GROUNDWATER SERVICES

LATA has performed full life-cycle services for groundwater and construction water treatment systems for 50 years. Our systems treat a wide variety of chemical and radiological groundwater contaminates at some of our nations' largest and most complex contaminated groundwater sites for commercial and government clients such as the Department of Energy, U.S. Army Corps of Engineers, U.S. Air Force, U.S. Environmental Protection Agency, and various municipalities and universities.

LATA's systems have treated over **20 billion gallons** of groundwater contaminated with VOCs, metals such as **Beryllium and PFASs**, and radionuclides such as **U238**. Our geologists and hydrogeologists determine the extent of contamination, design extraction and treatment systems, develop and apply models to optimize performance, and operate the systems to treat the groundwater.

AREAS OF EXPERTISE

- Site Investigations
- Groundwater Modeling
- Remediation
- Contaminants:
  - » VOCs
  - » Metals - such as Beryllium
  - » PFAS
  - » Radionuclides - such as U233/234 & U238
- Treatment Systems Design
- Treatment Systems Installation
- Operation
- Optimization
- Long-term Monitoring
- Maintenance
- Decommissioning

SAFETY | SERVICE | RELATIONSHIPS

Primary NAICS Code
562910: Environmental Remediation Services (Small Business)
Ancillary NAICS Codes
561210: Facilities Support (Small Business)
562211: Hazardous Waste Treatment and Disposal (Small Business)
541715: Research and Development in the Physical, Engineering, and Life Sciences (Small Business)
541519: Other Computer Related Services (Small Business)

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EXAMPLE PROJECTS

Groundwater Treatment, Paducah Gaseous Diffusion Plant, Paducah, KY

LATA designed and fabricated a mobile 250 gpm treatment system for removal of chlorinated solvents and radionuclides (uranium and Tc-99) from groundwater using multiple process units controlled locally by a PLC along with a remote access SCADA. LATA operated and maintained the system for over 5 years. Other engineering services included design and startup of a 50 gpm C-410 mobile water treatment system; design and fabrication of a 53-foot insulated trailer and liquid treatment vessels with a 200 gpm capacity; design of the electrical resistance hearting (ERH) project to remove approximately 8,000 lbs. of TCE from source spill in the subsurface representing a volume of 25,300 yd^3.

Waste Isolation Pilot Plant (WIPP) Management & Operating (M&O) Contract, Carlsbad, NM

LATA manages comprehensive environmental monitoring and surveillance including an extensive groundwater program. Program includes sampling and analysis of groundwater, surface water, sediment, air, and biota for radionuclides, VOCs, metals, and other parameters. LATA monitors 81 active wells ranging from 591 to 886 feet deep in the Culebra Dolomite and collects 241 samples for over 1,100 analytes and 738 water level measurements annually. Potentiometric maps and a calibrated MODFLOW-2000 groundwater model support flow and transport assessments. LATA also established a PFAS baseline in 2024 to guide future monitoring.

Design Modification and Installation of Infrastructure for Remedial Action, Pantex Plant, Amarillo, TX

LATA is installing infrastructure to support a large 41 well groundwater pump and treat system including 1 mile of 13.2KVA power with 1 mile of power lines; 2 miles of light duty roads; 1 mile of heavy-duty roads; 2 exits off of Texas State Highway 60; installation of 41 extraction well pumps; 2 miles of subsurface pipelines; power distribution and PLC control panels to support operation of the wells; and 2 equipment pads.

Midwest Base Realignment & Closure (BRAC) Environmental Construction & Optimization Services (ECOS)

LATA provides the full range of environmental, construction, and optimization services to conduct site restoration including maintenance of established remedies, implementation of optimization, and remediation activities for ten Midwest Region Air Force BRAC installations. Groundwater (GW) investigation and treatment includes but is not limited to: PFAS Treatment System (GAC and IX Resin) O&M and optimization, metals treatment via an Engineered Wetland Treatment System (EWTS), ongoing bio-sparging (BS) and in-situ bioremediation injections, base-wide GW monitoring and annual modeling updates, PFAS sample collection and analysis; waste characterization, removal, demolition, and disposal of an existing Fire Training AST and Building; chlorinated GW remediation via in-situ enhanced reductive dechlorination; site delineation for VOC compounds; and targeted ISCO injections and analysis for PAHs and metals.

Former Pease AFB Airfield Interim Mitigation System, Design-Build SCADA Services for PFAS Cleanup, Portsmouth, NH

LATA was subcontracted to provide a design/build PFAS solution for a facility-wide supervisory control and data acquisition (SCADA) and instrumentation and controls system for cleanup of contaminated groundwater. The proposed Airfield Interim Mitigation System solution is designed to ensure the protection of human health by eliminating exposure to drinking water that may have PFAS impacts above EPA lifetime health advisory values.

Texas Air Force Bases Performance Based Remediation (PBR), TX

LATA executed this PBR contract to provide risk-based remediation services concurrently at multiple sites within one Government-Owned/Contractor Operated aircraft manufacturing plant and five active AFBs covering 77 individual sites in Texas. LATA operated & maintained a groundwater extraction & treatment system of 31 extraction wells & 15 hydraulic control wells. Multiple bio-barriers were installed within paleochannels, which act as contaminant conduits for the GW plume, by injecting EHC® and EHC®-L. The effectiveness of the bio-barriers resulted in >46% TCE mass reduction in the plume. In-situ chemical reduction resulted in greater than 65% reduction in the chromium concentrations.

Design and Construction of Waste Water Treatment System at Fernald Preserve, Ohio

LATA designed and implemented a uranium treatment system to address groundwater contamination treating a 100 GPM slipstream diverted from a larger flow of 1,800 GPM extracted from 23 wells, supplemented by leachate from two landfills. The treatment train consists of two multimedia filter vessels in series (utilizing anthracite, quartz, and garnet media) for sediment removal, followed by two ion exchange resin vessels in series for uranium removal. The treated water is sourced from a prolific sand and gravel unit within the Great Miami Valley Aquifer.

Design, Construction and Operation of Treatment System at Motor Wheel Disposal Site (MWDS), Lansing, MI

LATA designed, built, and operated the Motor Wheel Disposal Superfund Site's groundwater extraction and treatment system from 1995 to 2021, addressing a two-mile contaminant plume impacting Lansing's drinking water source. The system, including 13 extraction wells and air strippers, treated over 2.25 mgd and processed over 8.5 billion gallons. Using a sophisticated groundwater model, LATA optimized well placement and treatment, resulting in significant contaminant reduction. Cost-saving measures saved over $800k.