



GWEN J. DALL, PE

PROJECT MANAGER

OVERVIEW

Gwen has 12 years of experience in civil engineering, water resources and related fields, including design of municipal water treatment systems, pumping and facilities design, large pipeline design, and other municipal drinking water engineering applications. Gwen is proficient in InfoWater Pro and WaterCAD and has utilized both programs to complete hydraulic, dynamic and water quality modeling and fire flow evaluation for numerous municipal water systems with up to 10,000 equivalent taps. Gwen's experience includes master planning, permitting, project management and bid and construction administration, and construction inspection which has allowed her to take projects from inception to final completion. Gwen was an employee of JDS-Hydro Consultants, Inc., which RESPEC acquired in 2021.

PROJECT EXPERIENCE

Trails at Aspen Ridge Booster Pump Station, Widefield Water and Sanitation District, Colorado Springs, Colorado. Gwen is the project engineer/manager for designing a 1,351-square-foot pump station with a flowrate from 20 to 3500 gallons per minute (gpm). Work included modeling, easement acquisition, bid and construction administration, and observation. This station is currently under construction.

Rolling Hills Booster Pump Station, Widefield Water and Sanitation District, Colorado Springs, Colorado. Gwen is the project engineer/manager for designing a 4,800-gpm, 1,707-square-foot pump station that replaces the initial station installed as part of the Veteran Affairs (VA) Pikes Peak National Cemetery (PPNC) project. Work included modeling, El Paso County permitting, Colorado Department of Public Health and Environment (CDPHE) permitting for chlorine boosting, landscaping and bid, and construction administration and observation. This station is currently under construction.

2MG Concrete Potable Water Storage Tank, Widefield Water and Sanitation District, Colorado Springs, CO. Gwen was the Project Engineer/Manager for design which included tank sizing, site design which included El Paso County 1041 and Site Development planning and approval processes. The project included easement acquisition, CDPHE permitting, grading and drainage design, access and service road design, passive mixing system, solar powered irrigation system considerations, bid and construction administration and observation.

Rolling Hills Tank Inlet Pipeline, Widefield Water and Sanitation District, Colorado Springs, CO. Gwen was the Project Engineer/Manager for the design, permitting and construction administration of roughly 4,900 LF of 24-inch-diameter potable water pipeline. The alignment crossed Tri-State and Mountain View Electric Association major powerlines and a 4" high pressure natural gas main. The project included easement acquisition, 1041 permitting, and El Paso County planning approval.

Water Master Plan, City of Gunnison, Gunnison, CO. Gwen was the Project Engineer/Assistant Manager for the master plan which included a review of current water demands and existing source of supply, evaluation of the adequacy and condition of current water infrastructure, projection of future demands and recommendations for meeting the needs of future growth and new regulatory requirements. The project included user characteristic definition based on water records, evaluation of risk factors and trigger events, creating and calibrating a water model using InfoWater, Capital Improvement Planning, and presentation to the City Council.

TECHNICAL EXPERTISE

- / Bentley WaterCAD
- / Innowyze InfoWater
- / Water Master Planning
- / Pump Station Design

EDUCATION

- / BS in Engineering Science (Environmental Engineering), Colorado State University, Fort Collins, CO (1999)

REGISTRATIONS & LICENSES

- / Professional Engineer in Colorado

PROFESSIONAL MEMBERSHIPS

- / Rocky Mountain Water and Environment Association
- / American Society of Civil Engineers

WORK HISTORY

- / RESPEC (2021–Present)
- / JDS-Hydro Consultants (2015–2021)
- / Pipeline Strategies and Integrity (2010–2015)
- / Applied Hydrology Associates (1999–2000)



Veteran Affairs Pikes Peak National Cemetery Water Delivery System, Widefield Water and Sanitation District, El Paso County, Colorado. Gwen was the Project Engineer/Manager for this project that included routing, planning, permitting, design and bidding of approximately 3.5-miles of 16-inch through 10-inch potable water delivery system; two booster pump stations and interim storage tank. The pipeline route crossed under Bradley Road and over CSU's 66-inch diameter SDS raw water transmission line. The project included hydraulic and water quality-water age modeling, county permitting approvals, crossing agreements, 1041 Exemption, coordination with affected entities including developers, VA engineering staff, and property owners for easements.

