

Research and Science Communities Across the Appalachian Region

Science and Technical Centers within the Department of Interior (DOI)

U.S. Fish and Wildlife Service Fisheries Division

- **Warm Springs Regional Fisheries Center (WSRFC; Warm Springs, Georgia).** The WSRFC includes a Fish Technology Center, Fish Health Center, and two National Fish Hatcheries. The WSRFC provides technical assistance in the areas of cryopreservation, conservation genetics, fish health, and fish culture to the FWS and its partners. Additional information about WSRFC activities, staff, and projects can be found on the website: (<http://www.fws.gov/warmsprings>)
- **Northeast Fishery Center (NEFC; Lamar, Pennsylvania).** NEFC includes the Lamar Fish Technology Center and the Lamar Fish Health Center, and provides technical assistance in the areas of population ecology, conservation genetics, fish health, and fish culture technology to the FWS and partners throughout the Northeast Region of the FWS. NEFC projects have dealt with a variety of aquatic species; including both fish and freshwater mussels. Additional information about NEFC activities, staff, and projects can be found on the website: (<http://www.fws.gov/northeast/fisherycenter/>).

U.S. Geological Survey - Science Centers

- **Upper Mid-west Environmental Science Center (UMESC; LaCrosse, Wisconsin).** The UMESC provides information on terrestrial and aquatic resources throughout the US. While their focus has historically been in the Upper Mississippi River Basin and the Midwestern states the UMESC staff has completed projects throughout the US and around the world. The UMESC further identifies their programmatic area to include Amphibians and Reptiles, Aquatic Invasive Species Control, Aquatic toxicology, Avian Conservation and Ecology, Fisheries Restoration, Geospatial Science, Long Term Resource Monitoring Programs, Native Mussels, Resource Mapping and Spatial Analysis, River Productivity, and Wildlife Toxicology. The UMESC provides extensive information on projects, staff, and other capacity information on their website (http://www.umesc.usgs.gov/umesc_home.html).
- **The Leetown Science Center (LSC).** The Leetown Science Center, the oldest Federal Fishery research facility was established in 1931. The Center applies expertise from a broad diversity of scientific disciplines to conduct integrated research programs addressing the high priority needs of natural resource managers. The LSC is divided into several research units. These are the Fish Health Branch, the Aquatic Ecology Branch, the Restoration Technologies Branch, the Southern Appalachian Field Branch, the Northern Appalachian Research Laboratory, and the Conte Anadromous Fish Laboratory. The Leetown Science Center provides current information on their projects and staff on their website (<http://www.lsc.usgs.gov/overview.asp>).
- **Patuxent Wildlife Research Center (PWRC).** The Patuxent Wildlife Research Center was established in 1936 as the nation's first wildlife experiment station. Their focus has been on conducting applied research and dissemination. The PWRC manages national inventory and monitoring programs and is responsible for the North American Bird Banding Program and leadership of other national bird monitoring programs. Research on the Shenandoah salamander, an Appalachian LCC endemic, is managed out of PWRC and is ongoing. The Patuxent Wildlife Research Center provides additional information on their current projects and staff on their

website (<http://www.pwrc.usgs.gov/aboutus/>).

- **Kentucky Water Science Center (KY WSC).** The Kentucky Water Science Center provides information and conducts research concerning hydrology including ground water, water quality, streamflow, precipitation, and lake and river elevations in Kentucky. The Kentucky Water Science Center provides information on their current projects and staff on their website: <http://ky.water.usgs.gov/>.
- **Virginia Water Science Center (VA WSC).** The Virginia Water Science Center provides information and conducts research concerning hydrology including ground water, surface water, streamflow, water quality, and precipitation in Virginia. The Virginia Water Science Center provides information on their current projects and staff on their website: http://va.water.usgs.gov/indx_projects.htm.
- **West Virginia Water Science Center (WV WSC).** The West Virginia Water Science Center provides information and conducts research concerning hydrology including ground water, water quality, streamflow, precipitation, and reservoirs in West Virginia. The West Virginia Water Science Center provides information on their current projects and staff on their website: <http://wv.usgs.gov/>.

