

AQUATIC BIOLOGY ASSOCIATES, INC.

Services and Projects

Aquatic Biology Associates, Inc. has analyzed benthic freshwater invertebrate samples from several thousand sites in North America from Alaska to Arizona, and east to Texas and Missouri. Projects include:

BIOMONITORING & BIOASSESSMENT: Aquatic Biology Associates, Inc. has designed and implemented biomonitoring programs which utilize the benthic macroinvertebrate fauna of streams, rivers, lakes and wetlands to assess non-point and point source impacts on aquatic ecosystem integrity. We are a recognized leader in the research and development of biomonitoring protocols, testing of metric efficacy, and construction of multimetric bioassessment indices in western North America.

STREAM ECOSYSTEMS: Stream communities from several thousand sites representing nearly every ecoregion in western North America have been evaluated by Aquatic Biology Associates, Inc. during the course of over 100 biomonitoring projects conducted during the past 15 years.

RIVERINE HABITATS: Aquatic Biology Associates, Inc. has analyzed benthic, drift and/or artificial substrate invertebrate samples from many riverine environments. Several thousand samples have been processed at our lab from rivers in Alaska, Alberta, Arizona, British Columbia, Idaho, Montana, Oregon, Utah, Washington and Wyoming.

LAKE BENTHOS STUDIES: Aquatic Biology Associates, Inc. has conducted benthic macrofauna studies in nearly 100 lakes in Alaska, Northwest Territories, Oregon, and Washington.

WETLAND INVERTEBRATE COMMUNITIES: Wetland projects conducted by Aquatic Biology Associates, Inc. include the design and implementation of a 10-year study of the macroinvertebrate community of 18 palustrine wetlands in the Seattle area using emergence traps; analysis of the benthic invertebrates of a created wetland near Ft. McMurray, British Columbia; and experimental design consultation with the U.S. Environmental Protection Agency for monitoring invertebrate communities in created wetlands in the United States.

ESTUARINE HABITATS: Robert W. Wisseman has been involved in the inventory of macroinvertebrate communities and baseline data collection in several estuaries, including the Copper River Delta (Alaska) and Indian Cove, Harstine Island (Washington). He directed a baseline survey of intertidal macro- flora and fauna of the Nisqually Delta, Puget Sound (Washington).

FORESTRY IMPACTS: Aquatic Biology Associates, Inc. has been intimately involved in the design and implementation of biomonitoring programs in several dozen U.S. National Forest and Bureau of Land Management Districts in western North America. These programs assess benthic invertebrate communities as a measure of cumulative impacts to stream ecosystems from various land management activities. Biomonitoring studies are also used for watershed screening, and to chart recovery of biotic integrity through trend monitoring.

MINING IMPACTS: Macroinvertebrate biomonitoring programs conducted by Aquatic Biology

Associates, Inc. in streams potentially impacted from mining and ore processing, include a 14 year, 3-season study of streams impacted by ASARCO operations in northwest Montana; a 12 year, 3-season study of Jordan Creek near Stanley, Idaho; evaluation of historic monitoring data for the Payette National Forest, Idaho; and monitoring of other streams at mine sites in Oregon, California, Missouri, Arizona, Montana, Alberta and British Columbia.

REGULATED RIVERS: Aquatic Biology Associates, Inc. has designed or participated in biomonitoring studies that gauge impacts of dams, diversions and water withdrawals to aquatic ecosystems of rivers in Oregon and Washington.

TOXINS: Aquatic Biology Associates, Inc. has designed and conducted an aquatic invertebrate drift study to determine the impacts of the biological insecticide Bt on aquatic macrofauna for the Mt. Hood National Forest. Projects involving biological monitoring at Superfund sites have been conducted in Alaska, Oregon, Washington, Utah, Montana, and California. We have provided rapid response to evaluate the extent of toxic spill impacts to stream ecosystems at two Oregon sites in the past 5 years for the Oregon Department of Fish & Wildlife.

BIODIVERSITY: Robert W. Wisseman is an authority on Threatened and Endangered (T & E) aquatic macroinvertebrates of the Pacific Northwest. He is an advisor to federal and state agencies in Oregon and the Nature Conservancy. Mr. Wisseman is a recognized world authority on western North America Trichoptera (caddisflies). Aquatic Biology Associates, Inc. developed a data base on rare, threatened, and endangered aquatic invertebrate fauna of Oregon for the Oregon Department of Fish and Wildlife.

FISH DIET ANALYSIS: Projects conducted by Aquatic Biology Associates, Inc. involving the quantitative analyses of the invertebrates found in fish guts include salmonids from lakes in the North Cascades National Park, Washington; Surprise Lake, Alaska; Crater Lake, Oregon; Copper River Delta and Admiralty Island streams, Alaska; Bull Run Lake, Mt. Hood National Forest; coastal waters of western North America; and Coos Bay and White River, Oregon.

MUSEUM PROJECTS: Robert W. Wisseman was retained by the Royal Ontario Museum to collect, sort, identify and prepare specimens of Trichoptera from western North America for inclusion in the museum collection and for current systematic projects. Mr. Wisseman has also prepared synoptic collections of Pacific Northwest Trichoptera (larvae and adults) for the U.S. National Museum, Washington, D.C. Aquatic Biology Associates, Inc. maintains its own extensive collection of freshwater invertebrate fauna for taxonomic reference, and for loan to specialists for systematic studies.