Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Sixth Periodic Data Report
of the ADEQ Fixed Station Network
January-September, 1989

1100.002

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Sixth Periodic Data Report
December 1991

Prepared by

Point Source & Monitoring Unit
Water Assessment Section

The Arizona Department of Environmental Quality shall preserve, protect and enhance the environment and public health, and shall be a leader in the development of public policy to maintain and improve the quality of Arizona's air, land and water resources.

Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

Printed on recycled paper

WQMS-170.411
AWQU-613.201

SIXTH PERIODIC DATA REPORT

of the

ADEQ FIXED STATION NETWORK

FOR MONITORING SURFACE WATER QUALITY

January - September, 1989

Point Source and Monitoring Unit

Water Assessment Section

Arizona Department of Environmental Quality

December 1991

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY 1

II. INTRODUCTION 2

III. ADEQ FIXED STATION NETWORK SAMPLING SITES 3

IV. ADEQ FIXED STATION NETWORK PARAMETERS 20

V. RESULTS AND SUMMARY OF CONSTITUENT VALUES THAT EXCEED WATER QUALITY STANDARDS LIMITS 22

APPENDIX A 26
APPENDIX B 27
APPENDIX C 29

LIST OF TABLES AND FIGURES

Figure 1. General Location Map-ADEQ Fixed Station Network Monitoring Sites, January - September 1989 4

Table 1. Site Location Summary 5

Table 2. ADEQ Fixed Station Network Sites, Colorado River Main Stem Basin 8

Table 3. ADEQ Fixed Station Network Sites, Little Colorado River Basin 9

Table 4. ADEQ Fixed Station Network Sites, Salt River Basin 10

Table 5. ADEQ Fixed Station Network Sites, Upper Gila River Basin 11

Table 6. ADEQ Fixed Station Network Sites, Middle Gila River Basin 12

Table 7. ADEQ Fixed Station Network Sites, Verde River Basin 13

Table 8. ADEQ Fixed Station Network Sites, San Pedro River Basin 14

Table 9. ADEQ Fixed Station Network Sites, Santa Cruz River Basin 15

Table 10. ADEQ Fixed Station Network Sites, Whitewater Draw Basin 17

Table 11. Willcox Playa Basin 18

Table 12. Rio Sonoyta Basin 19

Table 13. Analytical Parameters ADEQ Fixed Station Network Monitoring Sites 21

Table 14. Summary of Constituent Values That Exceed Water Quality Standards Limits for ADEQ Fixed Station Network 1/1/89 to 9/30/89 23

I. EXECUTIVE SUMMARY

This report contains the results of surface water quality sampling conducted by the Water Assessment Section (WAS) of the Arizona Department of Environmental Quality (ADEQ) as a component of the State's Fixed Station Network (FSN) program. The Point Source and Monitoring Unit of the WAS manages and maintains the FSN Program with personnel in both Phoenix and Tucson.

During the period of October 1988 through September 1989 water samples were collected and analyzed from 47 sites in Arizona. This report covers the period of January through September 1989 and contains descriptions of the sites, a list of analytical parameters, a list of surface water standards violations and data tables containing the results of the sampling. These tables are available on disc for running on LOTUS Spreadsheet software. Data for the first quarter of Water Year 1989 (September through December 1988) are included in the previous report in this series (Fifth Periodic Report). In addition to the ADEQ FSN program, the WAS conducts intensive surveys on various water courses within the state. Data from intensive surveys are published in separate reports by ADEQ.

ADEQ, in cooperation with the U. S. Geological Survey (USGS), funds the ADEQ/USGS Cooperative FSN which is operated by the USGS. The locations, frequency and parameters for this network during Water Year 1989 are summarized in Appendix B. These data have been published by the USGS as a part of their Water-Resources Data Report series in August 1990.

The special topic located in Appendix C contains a brief description of the cooperative sampling program that was established to collect supporting data for the Cienega Creek Unique Waters Nomination. This cooperative program was undertaken by ADEQ, Pima Association of Governments and Pima County Department of Transportation and Flood Control District. Data from this program are contained in Appendix A with FSN data under Site IDs SC-7, SC-8 and SC-9.

Data from the ADEQ FSN program are uploaded to the U.S. Environmental Protection Agency's STORET database system. Water Year 1989 and all prior data from the ADEQ/USGS Cooperative FSN are contained in the USGS WATSTOR database system and are regularly uploaded to STORET. These data are located in STORET under AGENCY CODES 21ARIZ and 112WRD for ADEQ and USGS, respectively.

