

Citywide On-Call Engineering Services for Stormwater

Albuquerque, New Mexico

CLIENT

City of Albuquerque

HIGHLIGHTS

- Projects include stormwater quality, LID, green infrastructure, and drainage/flood control
- Permitting assistance for NPDES/MS4
- Fast-track schedule



DBS&A field staff collect water samples throughout the City

DBS&A has provided services to the City of Albuquerque under the Citywide On-Call Engineering Services for Stormwater contract since 2014. Under this contract, we assist the City with the management of NPDES compliance efforts for the MS4 permit. In addition, DBS&A's scientists and engineers are providing technical expertise in all aspects of permit compliance, including water quality monitoring and pollutant mitigation.

Task Orders issued under this contract include the following:

- Evaluation of effects of permeable pavers on stormwater quality at Pino Yards–The goal of this work is to decrease the amount of stormwater discharge to the South Domingo Baca Arroyo and to improve the water quality of discharge to the Arroyo. DBS&A's work seeks to quantify both the water quality treatment benefits and the infiltration capacity of the permeable surfaces.
- Characterization of polychlorinated biphenyls (PCBs) in the Tijeras Arroyo–We developed a SAP, conducted sampling of sediments, performed laboratory analysis of sediments, and prepared data analysis and reporting.
- Illicit Discharge Detection and Elimination (IDDE) Program Assistance–DBS&A conducted a reconnaissance-level IDDE investigation consisting of GIS mapping, inspection of aerial photographs, and ground-truthing; developed the IDDE program quality assurance project plan (QAPP); and determined priority areas where illicit discharges may be likely

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and visual screenings of outfalls during dry weather are needed. Currently, DBS&A has performed IDDE inspections of over 300 commercial facilities not currently covered by the NPDES storm water Multi-Sector General Permit (MSGP). The inspections included a review and documentation of the general housekeeping and pollution prevention procedures, including spill prevention and the proper storage and disposal of materials and waste. DBS&A has also assisted city in staff IDDE training programs and organizing documentation for annual reporting to the EPA.

- **IDDE Sampling**–DBS&A is also under contract with the City to sample substantial illicit discharges to characterize non-storm water discharges. DBS&A performed an illicit discharge investigation at the ABQ Ride West Side Transit Facility’s stormwater outfall and stormwater detention ponds. The purpose of the investigation was to characterize the presence or absence of contaminants in the facility’s stormwater system due to possible illicit discharges. The investigation included a site inspection, production of a sampling analysis plan, sediment sampling, and subsequent reporting. The sampling effort included the collection of background sediment samples upgradient of the facility discharge. Samples were submitted for analysis of metals, volatile organic compounds, semi-volatile organic compounds, chloride, and diesel range and gasoline range organics. The contaminants to be sampled, specified in the MS4 permit, include biochemical oxygen demand, sediment (turbidity or TSS) E-coli, oil and grease, nutrients, and any pollutant that has been identified as cause of impairment of a water body receiving discharges from that portion of the MS4, including temperature. DBS&A is also tasked with database assistance and reporting.
- **Sediment Pollutant Load Reduction Strategy**–DBS&A prepared a report that summarizes professional papers regarding sediment loading and transport in the Middle Rio Grande, and reviewing and analyzing historical total suspended solids (TSS) and other sediment load indicators, total and dissolved metals, PCBs, and rainfall data and sediment removal data from AMAFCA. The report includes a summary of the literature review, findings, and recommendations.
- **As a result of the Sediment Pollutant Load Reduction Strategy Report**, DBS&A performed an investigation to characterize the presence or absence of near-surface PCB congeners and metal concentrations in sediment along stormwater channels and outfalls within the Albuquerque metropolitan area. DBS&A personnel developed a sampling plan and conducted sediment sampling upstream of the concrete-lined areas and in erosion control structures. The sampling plan included pertinent background information, sample locations and collection methods, sample handling and analysis procedures, and reporting information. The sampling effort included the collection of background sediment samples from natural arroyo locations upgradient of urbanized development and in structures where sediment accumulates and would be in contact during discharge events with stormwater that potentially reaches the Rio Grande.
- **Microbial Source Tracking (MST) Program Development**–DBS&A has developed a QAPP and a field sampling plan (FSP) for an MST program in the Albuquerque Basin. The goal of the MST program is to assess progress in achieving goals and the effectiveness of the City’s best management practices (BMPs) to reduce the impairment of the Rio Grande by bacteria discharged in surface water. The program consists of water quality sampling at designated sites in the basin’s stormwater drainage system during rain events. The program also consists of laboratory analysis, data validation, and subsequent reporting.