U.S. Geological Survey - Cooperative Research Units

Cooperative Research Units conduct research on renewable natural resource questions, participate in the education of graduate students, provide technical assistance and consultation on natural resource issues, and provide continuing education for natural resource professionals. There are 40 Cooperative Research Units in 38 states. Each unit is a partnership among the U.S. Geological Survey, a State natural resource agency, a host university, and the Wildlife Management Institute.

There are USGS Cooperative Research Units located in the states that are within the boundaries of the ALCC working on a variety of topics depending on partner interests and staff expertise (below).

- **Unit Name (Location)** - Alabama (Auburn University)
- **Aquatic - Irwin** - Lotic fish ecology and management; adaptive management of natural resources; landscape ecology; conservation of aquatic natural resources
- **Terrestrial - Grand** - Ornithology; Waterfowl Ecology; Population Biology & Management. **McGowen** - conservation and management decision support science; endangered species and birds (especially shorebirds); population and ecological modeling.
- **Unit Name (Location)** - Georgia (University of Georgia)
- **Aquatic - Jennings** - Fish ecology; Conservation biology. **Peterson** - Aquatic ecology and stream fish communities; Physical and biotic factors at multiple scales.; Population dynamics; Fish-habitat/landscape relationships; Evaluation of collection and population-estimation techniques
- **Terrestrial - Conroy** - Ecology and Wildlife Management; Population Dynamics; Biostatistics
- **Unit Name (Location)** - New York (Cornell University)
- **Aquatic - Fisher** - Modeling species-environment relationships; Evaluating environmental flows in rivers;

- **Aquatic - Fisher** - Modeling species-environment relationship, Evaluating environmental flows in rivers, Sampling design and methodology; Application of geotechnology
- **Terrestrial - Fuller** - Landscape ecology; Community ecology; Conservation biology
- **Unit Name (Location)** - North Carolina (North Carolina State University)
- **Aquatic - Hightower** - Anadromous fish ecology; Hydroacoustics; Population dynamics. **Kwak** - Fish ecology and management; Conservation ecology; Production biology; Rare, imperiled, and invasive aquatic species
- **Terrestrial - Collazo** - Demographic Processes and Conservation; Species-habitat relationships; Endangered Species Conservation. **Simons** - Avian ecology; Wildlife biology; Conservation biology
- **Unit Name (Location)** - Pennsylvania (Pennsylvania State University)
- **Aquatic - Wagner** - Fisheries ecology; Multiple spatial-scale assessment of aquatic resources; land-water interactions; hierarchical modeling
- **Terrestrial - Diefenbach** - Wildlife ecology; Estimation of population parameters; Harvest management of game populations
- **Unit Name (Location)** - Tennessee (Tennessee Tech University)
- **Aquatic - Layzer** - Stream regulation on aquatic biota; Ecology and conservation of freshwater mussels; Restoring and maintaining aquatic biodiversity; Ecology of stream fishes. **Bettoli** - Evaluating stocking programs using OTC marking and coded wire tagging technology; Catch-and-release mortality; Effects of water level fluctuations on fish recruitment in reservoir ecosystems; Dynamics of exploited fish populations; Management and ecology of imperiled fishes.
- **Terrestrial -**
- **Unit Name (Location)** - Virginia (Virginia Tech)
- **Aquatic - Angermeier** - Stream fish communities; assessing quality of aquatic resources; conservation of aquatic systems
- **Terrestrial - Ford** - Wildlife habitat interactions (forest management and prescribed fire); white-tailed deer management; ecology and management of bats; non-volant small mammals and woodland salamanders; high-elevation/relict forest management and restoration in the Appalachians
- **Unit Name (Location)** - West Virginia (West Virginia University)
- **Aquatic - Mazik** - Fish physiology and toxicology. **Welsh** - Fisheries management
- **Terrestrial - Wood** - Wildlife Ecology

[DOI - Climate Science Centers \[Map\]](#)