II. INTRODUCTION

The Fixed Station Network (FSN) monitoring is performed on a regular basis at selected sites throughout the state for a pre-determined period of time. At regular intervals, ADEQ personnel meet with interested agencies to determine data collection needs and objectives, sites, parameters and sampling frequency. Data collection is based mainly upon the informational needs of ADEQ and other cooperating agencies. Budget and personnel availability are also taken into consideration during this step of the process. Many of ADEQ's cooperators provide funding and/or field and technical assistance to add to the FSN program.

There are three major purposes for the FSN monitoring program. Sites needed for continuing data collection for long-term trend analysis and compliance evaluation are of critical importance. Sites that provide term data collection for program support and assessment provide important data. Normally these sites are evaluated when 10 to 20 samples have been collected. Sites not previously sampled are the next level of data collection. Evaluations are performed on these new sites after 1 to 6 samples are collected. Sites used for other than long-term evaluation are often inactivated for several years, depending on available resources and program needs.

Parameters evaluated at FSN sites focus on constituents regulated by state water quality standards (A.A.C. Title 18, Chapter 11, Articles 1, 2 and 3). Roles of the principle agencies (ADEQ and USGS) for operation of the FSN program in Arizona are largely determined by program interest, logistics, agency capabilities, and agency priorities. FSN data collected by ADEQ is entered into LOTUS spreadsheet system and periodically uploaded to STORET. Data collect by the USGS programs are contained by the WATSTOR system and periodically uploaded to STORET.

During the report period from January 1989 through September 1989 the Point Source and Monitoring Unit of the Water Assessment Section has been operating the ADEQ FSN for surface water in the Colorado Main Stem, Little Colorado, Salt, Upper and Middle Gila, Verde, San Pedro, Santa Cruz, Whitewater Draw, Willcox Playa and San Rio Sonoyta basins in Arizona.

Water measurements and sample collion are performed in the field. Field measurements include air and water temperatures, dissolved oxygen, electrical conductivity, pH and streamflow measurements. Samples are collected and submitted for laboratory analysis of physical, chemical and biological constituents to define general properties and evaluate compliance with State surface water quality standards (A.A.C. R18-11). Other data are collected at the sampling site. These include field notes pertaining to general field conditions, observations of anthropogenic activities, observed aquatic life, livestock and wildlife and unusual field conditions.

These data are maintained in the Point Source and Monitoring (PSM) Unit site files. When the lab results are received by PSM Unit personnel, the data are entered into a LOTUS 1-2-3 spreadsheet database and quality assurance/quality control (QA/QC) checks are run to ensure data validity.

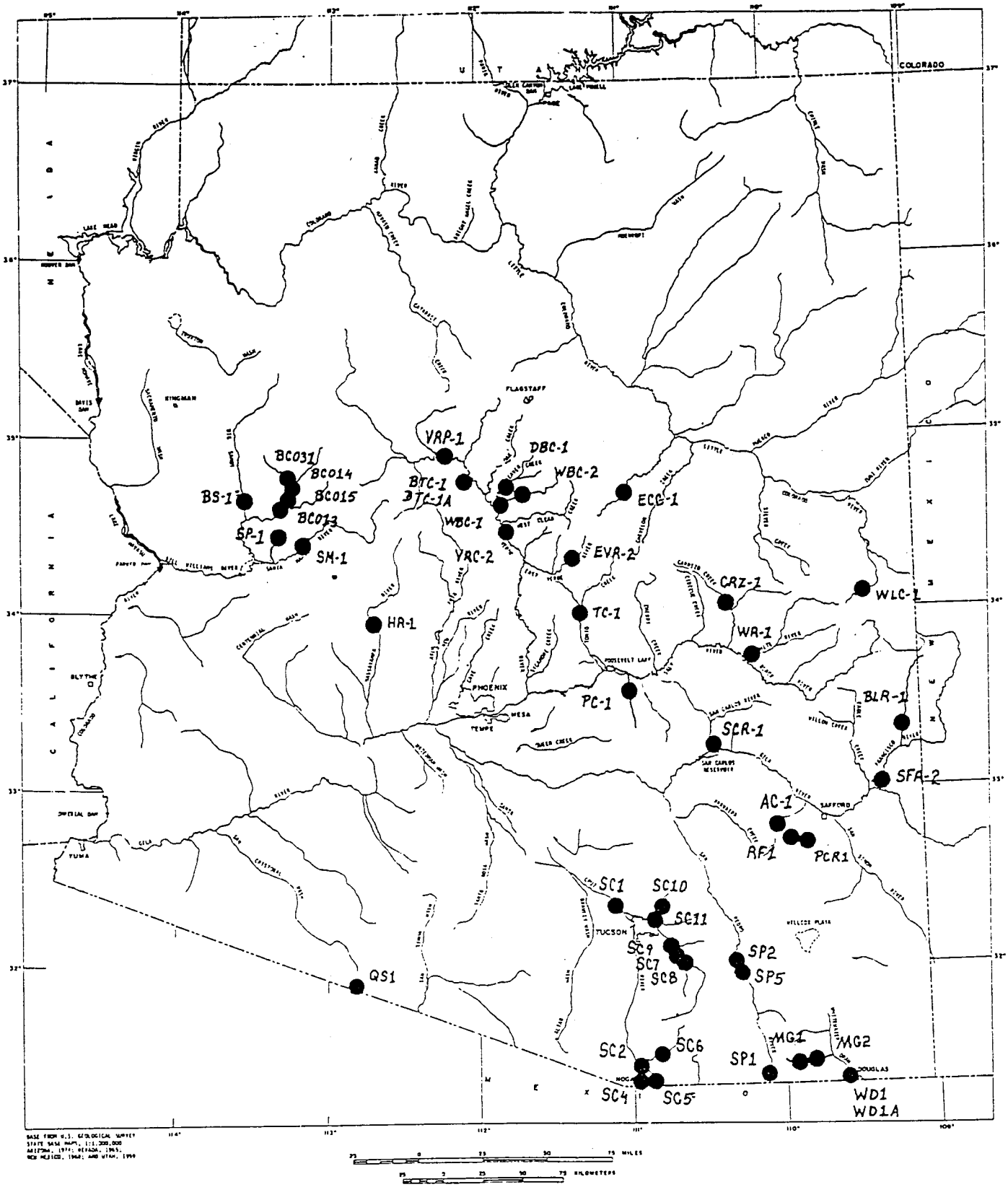
The following work was performed during this report period:

