineering to decrease traffic impact days from 400 to just 225 while replacing the existing culvert with two bridges and a buried arch.

The SR11 crossing is in an extremely congested area. To minimize disruptions, the team installed the replacement culvert during a single weekend closure, ultimately reopening the road in 52 hours.

The project team added habitat-enhancing features that will evolve with the stream system over time. Stream engineers placed large woody material to provide essential habitat for young fish. Within two weeks of finishing construction, salmon and steelhead were observed throughout the restored reach, demonstrating the success of the stream crossing.



Young Engineer of the Year:

MACKENZIE CAPACI, P.E., M. ASCE

Mackenzie has seven years of experience in the water and wastewater industry. She started working full-time in Phoenix, Arizona, before moving to Washington in 2019. She currently works for Kennedy Jenks as a Project Engineer and has experience with water and wastewater treatment plant design, groundwater remediation, conveyance and distribution system design, planning, asset management, and condition assessment. She is licensed as a Professional Civil Engineer in Washington and Arizona and holds a Certification as a Wastewater Treatment Plant Grade II Operator.

She primarily works on projects in Washington and California providing planning and design, scheduling, estimating, orchestrating and leading field teams on condition assessments and inspection, drafting, report writing, specification writing, and construction management services. On the Project Management side, Mackenzie writes proposals, facilitates client service calls, manages budgets and invoicing, and oversees general communication and coordination with clients and staff. With a passion for asset management, planning, design, and risk assessment, she strives to have each of her clients come away with a greater understanding of their existing infrastructure and confidence for the future of their facility. Recognizing the state of society's water infrastructure is crucial to the health and welfare of public health. When a utility has the tools to fully realize their existing issues, it empowers them to move forward in a strategic way; maintaining what they already have, embracing innovation, and safeguarding not only their customers, but their operators, maintainers, and the environment, putting foremost the health, safety and welfare of the public, and their workforce. Mackenzie's goal is to ensure that her client's infrastructure is safe, resilient, and sustainable. Focusing on master planning for utilities, Mackenzie has represented her company addressing local water boards and engaging in public outreach; she has often found that effectively communicating to the public the needs for infrastructure improvement is the only way that positive change can occur.



Mackenzie started serving as a member and officer in ASCE over a decade ago. Joining as a student member and continuing as an active Younger Member, she has worked hard to inspire, connect, and serve our membership and community through the civil engineering practice. Throughout her region and across multiple Sections, Mackenzie has served as numerous committee chair and executive board positions, helped re-write the constitution and bylaws for University Chapters, contributed countless volunteer hours to planning student conferences, aiding concrete canoe and steel bridge teams, facilitating networking and career development for students and younger members, established an ASCE club at a local high school, and engaged with numerous STEM programs; aligning her goals with the Societies commitment to maximize professional and personal growth for all members.