Town of Fountain Hills
16705 East Avenue of the Fountains
Fountain Hills, Arizona 85268
Phone: 480-816-5100
Fax: 480-837-3145

REQUEST FOR QUOTATION
FOR
Fountain Lake Testing and Treatments

2018-057

All quotes due by Thursday, October 19, 2017, at 10:00 A.M., Local Time, Phoenix, Arizona.

The Town of Fountain Hills (the "Town") is seeking a licensed and qualified Vendor to provide all material and labor required as described below on an as-needed basis for a period of one year, with up to four renewable one-year options.

Section I – Project Information

Vendor will perform water quality testing in Fountain Lake as follows:

1. October 1st through March 31st – one time per month
2. April 1st through September 30th – two times per month

Vendor will provide test results and invoices for each month of service in a timely manner (within 30 days of service) and any invoices received after 60 days of service will not be processed. Vendor will also provide contingency cost for two seasonal lake treatments for algae blooms or lake odor during the summer months. This service may or may not get used depending on the water quality issues each year.

The Contract created by this request and the resulting quotation will automatically renew for up to four successive one-year terms, unless the Vendor notifies the Town in writing of its desire to terminate the Contract. If extended, the then-current prices shall be applicable during the subsequent renewal year unless the Vendor notifies the Town in writing of any rate increase and the Town approves the increase with an authorized signature, prior to the end of the then-current term.

Section II – Instructions and Conditions

1. Quantities as described in Section I above are estimates only, based upon available information. The Town reserves the right to adjust the quantities as necessary to meet its needs.
2. Vendors must state the manufacturer of each product quoted on in conformity with the specifications.
3. All quotations must contain the quoting firm's name and be signed by an authorized agent, officer or employee.
4. Award will be made to the Vendor whose quotation is the most advantageous to the Town.
5. Please attach your Quotation behind the Exhibit A cover sheet and submit this document to the address above.

If you need additional information or have questions please contact Kevin Snipes by email at ksnipes@fh.az.gov .

Section III – Pricing

The Quotation shall be attached hereto as Exhibit A and shall contain pricing unless a separate price sheet is required, in which case the Price Sheet shall be submitted in the form attached hereto as Exhibit B and incorporated herein by reference.

Note: Prices offered shall include applicable state and local taxes.

Section IV – Execution and Submission

By executing this document and submitting a quotation to the Town of Fountain Hills, the authorized agent agrees (i) he/she has read the Town's Standard Terms and Conditions, dated April 14, 2016, as set forth on the Town of Fountain Hills website (http://www.fh.az.gov/po-terms), which are incorporated into and become a part of the company's quotation offer as if set forth fully herein and (ii) the company shall be bound by the Standard Terms and Conditions, dated April 14, 2016. By signing below the company is offering to provide the services set forth in Exhibit A and upon written acceptance of the company's offer by the Town, it will have entered into a binding agreement. The offer shall be considered held open for 60 days from the quotes due date set forth above.

Signature: _____ Date: 10-17-17

Printed Name: Frederick A. Amalfi Title: Vice President

Company Name: Aquatic Consulting & Testing, Inc.

Address: 1525 W. University Dr, Suite 106

City: Tempe State: AZ Zip: 85281

Email Address: ramalfi@aquaticconsulting.com Telephone No. 480-921-8044

The total contract amount, including all renewal terms, may not exceed $49,999.99. Contracts for $50,000 or more will not be authorized and will require a formal procurement process.

ACCEPTANCE OF OFFER AND CONTRACT AWARD (For Town of Fountain Hills Use Only)

The Vendor's Offer is hereby accepted. The Vendor shall not commence any billable work or provide any materials or service under this Contract prior to the date this Contract is executed.

Town of Fountain Hills, an Arizona municipal corporation

GR 11/1/17

_____ Date: 11/2/17

Grady E. Miller, Town Manager

Town Attorney Approval: 7509101

2375176.6

. EXHIBIT A
TO
REQUEST FOR QUOTATION
FOR

[Vendor's Quotation]

AQUATIC CONSULTING & TESTING, INC.

