

U.S. Geological Survey National Water Quality Laboratory

Capabilities Summary

USGS National Water Quality Laboratory
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NWQL USGS-visible web site:
<http://www.nwql.cr.usgs.gov/USGS>

The U.S. Geological Survey (USGS) National Water Quality Laboratory (NWQL) offers environmental analytical services, including inorganic, organic, and radiochemical constituents, and provides high-quality, reproducible data. The laboratory specializes in trace- and ultratrace-level analyses of water, sediment, and tissue, and the taxonomic identification and quantitation of benthic invertebrates. The NWQL also provides specialized services to its customers, including project planning, method development, customized projects, and data management.

Areas of Expertise

- inorganic, organic, and radiochemistry
- trace and ultratrace-level detection
- advanced environmental analytical methodologies
- different matrices (water, wastewater, sediment, tissue)
- taxonomic identification and quantitation of benthic invertebrates
- methods research and development (R&D)
methods scale-up for high capacity analytical support
- quality-assured supplies for field sampling

Personnel

- diverse staff of scientists and technicians
- expertise includes analytical chemistry, environmental biology, information technology, supply and business administration

Facilities

- state-of-the-art facility
- secure facility with sequestered area for chain-of-custody samples
- high-production capability
- high-efficiency-particle-arresting (HEPA) filtered air to remove airborne contaminants

Laboratory Information Management System (LIMS)

- customized LIMS manages workflow through the laboratory from receipt of samples through data release to customers and archival
- Sample Status Page provides customers web-based access to sample status information, including preliminary results

Customer Service

- online laboratory services catalog is searchable by analyte, schedule, and laboratory and parameter codes
- 1-866-ASK-NWQL or by email at LabHelp@usgs.gov
- email LabLogin@usgs.gov for receipt-of-sample issues
- online sample status and tracking
- coordination of USGS Department of Defense Earth Science Program (DODESP) analytical support

Full Service Analytical Support

- Analytical chemistry consulting
Commercial contract laboratory capability for:
- Regulatory compliance (TestAmerica, Inc.)
 - Radiochemical (Eberline Services, Inc.)
 - Stable isotopes (carbon) (Woods Hole Oceanographic Institute)
 - Low-level tritium (University of Miami)

Commitment to Safety, Health, & Environmental Compliance

- fully audited and compliant with State of Colorado Resource Conservation & Recovery Act and Metropolitan Wastewater Reclamation District discharge permit – Received Gold Award (2005, 2006, 2007, 2008)
- LIMS tracking of sample disposal and any hazardous materials that may be in samples
- continuing effort toward green analytical chemistry, including minimizing energy usage, waste streams, and waste disposal costs

Quality Control/Quality Assurance External Accreditations

- National Environmental Laboratory Accreditation Program (NELAP)
- States of New York, Texas, and Florida for nonpotable constituents
- awaiting North Carolina

Performance Testing, Audits and Evaluations

- Environment Canada Federal Provincial Studies
- NELAP
- New York State Department of Health
- USGS Branch of Quality Systems
- Chesapeake Bay Blind Audit
- USGS Radiological Safety Committee

Representation on Scientific Committees

- ASTM International
- National Environmental Methods Index
- Multi-Agency Radiological Laboratory Analytical Protocols
- Methods and Data Comparability Board