Basin	Sites	Visits	Samples Collected
Colorado River Main Stem	7	12	14
Little Colorado River	2	13	14
Salt River	4	33	34
Upper Gila River	4	28	32
Middle Gila River	1	2	2
Verde River	8	56	61
San Pedro River	4	12	13
Santa Cruz River	10	39	44
Whitewater Draw	4	14	7
Willcox Playa	2	2	2
Rio Sonoyta	1	1	1

III. ADEQ FIXED STATION NETWORK SAMPLING SITES

During the report period 47 sites were active in 11 hydrologic basins. Figure 1 shows their approximate locations. Definitive location data are listed in Table 1. Site descriptions, grouped by basin, are presented in Tables 2 thru 12.

Figure 1. General Location Map-ADEQ Fixed Station Network Monitoring Sites, January - September 1989



NOTE: See Table I for specific site locations.

Table I. Site Location Summary

ADEQ FIXED STATION NETWORK MONITORING SITES
JANUARY 1989 - SEPTEMBER 1989

SITE ID	SITE NAME	STORET CODE	HUC NO.	REACH	COUNTY	TOWNSHIP	RANGE	SECTION	1/4
	COLORADO RIVER MAIN STEM								
	Burro Creek:								
BC013	below Boulder Creek	106710000004250	15030202	-004	Yavapai	T15N	R10W	28	b--
BC014	above Boulder Creek	106710000004345	15030202	-008	Yavapai				
BC015	below Francis Creek	106710000006140	15030202	-008	Yavapai	T16N	R9W	18	ba-
BC031	Francis Creek above Burro Creek	106711000000005	15030202	-012	Yavapai	T16N	R9W	7	ca-
BS-1	Big Sandy River below Hwy. 93	106700050005280	15030201	-004	Mohave	T15N	R13W	1	ccb
SM-1	Santa Maria River below Hwy. 93	106708200003390	15030203	-009	Yavapai	T12N	R9W	22	cba
SP-1	South Peoples Canyon Spring	106708250000483	15030203	-009	Yavapai	T12N	R10W	14	cdd
	LITTLE COLORADO RIVER BASIN								
WLC-1	W. Fork L. Colorado, Govt. Springs	300010000000130	15020001	-012	Apache	T7N	R27E	14	cdd
ECC-1	East Clear Creek near Winslow	307300500009590	15020008	-007	Coconino	T15N	R13E	19	dcd
	SALT RIVER BASIN								
PC-1	Pinto Creek at Henderson ford	604500000001070	15060103	-018	Gila	T2N	R13E	1	bad
WR-1	White River near Fort Apache	SR-WR1	15060102	-005	Gila	---	---	--	acc
TC-1	Tonto Creek near Gun Creek	605500000004360	15060105	-008	Gila	T7N	R10E	2	---
CRZ-1	Carrizo Creek near Carrizo	601000000004090	15060104	-007	Gila	---	---	--	---
	UPPER GILA RIVER BASIN								
SFR-2	San Francisco River near Clifton	401000000001002	15040004	-003	Greenlee	T5S	R29E	12(E)	dca
BLR-1	Blue River near Clifton	401002000002000	15040004	-025	Greenlee	---	---	--	---
SCR-1	San Carlos River at Hwy. 70 bridge	405000000001370	15040007	-001	Graham	---	---	--	---
AC-1	Ash Creek blw. Cabins on Mt. Graham	402700000002172	15040005	-015	Graham	T8S	R24E	29	---
	MIDDLE GILA RIVER BASIN								
HR-1	Hassayampa River near Wickenburg	408000000009180	15070103	-002	Maricopa	T7N	R4W	20	bbd