1525 W. University Drive, Suite 106
P.O. Box 1510
Tempe, Arizona 85281
Phone: (480) 921-8044 • Fax: (480) 921-0049

Lic. No. AZ0003

17 October 2017

Jennifer Lyons, Community Services Department Executive Assistant
Town of Fountain Hills
16705 E. Avenue of the Fountains
Fountain Hills, AZ 85268

Ref: Fountain Lake Monitoring Quote

Dear Ms. Lyons:

Aquatic Consulting & Testing, Inc. is pleased to provide you with this quotation for monitoring Fountain Lake. We have been providing the lake testing and chemical application services for many years and would be very happy to continue. We believe we have the familiarity and experience with the reservoir necessary to provide effective and cost-efficient service. Our laboratory is licensed by Arizona Department of Health Services and field personnel are licensed by Arizona Dept. Agriculture Pest Management Division (PMD). Our firm includes a NALMS-Certified Lake Manager, two PMD-Qualified Applicators, and four PMD-Licensed Applicators.

We have provided a cost for the parameter list that has been used for the water quality monitoring at Fountain Lake for many years, and contingencies for 5-acre and 10-acre applications for odors or algae management (Appendix A). A complete fee schedule is included in the submittal as Appendix B. This fee schedule would be in effect for any additional work or testing that might be needed or requested during the contract period. The fee schedule also provides information on hours of operation and fees for accelerated (rush) testing.

Should you have any questions regarding the information in this quote or require additional information, please do not hesitate to contact me.

Respectfully,

AQUATIC CONSULTING & TESTING, INC.

Frederick A. Amalfi, Ph.D., C.L.M.
Vice President

CHEMICAL APPLICATION CONTINGENCIES

Description	No./yr	Quantity	Unit cost $	Ext. cost $
Algae bloom - 5 acre treatment area				
Chemical application labor (2 personnel)	1	5 hr	85.00	425.00
Algaecide (Cutrine Ultra, Applied Biochemists)	1	4x5-gal	138.95	555.80
Supplies/documentation	1	1	85.00	85.00
TOTAL				**1,065.80**

Odor formation - 5 acre treatment				
Chemical application labor (2 personnel)	1	5 hr	85.00	425.00
Oxidant (Phycpmycon WSP, Applied Biochemists)	1	10x50-lb	77.35	773.50
Supplies/documentation	1	1	85.00	85.00
TOTAL				**1,283.50**

Description	No./yr	Quantity	Unit cost $	Ext. cost $
Algae bloom - 10 acre treatment area				
Chemical application labor (2 personnel)	1	7 hr	85.00	595.00
Algaecide (Cutrine Ultra, Applied Biochemists)	1	8x5-gal	138.95	1,111.60
Supplies/documentation	1	1	85.00	85.00
TOTAL				**1,791.60**

Odor formation - 10 acre treatment				
Chemical application labor (2 personnel)	1	7 hr	85.00	595.00
Oxidant (Phycpmycon WSP, Applied Biochemists)	1	20x50-lb	77.35	1,547.00
Supplies/documentation	1	1	85.00	85.00
TOTAL				**2,227.00**

PROPOSED ANALYTE LIST FOR FOUNTAIN HILLS ROUTINE MONITORING

Parameter	No./yr	Unit cost $	Ext. cost $
Algae count and identification	18	100.00	1,800.00
Temperature & oxygen depth profile	18	included	0.00
pH	18	included	0.00
Transparency	18	included	0.00
Ammonia	18	20.00	360.00
Nitrate+nitrite	18	20.00	360.00
Phosphorus, total	18	30.00	540.00
Total kjeldahlN	18	40.00	720.00
Chlorophyll-a	18	60.00	1,080.00
Travel and labor (flat fee)	18	200.00	3,600.00
Report preparation	18	85.00	1,530.00
TOTAL ANNUAL	18	**555.00**	**9,990.00**

Aquatic Consulting & Testing, Inc.

Statement of Qualifications

and Fee Schedule

Aquatic Consulting & Testing, Inc
1525 W. University Drive, Suite 106
Tempe, Arizona 85281
Telephone: (480) 921-8044
Fax: (480) 921-0049
E-mail: lab@aquaticconsulting.com
Web address: www.aquaticconsulting.com

EXHIBIT B
TO
REQUEST FOR QUOTATION
FOR

[Price Sheet]

HISTORY

Aquatic Consulting & Testing, Inc. (AC&T) is a small, woman-owned business incorporated in 1988. Start-up services included environmental microbiological and limited inorganic analysis, and consulting services to municipalities and engineering firms.

Expansion by acquiring an independent environmental laboratory in 1994 allowed AC&T to provide expertise in full-service inorganic analysis, as well as aquatic biology and limnology. The office has been located in the DeMuro Corporate Square, conveniently located between ASU and Phoenix Sky Harbor Airport, throughout its course of operation.

