

STATEMENT OF QUALIFICATIONS

Description of Services:

1.0 General Statement

Thank you for your recent interest in the services provided by Aquatic Consulting & Testing, Inc. (AC&T). This general description of the various services provided at AC&T is just that, general. AC&T is a niche consultant. We have been providing aquatic consulting and analytical testing for over 15 years. Our staff has over a hundred years combined environmental consulting and analytical testing experience. Some of the services provided include:

- * Environmental Water Quality
- * Lake and Reservoir Management
- * Field Sampling
- * Environmental Data Evaluation & Validation
- * Vector Monitoring
- * Botanical and Zoologic Species Identification
- * Biototoxicity Determination
- * Environmental Analytical Testing
- * Fish Habitats

A brief description of the services provided and practical experience follows.

2.0 Environmental Water Quality Consulting

AC&T performs analytical testing for water quality compliance programs such as City Discharge, NPDES/AZPDES permits, Aquifer Protection permits and source water quality monitoring for drinking water. We can help you coordinate your monitoring program, complete required permit applications and monitoring reports, and assists in corrective actions to comply with regulatory requirements. We have certified water and wastewater operators on site that will assist you in answering domestic water treatment problems.

AC&T has been fortunate to have been a member of some significant consulting teams for water quality projects in the valley for over the last ten years. We specialize in filling in the missing niche or adding the extra thought to the project or proposal that has been the success of many water-related, civil engineering projects.

The water quality consulting services we have provided in the past include:

- * Safe Drinking Water Act
 - * Compliance sampling, testing, reporting, and general assistance
- * Clean Water Act NPDES
 - * Regulatory assistance
 - * Stormwater monitoring and compliance reporting
 - * Field sampling
 - * Analytical testing
- * Pretreatment Discharge Compliance
- * Regulatory assistance
- * Field sampling
- * Analytical testing and reporting
- * Municipal Treatment
 - * Process consulting
 - * Microbiology
 - * NPDES/AZPDES compliance
 - * Receiving stream biological impact evaluation

3.0 Lake and Reservoir Management

Co-owner and Vice President, Dr. Frederick Amalfi developed his doctoral thesis on lakes in Arizona, and has provided consulting services to many City, County, State and Federal agencies with regard to lake management and reservoir water quality management. We specialize in low-level nutrient analyses for wetland and aquatic resource monitoring. Measuring phosphorous down to 5 ppb, nitrate to 10 ppb, and ammonia to 30 ppb allows the consulting engineer to determine the real changes in aquatic system operation and efficiency. We can even measure the nutrient or element level uptake in vegetation and animals.

Some of the consulting services provided for lake and reservoir management include:

- * Regulatory Compliance
 - * Aquifer protection
 - * Stormwater runoff
 - * Fish consumption and full body contact water quality compliance
 - * Compliance sampling, testing and reporting
- * Insect, Algae and Macrophyte Management
 - * Certified NALMS & AZ Structural Pesticide Control Commission
 - * Morphometric measurements
 - * Chlorophyll a,b,c / pheophytin
 - * Management plans
- * Fisheries Management
 - * Regulatory assistance
 - * Analytical testing and reporting
- * Water Quality Measurement
 - * Temperature / oxygen profiles
 - * Trophic status
 - * Siltation rates
 - * Nutrient budgets
 - * Water quality analyses
 - * Reclaimed water feasibility
 - * Microbiology

4.0 Field Sampling

We have the ability to provide field sampling and analytical testing in support of most of our consulting services. Contact us for details.

- * Grab
- * 24-Hour Flow Weighted Composite
- * Stormwater
- * Groundwater
- * Surface Water
- * Source/Drinking Water
- * At Depth
- * Sediment
- * Soil
- * Hazardous Waste
- * Fish Habitats

5.0 Environmental Data Evaluation and Validation

Our staff has decades of experience analyzing, reviewing and reporting environmental analytical data. We can provide full service validation, reporting, recommendations and professional expert witness testimony. Contact us for details.

6.0 Vector and Nuisance Insect Monitoring

AC&T conducts ongoing collection and monitoring of adult and larval mosquitoes and midge flies for our clients, and in cooperation with Maricopa County Health Department, and the Arizona Department of Health Services as a warning system for any vector issues arising from wetland vegetation and water quality. Our resident limnologists and entomologists provide aquatic insect monitoring and treatment for aesthetic and vector management. Organisms of concern in Arizona include midge flies and mosquitoes. AC&T can also test the mosquitoes for presence of West Nile Virus or St. Louis Encephalitis using either Vec Test or RAMP.

AC&T provides live trapping of adult mosquitoes using carbon-dioxide traps. Identification is important to assess the origin of the mosquitoes and relative risk of vector-borne disease in the trap area. Counts are necessary for estimating population changes and efficacy of control measures. Manual larvae dipping, counting, and species identification also identify breeding areas.

Adult midge flies are collected in the evening using New Jersey Light Traps. Remote-operated dredges collect larval midges, which most often live in organically rich sediments of irrigation channels or lakes and ponds. Management strategies usually involve biologically limiting the number of larvae in the sediment, and water quality management to reduce production of organic matter in the water. AC&T provides integrated pest management plans for controlling these undesirable aquatic organisms. Case-specific management strategies are developed which incorporate public education, habitat manipulation, biological controls, and chemical treatment. AC&T employees are ASPCC-licensed for aquatic and public health pesticide applications.

7.0 Biotic and Zoologic Species Identification

Our biologist and entomologists can identify the algae, fungus or insect you need to identify in order to create a management plan for control. We can identify and quantify the algal species, submerged and emergent macrophytes, zooplankton, insects, or invertebrates that comprise the biotic wetland community. Contact us for details.

8.0 Biotoxicity Determination

AC&T provides several biological monitoring and evaluation techniques for investigative and effluent discharge compliance requirements. Algal growth potential (AGPT) or algal biostimulation tests may be performed to determine the nutrient status of surface water and its response to changes in environmental conditions. Short term static or renewal, acute and chronic toxicity tests can be used to identify potentially biohazardous constituents of a discharge or the waste load allocation for receiving water. Toxicity tests are also provided to meet NPDES/AZPDES discharge permit requirements. Sediment toxicity tests are available for assessing potential adverse effects of accumulated or solids-related contaminants on benthic organisms. Changes in algal composition and abundance, aquatic insect composition, and periphyton composition are used to assess suspected stream or river pollution using the USEPA or ADEQ Rapid Bioassessment Protocol (RBP).

9.0 Environmental Analytical Testing

AC&T is a turnkey environmental laboratory. We provide many chemical analyses for compliance with City, State and Federal drinking water standards, aquifer protection permits, and wastewater NPDES/AZPDES permits. Constituents analyzed include forms of chlorine, nitrogen and phosphorous, solids, metals, biochemical and chemical oxygen demand, anions and total organic carbon. Specialized soil testing is available for contaminant identification, toxicity assessments, and bioremediation support. Chemical testing and sampling for NPDES industrial and municipal stormwater runoff permits are available. AC&T also provides process and surface water contaminant identification and microbiological testing including Biolog species identification, AMES mutagenicity testing, and dangerous pathogen screening. We call ourselves turnkey because of our ability to manage your analytical data quality objectives by teaming with several types of subcontract laboratories to ensure, no matter what your project goal entails, you will have the data to back your conclusions and recommendations.