Phase II Regional Water Improvements, Forest Lakes Metropolitan District, Monument, Colorado.

Gwen was the Design Engineer and Project Manager for the planning, permitting, and design of a 300 gpm booster pump station, 0.26 MG Bolted Steel Potable Storage Tank and sizing of interconnecting zone piping. Design also included hydraulic modeling for upper pressure zone creation and expansion, and water age/chlorine residual degradation modeling for new zone especially in early development stages. Permitting included El Paso County permitting approvals, 1041 Exemption, and Colorado Department of Public Health and Environment approvals. Gwen also completed bid and construction administration for the project.

Booster Pump Station, Forest View Acres Water District, Monument, Colorado. Gwen was the Project Engineer for a 130 GPM booster pump station. On-site observation and construction coordination included the construction of a 390-square-foot building, field piping connections, existing booster station demolition, and landscape and revegetation and management of multiple subcontractors.

Western Water Line Phase 2, Triview Metropolitan District, Monument, Colorado. Gwen was the Project Manager for the routing, planning, permitting, and design which included a 12-inch transmission line with a 900-foot directional bore, interface with endangered species habitat, and paralleling of Tri-State major power lines. The project included hydraulic modeling, county permitting approvals, 1041 Exemption, coordination with affected entities including developers, Tri-State, and property owners for easements.

Morning Sun Pressure Reducing Station, City of Woodland Park, Woodland Park, Colorado. Gwen was the Project Engineer for the vault design which included internal layout for 100-square-foot vault and reconnection to existing water mains, specification review, procurement assistance and onsite construction observation.

Phase 4 Water Main Rehabilitation, Forest View Acres Water District, Monument, Colorado. Gwen was the Project Engineer for the design, construction observation, and administration of approximately 3,800 LF of 6-inch potable water main replacement, which included service connections, horizontal directional drilling, hydrant replacements, and reconnection to existing water mains. Rock with a mineral hardness greater than 3 was encountered. Directional boring for the project utilized rock tooling bits, excavation for pipeline installation by open hole utilized a trencher and excavation for tie-in locations utilized a pneumatic rock breaker. Significant coordination with CDPHE and the contractor was required because of State Revolving Fund requirements.

Phase 2 and 3 Water System Improvements, Forest View Acres Water District, Monument, Colorado. Gwen was the Project Engineer and completed construction observation and administration of roughly 4,900 linear feet (LF) of 6-inch potable water main replacement, service connections, horizontal directional drilling, hydrant replacements and reconnection to existing water mains. Significant coordination with CDPHE and the contractor was required because of State Revolving Fund requirements.

Keeton Water Treatment Facility, Red Rock Valley Estates Water District, Colorado Springs, Colorado.

Gwen was the Project Engineer for the permitting and design of a surface water treatment plant. Design included chemical feed, membrane filtration, back-wash systems-recovery, booster pumping, instrumentation/controls, 12" chlorine contact loop, internal layout of a 600-square-foot building, field piping for five water sources, a shallow well redrill, existing treatment plant demolition, and the addition of a back-up generator. Significant cobble was encountered at the site including boulders larger than 3.5 cubic yards that had to be broken to allow for building excavation. The project also required grant coordination to comply with State Revolving Fund requirements, CDPHE permitting, Division of Water Resources permitting and on-site construction observation.



SARAH N. ITZ

BIOLOGIST

TECHNICAL EXPERTISE

- / Section 404 Permitting
- / T&E Habitat Assessments
- / NEPA Compliance
- / Project Management
- / GIS Analysis
- / Trimble GPS Data Collection

EDUCATION

- / BS in Biology, University of Texas at Austin, Austin, TX (2003)

CERTIFICATIONS & TRAINING

- / Texas Department of Transportation Pre-certifications: 2.3.1 Wetland Delineation, 2.4.1 Nationwide Permit, 2.6.2 Impact Evaluation Assessments, 2.13.1 Hazardous Materials Initial Site Assessment (2020)
- / Wetland Training Institute 40-Hour Wetland Delineation Course (2005)
- / USACE 404 Permit Application and Compliance (2009)
- / Wetland Training Institute Wetland Plant Identification (2011)
- / Wetland Training Institute Regional Field Refresher Courses in Laramie WY and Santa Fe NM (2017 and 2018)
- / University of Texas at Austin Technical Writing Course (2013)