ABOUT US

The staff is composed of 12 biologists, chemists and environmental scientists, and 2 support personnel. The owners, Elizabeth (Beth) Atkinson and Frederick (Rick) Amalfi, Ph.D., have been involved in day-to-day operation of AC&T since its inception.

AC&T is certified by the Arizona Dept. of Health Services (ADHS), Office of Laboratory Licensure, for analysis of multiple parameters. OPM (Office of Pest Management)-licensed aquatic pesticide applicators and a NALMS-certified lake manager are on staff for surface water chemical applications and management.

AQUATIC CONSULTING & TESTING, INC.
STATEMENT OF QUALIFICATIONS

Biological and Analytical Chemistry Services

Laboratory Location:
The office and laboratories are located just west of the University and Priest intersection in Tempe, Arizona:

1525 W. University Drive, Suite 106
Tempe, Arizona 85281
Telephone: 480-921-8044
Fax: 480-921-0049
Email: lab@aquaticconsulting.com
Website: www.aquaticconsulting.com

Laboratory Turnaround Time
15-day turnaround time is generally offered. RUSH turnaround analysis can be provided in addition to weekend and holiday rates. The following surcharges apply:

Requirement	Charge
24 Hour	3X base rate
48-72 Hour	2X base rate
3-5 Day	1.5X base rate
5-10 Day	Standard, available based on laboratory workload
Weekend/Holiday*	3X base rate

* Samples requiring immediate attention (short holding times or special lab preparation) and received after 3:00pm on a Friday may be subject to Weekend/Holiday surcharge. Contact the lab if sample must be submitted on Friday afternoon.

Supplies and Volume Discounts
Clients are provided with clean, pre-preserved sample bottles, coolers, blue ice and chain of custody. Volume discounts may be applicable.

Invoices & Payment
Payment is due thirty (30) days from invoice date. A finance charge of 1% per month may be added to any balance unpaid after the 30 days.

Description of Services:

1.0 General Statement

AC&T has been providing aquatic consulting and analytical testing for over two decades. Collectively, staff members have over a hundred years of environmental consulting and analytical testing experience. Services provided include:

- Environmental Water Quality Consulting
- Lake, Pond and Reservoir Management
- Field Sampling
- Environmental Data Evaluation & Validation
- Vector Monitoring and Management
- Biological Identification
- Biotoxicity Assays
- WET Testing
- Environmental Analysis

2.0 Environmental Water Quality Consulting

AC&T performs analytical testing for water quality compliance programs such as industrial pretreatment permits, NPDES/AZPDES permits, Aquifer Protection permits, and source water quality monitoring for drinking water. Assistance is available for coordination of monitoring programs, completion of required permit applications, monitoring reports, and corrective actions for compliance with regulations. Certified water and wastewater operators are available for assistance with domestic water treatment problems. On-site operation and maintenance of in-line treatment systems or on site-laboratories are also available.

- Safe Drinking Water Act
  - Compliance sampling, testing, reporting
- Clean Water Act NPDES/ AZPDES
  - 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
  - AZPDES/NPDES compliance
  - Effluent water quality monitoring

3.0 Lake and Reservoir Management

Vice-President and co-owner, Dr. Frederick A. 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. Dr. Amalfi has also consulted internationally on large reservoir management, most notably at Lake Baikal, in Siberia.

Consulting services provided in our surface water 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 Aquatic Weed Management
  - Certified NALMS & AZ OPM (Office of Pest Management
  - 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

Field sampling and analytical testing supports most of our consulting services:

Discrete sampling
- 24 Hour flow weighted composite sampling
- Stormwater
- Groundwater
- Surface water
- Source/drinking water
- Sediment
- Soil
- Hazardous waste

5.0 Environmental Data Evaluation and Validation

Our staff has decades of direct experience analyzing, reviewing, and reporting environmental analytical data. Full service validation, reporting, recommendations, and professional expert witness testimony are offered.

6.0 Vector Monitoring and Management

Organisms of concern in Arizona include midge flies and mosquitoes. 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 (MCHD) and the Arizona Department of Health Services (ADHS) provides a warning system for any vector issues arising from wetland vegetation and water quality. Our resident limnologists and entomologists provide aquatic insect monitoring and mitigation for aesthetic, quality of life, and human health protection. Although most species of midge flies do not bite, they tend to swarm in the early evening, interfering with human recreational activities. Mosquitoes, on the other hand, can be mild to aggressive biters, causing minor skin irritations to severe diseases in humans and domesticated animals.

