



# Aquatic Laboratory Services

**CEC's in-house aquatic laboratory enables the completion of services for benthic macroinvertebrate monitoring, including sample collection, taxonomic identification, index computation, reporting, and database storage.**

CEC performs macroinvertebrate surveys to meet a number of objectives, including:

- Aquatic life use and antidegradation determinations for streams and other water bodies
- Aquatic impact assessments for Clean Water Act permits
- Source identification and cause of impairment, if any, to water bodies from point and non-point discharges
- Assessment of effects of physical habitat and other stream variables on species diversity and abundance
- Evaluation of the effectiveness of remedial actions and restoration activities

To provide a robust set of services for benthic macroinvertebrate monitoring, CEC engages its experienced aquatics staff to provide the following:

- Field sampling by permit-holding biologists
- Sample processing by in-house laboratory staff following protocols from various agencies (PADEP, OEPA, WVDEP, and VADEP)
- Identification by taxonomists with certifications from the Society of Freshwater Science (SFS) in eastern EPT and chironomids
- Analysis of benthic macroinvertebrate data in the form of Indices of Biotic Integrity (IBI's) made up of varying metrics set forth by agency protocols
- Reporting to agencies for permits and monitoring requirements, or for client use
- Data and sample storage within CEC's database management programs and extensive aquatic warehouse

## ADDITIONAL AQUATIC ECOLOGICAL MONITORING SERVICES

- Fish Surveys
- Freshwater Mussel Surveys
- Wetland Surveys
- Bathymetric and Hydrographic Surveys
- Water and Sediment Sampling