WORK HISTORY

- / JDS Hydro (2019–Present)
- / EST, Inc. (2020–Present)
- / CP&Y, Inc. (2005–2019)
- / Texas Department of Transportation (Jan 2005–Nov 2005)
- / Stormwater Research Group (May 2004–Dec 2004)
- / Environmental Careers Organization (Feb 2004–May 2004)

OVERVIEW

Ms. Itz has 16 years of experience working on a variety of water/wastewater, transportation, land development, and environmental projects. Ms. Itz's technical specialties include project management, National Environmental Policy Act (NEPA) compliance, wetland delineations, Section 404 permitting, agency consultation, plant identification, and threatened and endangered species habitat assessment and presence/absence surveys. Most of her projects have been in Texas, Oklahoma, and Colorado for a wide variety of clients including departments of transportation, counties, municipalities, oil/gas and utility companies, private landowners, Native American tribes, regional water districts, landfills, airports, and civic groups.

PROJECT EXPERIENCE

Cottonwood Creek Drop Structures, City of Colorado Springs, Colorado. As environmental project manager, Sarah completed field investigations for Section 404 permitting purposes for three proposed drop structures in Cottonwood Creek north of N. Academy Blvd. Field investigations included wetland delineations along the creek, delineating the ordinary high water marks (OHWM) of the creek, habitat assessment for federally listed species known to occur in the vicinity, and taking representative photos and notes. Sarah prepared a PCN under Regional General Permit (RGP) 37 for submittal to the USACE.

South Cascade Avenue Project, City of Colorado Springs, Colorado. Sarah served as the environmental project manager for a proposed channel improvement project at Cheyenne Run under S. Cascade Avenue in Colorado Springs. She conducted field work to delineate the OHWMs of Cheyenne Run and to GPS locations of mature trees in the project area. She coordinated with project engineers to determine water and vegetation impacts. Lastly, Sarah prepared a Regional Permit PCN for submittal to the USACE.

Marksheffel Road Improvements, City of Colorado Springs and Colorado Springs Utilities, Colorado. Sarah's role in this project was the environmental project manager and permitting specialist. The project involved a proposed Marksheffel Road bridge over Sand Creek and related creek stabilization activities within and along Sand Creek. She completed performed wetland delineations along the creek, delineated the OHWMs of the creek, completed a habitat assessment for federally listed species known to occur in the vicinity, and took representative photographs and notes. Sarah coordinated with the USACE to determine the appropriate permitting required and prepared a PCN under NWP 14 and RGP 37.

West Water Pipeline Project 1041 Environmental Documentation, Woodmen Hills Metropolitan District, Colorado Springs, Colorado. As an environmental specialist, Sarah completed a habitat assessment and waters/wetlands delineation along the proposed West Water pipeline project area and completed the environmental sections of the El Paso County 1041 environmental document for the project. Field investigations also involved taking representative photographs and GPS data of notable features within the project area.

Riverbend Crossing Proposed Development Environmental Studies, Avatar Riverbend, LP, Southern El Paso County, Colorado. This project involved the proposed residential development of two parcels totaling 52 acres. As the project's environmental specialist, Sarah completed a waters and wetlands delineation, threatened and endangered species habitat assessment, and migratory bird and nest survey on the entire property. She then prepared an environmental report for the client and detailed the field results. Fountain Creek and one emergent wetland were delineated on the property; however, based on project plans, no impacts to either would occur and no Section 404 permit was deemed necessary.



Hausman Road Drainage Project, Phase I (LC9), Bexar County, Texas. Sarah served as Wetland Scientist for this proposed road widening/flood control/stream restoration project in Bexar County. She performed tasks related to jurisdictional waters determination and habitat assessment for listed species. A hydraulics and hydrology study was completed for downstream flooding issues; Sarah helped identify environmental issues for the alternatives produced. The preferred alternative required a Nationwide Permit (NWP) 27 for Stream Restoration Activities. She completed the Preliminary Jurisdictional Determination Report and assisted with the development of the Alternatives Analysis, the Qualitative Habitat Evaluation Index Report, and the NWP 27, which was approved by the U.S. Army Corps of Engineers (USACE) with no comments.