AC&T provides live trapping of adult mosquitoes using carbon-dioxide traps. These traps, consisting of carbon dioxide and light sources, electric-operated intake fan, and capture net, are placed in the field during the late afternoon. The traps are picked up in the morning and the adult mosquitoes are quick-frozen for subsequent enumeration and identification. 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 dipping, counting, and species identification of mosquito larvae also helps identify breeding sites.

Midge flies are collected in the evening using New Jersey Light Traps. The traps are similar to those used for mosquitoes, but depend on a much stronger light source and collection fan. Remote operated dredges collect larval midges. Larvae most often live in organically rich sediments of irrigation channels or lakes and ponds. The larvae are separated from the mud by floatation and densities are determined per square meter of lake or channel bottom. 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 undesirable aquatic organisms.

Case-specific management strategies are developed which incorporate public education, habitat manipulation, biological controls and chemical treatment. OPM-licensed and certified aquatic pesticide applicators are on staff for any required chemical treatment.

7.0 Biological Identification

Staff biologists, entomologists, and environmental scientists can identify the species necessary for formulation of management plans. We can characterize the algae, submerged and emergent aquatic plants, zooplankton, insects and other invertebrates that comprise the biotic community.

8.0 Biotoxicity Assays

AC&T can provide 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 using EPA protocols are utilized for identification of potentially biohazardous discharge or waste load allocation for receiving waters. 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 determined to assess suspected stream and river pollution using USEPA Rapid Bioassessment Protocol (RPB).

9.0 WET Testing

AC&T is certified by the Arizona Dept. of Health Services (ADHS), Office of Laboratory Licensure, for analysis of multiple parameters including freshwater acute and chronic toxicity tests.

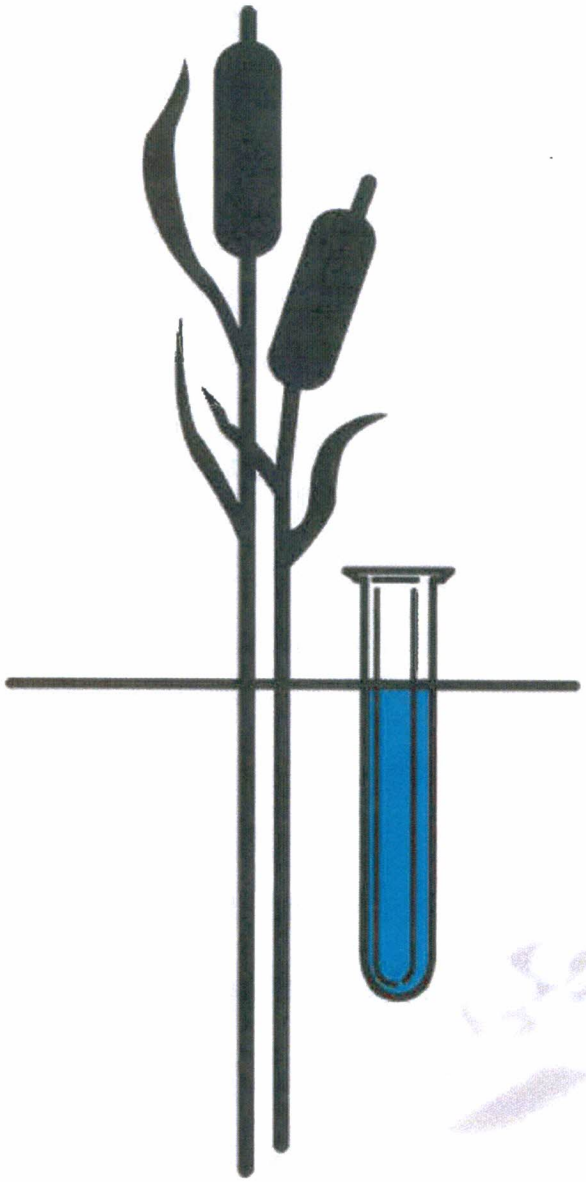
The WET testing section of our laboratory occupies over 1200 square feet and is physically separated from other testing areas to eliminate cross contamination. The WET laboratory is environmentally controlled and equipped with dedicated growth chambers and instruments. Invertebrate and algal cultures are maintained in-house; vertebrates are purchased exclusively from the same supplier since 1989.

