



MDB provides engineering, planning, and technical assistance services focused on helping small, rural, and tribal communities address wastewater, drinking water, and stormwater infrastructure needs. MDB specializes in resilient solutions that account for financial, structural, and capacity constraints common in small communities.



COLLABORATIVE



CREATIVE



COMMITTED

MDB's engineering work focuses on the conceptual phase through preliminary engineering. However, MDB's staff bring deep experience across the full project lifecycle and remain actively involved from concept through implementation. When projects advance to final design, permitting, and construction, MDB partners with trusted firms as subcontractors, serving as project managers and ensuring projects are responsive to community priorities. This approach allows MDB to offer context-sensitive solutions while communities benefit from local knowledge and the most appropriate technical expertise for each project.

MDB has professional engineers licensed in the following states and can expand into additional states as projects require: AR, AZ, CO, MA, MI, MO, NC, NY, OR, TN, VA, VT.



MDB engineer examining test pits in Colchester, VT.

SERVICES

WASTEWATER & DECENTRALIZED (SEPTIC) SYSTEMS

- Wastewater condition assessments
- Regulatory compliance evaluations and corrective action planning
- Soils evaluation and hydrogeologic assessment
- Nutrient management (nitrogen, phosphorus control)
- Feasibility studies, Preliminary Engineering Reports (PERs), and alternatives analyses
- Centralized, cluster, and individual onsite wastewater system planning
- Design- and construction-phase support provided through subcontracted firms, with MDB serving as project manager and owner's representative

DRINKING WATER SYSTEMS

- Sanitary surveys
- Regulatory compliance evaluations and corrective action planning
- Lead pipe detection/lead contamination source identification
- Feasibility studies, Preliminary Engineering Reports (PERs), and alternatives analyses
- Community and individual water system (source, treatment, storage and distribution) planning
- Cost estimating and scheduling
- Design- and construction-phase support provided through subcontracted firms, with MDB serving as project manager and owner's representative

STORMWATER AND GREEN INFRASTRUCTURE

- Stormwater retrofits planning
- Best management practice (BMP) preliminary design
- Hydrologic and hydraulic modeling
- Climate resilience and adaptation strategies
- Integrated watershed planning
- Design- and construction-phase support provided through subcontracted firms, with MDB serving as project manager and owner's representative

CONTINUED ON OTHER SIDE

Closing America's Wastewater Access Gap in North Carolina

MDB is supporting nine communities across North Carolina in identifying feasible, long-term wastewater solutions. The range of approaches under consideration reflects the diverse needs of each community and includes sewer extensions to neighboring towns, cluster systems, individual onsite system repairs and upgrades, and development of a regional wastewater facility. For this effort, MDB partners with a local engineering consultant subcontractor while serving as the project manager and owner's representative. MDB helps define the scope of engineering services, works closely with community leaders and engineers to identify affordable solutions that are practical to implement and operate, and supports stakeholder engagements to build understanding and community support for the selected projects.

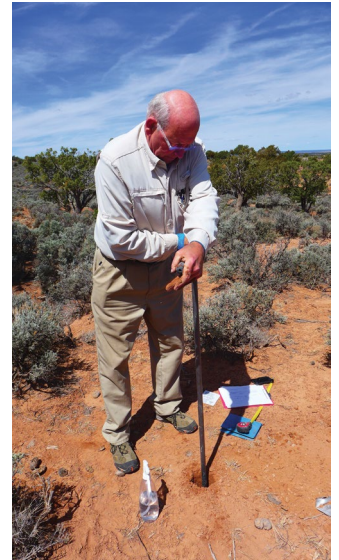


MDB engineer assessing onsite wastewater infrastructure in Duplin County, NC.

Navajo Nation Septic System Evaluations

In the Gallup District of the Navajo Nation, MDB engineers evaluated 59 homes to assess septic system conditions. Each evaluation included visual inspections, homeowner interviews, and preliminary soil testing using hand tools. Based on our findings, we provided tailored recommendations for each homesite, offering options ranging from new installations to repairs or shared systems.

These evaluations supported a funding application submitted to the Indian Health Service.



MDB engineer assessing soils in Gallup, NM (top), and Wastewater seepage at residential septic system in Gallup, NM (above).

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