T&E Species Survey, Algodones Dunes, Imperial County, California. Sarah served as a temporary field biologist and surveyed for three special status plant species, Peirson's milk-vetch (*Astragalus magdalenae* var. *peirsonii*), Algodones Dunes sunflower (*Helianthus niveus*) and sand food (*Pholisma sonora*) to obtain estimations of density and population size for the Bureau of Land Management. She used GPS units to navigate on transects through the Algodones Dunes and data sheets to record findings.

Bald Eagle (*Haliaeetus leucocephalus*) Survey, Brazoria County, Texas. As an environmental scientist, Sarah attended weekly field visits to survey status of nesting pair of bald eagles near the Brazos River and SH 36 in Brazoria County. Construction of SH 36 improvements in the vicinity was halted to avoid noise impacts to the eagles.

State Highway (SH) 9 at Fish Creek Bridge Replacement and Approaches Project, Oklahoma Department of Transportation, Hughes County, Oklahoma. As the Wetland Scientist, Sarah completed a wetland delineation, waters of the U.S. determination, and habitat assessment for this bridge replacement project in Hughes County, Oklahoma. She delineated a complex forested wetland and braided stream system of Fish Creek. Sarah also completed the Biological Assessment report for inclusion in the Categorical Exclusion (CE) document.

San Antonio River Outfall (SARO) Pipeline Environmental Compliance Document and Phase I, San Antonio Water System (SAWS), San Antonio, Texas. Sarah served as an Environmental Scientist for the proposed rehabilitation and repair of an 18-mile-long segment of SAWS pipeline in southeast San Antonio. She completed field work, environmental compliance documentation, and a Phase I Environmental Site Assessment (ESA). She also coordinated between the client and subconsultants, determined Section 404 permitting requirements, and made a Phase II ESA recommendation due to hazardous waste issues along the project.

C-5 Culebra and C-28 Zarzamora Creek Pipeline Project Environmental Compliance Document and Phase I, SAWS, San Antonio, Texas. Sarah served as an environmental specialist for the proposed rehabilitation and repair of several segments of SAWS pipeline near downtown San Antonio. She completed field work, environmental compliance documentation, and a Phase I ESA. Sarah also handled coordination between the client and subconsultants, prepared and submitted a pre-construction notification (PCN) under NWP 12 to the USACE, and made a Phase II recommendation due to hazardous material issues in the project area.

Babcock Road Improvements PCN, Bexar County, Texas. Sarah served as an environmental specialist for the proposed improvements to Babcock Road in northern San Antonio. She conducted field work to obtain limits of jurisdictional waters for permitting purposes and prepared a PCN under NWP 14 due to the presence of federally listed endangered species in the vicinity. Sarah coordinated with project engineers and U.S. Fish and Wildlife Service (USFWS) to minimize impacts to the habitat of this endangered species. Permit was approved by the USACE with no revisions necessary.

Galveston Island State Park Individual Permit, Texas Parks and Wildlife Department, Galveston, Texas. Sarah served as environmental specialist for this project and assisted in the preparation of an Individual Permit at Galveston Island State Park (GISP). The project included the construction of residences for GISP staff, maintenance facilities, and beachside camping facilities that were destroyed by Hurricane Ike. Sarah aided in completing wetland delineations on the beachside camping area and portions of the bayside area. She also prepared a NWP due to impacts to a small wetland from a proposed driveway.

San Felipe Creek Master Plan, City of Del Rio, Texas. As an assistant biological scientist, Sarah conducted a habitat assessment, wetlands and Waters of the U.S. determination, and native vegetation survey within the project area of the San Felipe Creek Master Plan project in Del Rio, Texas. The habitat assessment consisted of determining the presence of federally listed T&E species habitat for the Mountain Plover, Devils River minnow, and the San Felipe gambusia. Sarah aided in USFWS coordination which was required since the project was within critical habitat for the threatened Devils River minnow.