Quality control is maintained by extensive documentation and monthly reference toxicant analysis. Acceptability of greater than 99% has been achieved in 22 annual DMRQA proficiency studies.

10.0 Environmental Analysis

AC&T is a state-licensed environmental laboratory. Many chemical analyses are provided 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 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/AZPDES industrial and municipal storm water runoff permits are available. AC&T also provides process and surface water contaminant identification using ICP, SEM/EDS, and a variety of microscopic examinations.



MICROBIOLOGY

Analysis		Cost / Sample	
	Method	Water	Soil
Total Coliform			
P/A	SM9221E	$ 25.00	n/a
Colilert	SM9221B	$ 25.00	$ 50.00
Colilert (24 hr RUSH - Escrow)	SM9221B	$ 50.00	n/a
Fecal Coliform			
MPN (15 tube/3 dilution series)	SM9221C	$ 25.00	$ 50.00
Each additional dilution		$ 20.00	$ 20.00
Membrane Filter	SM9221D	$ 25.00	n/a
Biosolids	SM9221C	n/a	$50.00
E. coli			
Colilert (P/A)	SM9223B	$25.00	n/a
Membrane Filter	SM9221C	$25.00	n/a
Fecal streptococcus			
MPN (15 tube/3 dilution series) – (1,600)	SM9230B	$ 45.00	$ 75.00
Each additional dilution		$ 20.00	$ 20.00
Membrane Filter	SM9221D	$ 45.00	n/a
Heterotrophic Plate Count (HPC)	SM9215B	$ 50.00	$ 75.00
Iron Bacteria (P/A Reactivity)	SM9240B	$ 60.00	$ 100.00
Sulfur Bacteria (P/A Reactivity)	SM9240C	$ 60.00	$ 100.00
Botulism Toxin Screening		$ 75.00	
Denitrifying Bacteria		$ 60.00	
Nitrifying Bacteria		$ 60.00	
Slime Forming Bacteria		$ 60.00	
Pseudomonas Screen		$ 50.00	
***E. coli* Type H0157:H7**		$ 60.00	
Bacteria Species Identification (BIOLOG)		$ 75.00 culture + $90.00 per	colony type
Yeast & Mold Count		$ 75.00	
Fungus (Genus identification)		$ 75.00	
Coliphage		$ 150.00	
Mutagenicity (AMES test)		Quote	
AMES Test		$ 2800.00	
Salmonella		$ 45.00	$ 150.00
Aeromonas Screen		$50.00	$50.00
Anaerobic Bacteria Count		$50.00	$50.00

BIOLOGY CONSULTING

Consultation and Special Analyses	Cost / Hour
Research and Developments – Special Projects	
Senior Microbiologist	$ 125.00 *
Senior Biologist	$ 125.00 *
Microbiology Technician	$ 75.00 *
Clerical	$ 45.00 *
*minimum fee	

BIOMONITORING / BIOTOXICITY

	Cost / Sample		
	Number of replicates		
Acute Toxicity Test (EPA Method 821-R-02-012)	**2**	**4**	**5**
100% vs Control (*Daphnia magna/pulex, Ceriodaphnia dubia*, or *Pimephales promelas)*			
24-hr static test	$ 150.00	$ 200.00	$ 250.00
48-hr static test or renewal test	$ 175.00	$ 225.00	$ 300.00
96-hr static test or renewal test	$ 300.00	$ 400.00	$ 450.00
Five dilution series (*Daphnia magna/pulex, Ceriodaphnia dubia*, or *Pimephales promelas)*			
24-hr static test	$ 400.00	$ 400.00	$ 450.00
48-hr static test or renewal test	$ 450.00	$ 550.00	$ 650.00
96-hr static test or renewal test	$ 550.00	$ 750.00	$ 850.00

	Cost / Sample
Chronic Toxicity Test (EPA Method 821-R-02-013)	
Cladoceran (*C. dubia*) survival & reproduction [USEPA 1002.0]	
100% vs control (10 reps)	$ 800.00
Five dilution series (10 reps)	$ 1150.00
Fathead minnow (*P. promelas*) survival & growth [USEPA 1000.0]	
100% vs control (4 reps)	$ 800.00
Five dilution series (4 reps)	$ 1150.00
Algal growth test (*R. subcapitata* [USEPA 1003.0]	
96-hr, 100% vs control (4 reps)	$ 350.00
96-hr, Five dilution series (4 reps)	$ 750.00
Biostimulation test (SM8111)	$ 900.00

All toxicity testing MUST be scheduled with the laboratory prior to sample submittal.

