

## U.S. Geological Survey National Water Quality Laboratory

### Summary

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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, as well as 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)
- 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 that includes both Federal and contract employees
- expertise includes analytical chemistry, environmental biology, information technology, and supply and business administration

#### Facilities

- state-of-the-art facility (completed in 1999)
- secure facility with sequestered area for chain-of-custody samples
- high-production capability
- high-efficiency-particle-arresting (HEPA) filtered air to remove air-borne contaminants

#### Laboratory Information Management System (LIMS)

- customized LIMS manages workflow through the laboratory from receipt of samples through data release to customers and archival
- LIMS allows
  - scheduling tests to be performed on a sample
  - storing and retrieving analytical results
  - interfacing of automated laboratory procedures

#### Customer Service

- online laboratory services catalog is searchable by analyte, schedule, and laboratory and parameter codes
- 1-866-ASK-NWQL or by e-mail at [LabHelp@usgs.gov](mailto:LabHelp@usgs.gov)
- e-mail [LabLogin@usgs.gov](mailto: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

- commercial contract laboratory capability for:
  - regulatory compliance
  - radiochemical
  - stable isotopes
  - low-level tritium

#### Commitment to Safety, Health, & Environmental Compliance

- compliance with State of Colorado Resource Conservation & Recovery Act and Metropolitan Wastewater Reclamation District discharge permit — received Gold Award (2005, 2006, 2007)
- 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, & 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