



AQUATIC RESOURCES RESEARCH & SERVICES

P.O. Box 249, Forest Grove, Oregon 97116 Phone: (503) 359-7525 Fax: (503) 359-8875

ABR's Fisheries and Aquatic Sciences Program provides research and consulting services to help those working to manage or restore aquatic habitats, water quality, and fisheries resources.



Building on ABR's **two decades of experience in environmental research**, our fisheries and aquatic sciences program provides expert services in the following areas:

- **Watershed assessment**
- **Fisheries research and surveys**
- **Water quality and physical habitat studies**
- **Biomonitoring with fish and macroinvertebrate communities**
- **Restoration effectiveness studies**
- **Grant proposal writing**
- **Taxonomy and sample processing (fish and macroinvertebrates)**
- **Ecological risk assessment**
- **GIS mapping and spatial analysis**

ABR AQUATIC RESOURCES PERSONNEL

Michael Cole, Ph.D.	Fisheries Biology, Biomonitoring, Aquatic Toxicology
Todd Mabee, M.S.	Design and Analysis of Experiments, Amphibian Ecology
Robert Burgess, M.S.	Biomonitoring, Aquatic Pollution (AK, Office)
Janet Kidd, M.S.	Wetland Science and Ecology (AK, Office)
Torre Jorgenson, M.S.	Geomorphology, Hydrology, GIS (AK, Office)

WATERSHED ASSESSMENT

- **Watershed assessments** are a synthesis and interpretation of information that characterize biological, chemical, and physical conditions in a watershed with emphasis on the aquatic environment. Assessments are necessary to **identify information gaps and prioritize restoration needs**. We are familiar with state and federal watershed assessment protocols and design watershed assessments to best address particular needs.

FISHERIES RESEARCH AND SURVEYS

- ABR conducts fisheries research and survey work in areas as diverse as the Oregon Coast Mountain Range to the North Slope of Alaska. We can undertake work ranging from

presence and distribution surveys, to **population size estimation and modeling** for assessing trends in fish populations, to investigations of **fish-habitat relationships** to assess restoration efforts for salmonids. We are experienced in employing standard agency survey and assessment protocols.

AQUATIC BIOMONITORING

- Stream invertebrates have become widely used as indicators of instream and watershed conditions because they integrate the effects of water quality and habitat condition. We are experienced in **designing and conducting biomonitoring programs** using macroinvertebrates. We use standard collection, processing, identification, and analysis protocols developed by regulatory agencies.
- Biomonitoring programs can be designed to assess biological conditions throughout an entire watershed, or they can be used to evaluate biological responses to specific **restoration projects** or best management practices. **Sample processing and taxonomic services** are also provided for those who do not have the in-house taxonomic expertise needed to identify aquatic macroinvertebrates.



SELECTED CLIENTS

Tualatin River Watershed Council • Unified Sewerage Agency • CH2Mhill • Willamette Industries, Inc. • Weyerhaeuser Company • South Fork of the John Day Watershed Council • Grant Soil and Water Conservation District • Molalla River Watch, Inc. • Phillips Petroleum • MJM Research • Aquatic Biology Associates, Inc. • Necanicum River Watershed Council • Confederated Tribes of the Grand Ronde Community of Oregon.

SELECTED PROJECTS

- Biomonitoring of restoration activities in the Upper South Fork of the John Day River Watershed, Oregon for the Grant Soil and Water Conservation District (2000 & 2001)
- Surveys of the upper limits of salmonid distribution, fish passage barriers, and usable habitat in selected drainages of the north Oregon Coast Range for Willamette Industries, Inc. (2001)
- Technical review and evaluation of the Portland Harbor Contaminated Sediment Remediation Work Plan for the Grande Ronde Tribes (2000)
- Bioassessment of macroinvertebrate communities of the Tualatin River Basin for the Tualatin River Watershed Council and the Unified Sewerage Agency (2000 & 2001)
- Relationships between torrent salamanders, aquatic macroinvertebrate communities, and physical habitat in headwater streams of managed forests in the Oregon coast range (for Willamette Industries, Inc. 2001)
- Bioassessment of macroinvertebrate communities of the Molalla River for Molalla River Watch, Inc. (2001)



For more information, please contact Mike Cole, ABR's Fisheries and Aquatic Sciences Program Leader, at (503) 359-7525 or mcole@abrinc.com.