BIOMONITORING / BIOTOXICITY

SEDIMENT TOXICITY TEST	Cost / Sample
ASTM E 1383	
5 replicates, 20 organisms per replicate, static	
Hyalella azteca, Chironomus spp.	
10-day survival test	$ 700.00
10-day survival & growth test	$ 800.00
30-day survival, growth, and reproduction test	$ 2200.00
EPA 600/R-94/024	
8 replicates, 10 organisms per replicate, renewal	
Hyalella azteca	$ 1300.00
Chironomus spp.	$ 1300.00
PRODUCT TESTING	**Cost / Sample**
Screening	$ 150.00 *
**plus Acute or Chronic fees listed on the previous page.*	
PRYMNESIN (Golden Algae) Toxin Screen	$ 150.00

All toxicity testing MUST be scheduled with the laboratory prior to sample submittal.

ORGANISM IDENTIFICATION AND QUANTIFICATION

Algae	Cost / Sample
Identification (only) to Division level	$ 45.00
Identification (only) to Genus level	$ 75.00
Quantification (total cell count)	$ 50.00
Golden algae screen	$ 50.00
Identification & Differential Quantification to Genus	$ 100.00
Identification & Differential Quantification to Species	$ 250.00
Chlorophyll a	$ 50.00
Chlorophyll a & Pheophytin a	$ 60.00
Chlorophyll a, b, c, & Pheophytin a	$ 80.00

Zooplankton	Cost / Sample
Identification (only) to major taxa	$ 60.00
Quantification (total count)	$ 50.00
Identification & Differential Quantification to major taxa	$ 100.00

Aquatic Invertebrates	Cost / Sample
Identification includes:	$ 125.00
Insects (to Order level)	
Nematodes(to Phylum level)	
Flatworms (to Class level)	
Annelids (to Class level)	
Mollusks (to Family level)	

Microscope Evaluations	Cost / Sample
Microscopic Particulate Analysis (MPA)	$ 375.00
General microscopic Identification of unknown material	$ 75.00/hr *
Particle count / identification	$ 75.00/hr *
*minimum.	
Enteric Virus	$ 600.00
Parasites – extraction plus	$425.00
Giardia lamblia	$ 65.00
Cryptosporidium	$ 65.00
Ascaris (common large tapeworm)	$ 50.00
Entamoeba histolytica	$ 65.00
Common tapeworm	$ 65.00
Ascaris only	$ 150.00
Common tapeworm only	$ 150.00

GENERAL CHEMISTRY ANALYSIS

Water/Wastewater

Analyte	Cost / Sample	Analyte	Cost / Sample
Acidity	$ 20.00	Nitrogen, Total N (TKN+NO3+NO2)	$55.00
Acidity / Soil	$ 20.00	ORP (Redox Potential)	$50.00
Alkalinity	$ 20.00	Oxygen, Dissolved	$20.00
Ash	$45.00	Oil & Grease (HEM)	
Biochemical Oxygen Demand	$ 40.00	Gravimetric (1664 Hexane)	$ 100.00
Bromide	$ 20.00	Perchlorate	$175.00
Carbon Dioxide	$ 30.00	pH	$ 15.00
Chemical Oxygen Demand	$ 40.00	Phenol, total (EPA 420.1)	$ 100.00
Chloride	$ 20.00	Phosphorus, Total	$ 30.00
Chlorine, free	$ 20.00	Phosphorus, Ortho	$ 20.00
Chlorine, total	$ 20.00	Silt Density Index (SDI)	$50.00
Chromium, hexavalent	$ 65.00	Silica, Soluble	$ 25.00
Color	$40.00	Solids, Dissolved	$ 25.00
Conductivity	$20.00	Solids, Suspended	$25.00
Corrosivity (Langlier Index)	$75.00	Solids, Settleable	$ 25.00
Cyanide (CN), total or amenable	$ 20.00	Solids, Total	$ 25.00
EDS Scan +	$ 180.00	Solids, Volatile	$ 45.00
Electrical Conductivity	$50.00	SOUR	$145.00
Fluoride	$20.00	SSC * (Single)	$40.00
Formaldehyde	$50.00	SSC * (Multiple)	$100.00
Hardness, Total	$20.00	Sulfate	$ 20.00
Iron, Ferrous	$50.00	Sulfide, Total	$25.00
Langlier/Ryznar Index	$75.00	Sulfide, Dissolved	$25.00
MBAS	$85.00	Sulfite	$40.00
Moisture %	$25.00	Surfactants (MBAS)	$85.00
Nitrogen, Ammonia	$20.00	Tannin/Lignin (Extractable)	$100.00
Nitrogen, Kjeldahl	$35.00	Total Organic Carbon (TOC)	$60.00
Nitrogen, Nitrate + Nitrite	$20.00	TPHC (HEM + SGT)	$100.00
Nitrogen, Nitrate (only)	$20.00	Turbidity	$20.00
Nitrogen, Nitrite (only)	$20.00	Threshold Odor Number (TON)	$100.00
		UV254	$50.00

+ Energy-dispersive X-ray spectroscopy

*Suspended sediment concentration

METALS ANALYSIS

Parameter	Cost / Element
Aluminum (Al)	$15.00
Antimony (Sb)	$15.00
Arsenic (As)	$15.00
Barium (Ba)	$15.00
Beryllium (Be)	$15.00
Boron (B)	$15.00
Cadmium (Cd)	$15.00
Calcium (Ca)	$15.00
Chromium (Cr)	$15.00
Chromium, Hexavalent (Cr^{6})	$65.00
Cobalt (Co)	$15.00
Copper (Cu)	$15.00
Iron (Fe),	$15.00
Iron, Ferric (Fe^{+++})	$25.00
Iron, Ferrous (Fe^{++})	$50.00
Gold (Au)	$25.00
Lead (Pb)	$15.00
Lithium (Li)	$15.00
Magnesium (Mg)	$15.00
Manganese (Mn)	$15.00
Mercury (Hg)	$45.00
Molybdenum (Mo)	$15.00
Nickel (Ni)	$15.00
Palladium (Pd)	$25.00
Potassium (K)	$15.00
Selenium (Se)	$15.00
Silver (Ag)	$15.00
Sodium (Na)	$15.00
Strontium (Sn)	$15.00
Thallium (Tl)	$15.00
Tin (Sn)	$15.00
Vanadium (V)	$15.00
Zinc (Zn)	$15.00
Zirconium (Zr)	$25.00

SAMPLE PREPARATION

Method Number	Matrices	Cost/Sample
3005, 3010, 3020	Water, Wastewater	$30.00
3050	Soils, Sediments, Solids	$30.00
1311 (TCLP)	Toxicity Characterization Leaching Procedure	$100.00
1312 (SPLP)	Synthetic Precipitation Leaching Procedure	$125.00
ASTM	Soluble Metals	$30.00

GROUP ANALYSIS

Safe Drinking Water Act/Maricopa County New Source Approval	Cost/Sample
Inorganic Compounds	
Metals (Sb, As, Ba, Be, Cd, Cr, Ni, Hg, Se, Tl, Cyanide (CN), Fluoride (F), Nitrate (as N), and Nitrite (as N)	$300.00
Asbestos	$175.00
Recommended Inorganic Compounds	
Primary – As, Ba, Cd, Cr, F, Hg, NO_3, NO_2, Se	$150.00
Secondary – Ca, Cu, Fe, Pb, Mg, Mn, Na, Zn, Alkalinity, Chloride, Hardness, pH, Sulfate, TDS	$150.00
Lead (Pb) and Copper (Cu)	$30.00
Langlier/Ryznar Index (pH, Temperature, Calcium Hardness, Alkalinity, TDS	$75.00
Microbiology	
Coliform, Total (Colilert)	$25.00
Radiochemical	
Gross α **	$50.00
Radium 226/228 (** May be required with positive detection)	$215.00
Uranium (U)	$180.00
Volatile Organic Compounds (EPA 524)	$175.00
MTBE (methyl+butylethane)	$200.00
Semi-Volatile Organic Compounds (*less Dioxin & Glyphosate*)	
EPA Methods 525.2, 531.1, 508, 515.1, 504, 548, 549.1	$1275.00
2, 3, 7, 8 – TCDD (Dioxin) EPA Method 1613 *	$600.00
Glyphosate – EPA Method 547 *	$150.00
**Waiver program available. Contact ADEQ for details.*	
Disinfection By-Products	
Trihalomethanes (THMs) EPA Method 524.2	$150.00
Haloacetic Acids (HAAs) EPA Method 552.2	$160.00
New Source Approval (depending on parameter list)	~ $3000.00
Microscopic Particulate Analysis (MPA)	$375.00

GROUP ANALYSIS (Continued)

Resource Conservation & Recovery Act	Cost/Sample
Hazardous Waste Characterization	
pH	$15.00
Paint Filter	$25.00
Flash Point	$75.00
Reactivity (Cyanide, Sulfide, and Water)	$180.00
8 RCRA Heavy Metals by TCLP (As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	$250.00
8 RCRA Heavy Metals by digestion (As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	$180.00
13 Priority Pollutants (Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn)	$255.00
Clean Water Act	Cost/Sample
National Pollution Discharge Elimination System (NPDES/AZPDES)	
Municipal Disharge Water Quality Monitoring	
pH	$15.00
Sulfides	$25.00
Total Petroleum Hydrocarbons [HEM-SGT]	$100.00
Cyanide	$60.00
Metals (see metals analysis section)	
	Cost/Sample
Total Toxic Organics (TTO)	$625.00
Volatile Organic Compounds – EPA Methods 624/8260	$175.00
Semi-Volatile Organic Compounds – EPA Methods 625/8270	$275.00
Chlorinated Pesticides – EPA Method 608/8080	$150.00
Chlorinated Herbicides – EPA Method 615/8151	$200.00

BIO-SOLIDS ANALYSIS

Test Group	Cost/Sample
503 Nutrients (NH_3, TKN, NO_3+NO_2, P-T)	$100.00
503 Metals (As, Cd, Cr, Cu, Pb, Hg, Mo, Ni, Se, Zn)	$210.00
Fractional Volatile Solids Reduction	$450.00
SOUR (includes TS, VSS)	$145.00
Total Solids (TFS, TS, TVS)	$70.00
Hazardous Waste Disposal	
EPA 8260 TCLP-ZHE (Volatiles)	$250.00
EPA 8270 TCLP-ZHE (Semi-Volatiles)	$450.00
EPA 8081 Pesticides (TCLP)	$250.00
EPA 8151 Herbicides (TCLP)	$300.00
Enteric Virus	$650.00
Salmonella	$50.00

GENERAL AGRONOMY AND SOIL TESTS

Test Group	Method	Cost/Sample
Cations:		
Ca, Mg, Na, K, cation exchange capacity (CEC), exchangeable sodium	SPAC-NAA ICP	$60.00
Minor elements:		
Cu, Fe, Mn, Zn	SPAC-DPTA	$60.00
Boron	SPAC-ICP	$20.00
Sulfate/Sulfur	ASA 79-4	$20.00
Nitrate	SPAC DPTA	$20.00
Kjeldahl nitrogen	ASA 83-7	$40.00
Phosphate/Phosphorus	SPAC DPTA	$30.00
Salinity (Soluble salts/electrical conductivity)	ARIZ 237B	$20.00
pH	ARIZ 237B	$15.00
Organic matter	ASA 90-3	$30.00
Cation exchange capacity	ARIZ 57-3	$60.00
Chloride	ARIZ 736	$20.00
Free lime (qualitated)		$10.00
Lime (quantitated)		$30.00
Petiole analysis (nitrate)		$20.00
Petiole analysis (nitrate+phosphorus)		$40.00
Soil herbicide bioassay		$100.00
Agronomic/landscape data assessment		$35.00

FIELD SAMPLING/CONSULTATION FEES

Field Sampling			Cost
	Travel, per hour (2 hr minimum)		$75.00
	Mileage, per mile		$0.75
	Specimen Collection, per hour		
		Field Biologist/Chemist	$75.00
		Project Manager	$110.00
		Principal, Senior Staff	$150.00
Sample pick-up Service			
	Routine sample pick-up		$50.00
	(24 hour notice is required for scheduling)		
Consultation			
	Expert Witness		$250.00
	Research or Report Prep		
		Field Biologist/Chemist	$75.00
		Project Manager	$110.00
		Principal, Senior Staff	$150.00
		Clerical	$45.00
Miscellaneous			
	Disposal Fee *		$5.00
	Minimum Invoice Fee		$25.00
	Sample Hold Charge (*per sample*)		$5.00
	Compositing Fee (*per sample*)		$10.00

*Applied to any sample determined to be a hazardous/special waste.