	VERDE RIVER BASIN								
EVR-2	East Verde R. at Hwy. 87 bridge	706500000004300	15060203	-022	Gila	T11N	R10E	--	---
VRC-2	Verde River below Camp Verde	700000000014400	15060202	-027	Yavapai	T12N	R5E	17	daa
VRP-1	Verde River near Perkinsville	700000000025860	15060202	-037	Yavapai	T18N	R1E	36	dac
	Bitter Creek:								
BTC-1A	at Clarkdale	702600000000006	15060202	-025	Yavapai	T16N	R3E	20	bdd
BTC-1	near Clarkdale	702600000000095	15060202	-025	Yavapai	T16N	R3E	19	cdc
	Wet Beaver Creek:								
WBC-1	at Camp Verde	704600100000105	15060202	-002	Yavapai	T14N	R5E	29	bbb
WBC-2	near Rimrock at USGS Gage	704600100003870	15060202	-004	Yavapai	T15N	R6E	24	cbd
DBC-1	Dry Beaver Creek near Sedona	704600200000100	15060202	-010	Yavapai	T15N	R5E	1	bdb
	SAN PEDRO RIVER BASIN								
	San Pedro River:								
SP1	near Palominas at Hwy. 92 Bridge	500000000022200	15050202	-008	Cochise	T23S	R22E	33	dcd
SP5	0.8 mi. south of Hwy. 80	500000000014610	15050202	-003	Cochise	T18S	R21E	6	aac
SP2	at Hwy. 80 Bridge	500000000014480	15050202	-003	Cochise	T17S	R21E	31	ccc
SP2.5	0.4 mi. south of Hwy. 80	500000000014560	15050202	-003	Cochise	T18S	R21E	6	bdb
	SANTA CRUZ RIVER BASIN								
	Santa Cruz River:								
SC5	at International Boundary	800000000030550	15050301	-012	SantaCruz	T24S	R15E	18	dcc
SC2	at Rio Rico Bridge	800000000028170	15050301	-010	SantaCruz	T22S	R13E	35	cbc
SC1	at Cortaro Road Bridge	800000000016960	15050301	-001	Pima	T12S	R12E	35	bba
SC4	East Nogales W. @ Morley Avenue	801005000001030	15050301	-011	SantaCruz	T24S	R14E	17	acc
SC6	Sonoita Creek blw. Patagonia WWTP	801500000002786	15050301	-013	SantaCruz	T22S	R15E	12	dbb
	Cienega Creek:								
SC7	at Marsh Station Road Bridge	SC-SC7	15050302	-005	Pima	T16S	R17E	19	dcc
SC8	at Tilted Bed Site	806001002000649	15050302	-005	Pima	T16S	R17E	34	add
SC9	near Agua Verde Wash	806001002000314	15050302	-005	Pima	T16S	R16E	24	bbc

	SANTA CRUZ RIVER BASIN (Continued)								
	Cienega Creek:								
SC10	Sabino Creek near Tucson	806002034000722	15050302	-009	Pima	T13S	R15E	9	dac
SC11	Tanque Verde Ck. @ Sabino Canyon Rd.	806002000000335	15050302	-009	Pima	T13S	R15E	30	ddd
	WHITEWATER DRAW BASIN								
	Whitewater Draw:								
WD1A	at International Boundary	510000000002280	15080301	-002	Cochise	T24S	R27E	22	aad
WD1	at Hwy. 80 Bridge near Douglas	510000000000240	15080301	-002	Cochise	T24S	R27E	10	dca
	Mule Gulch:								
MG1	at Elfrida Cutoff	510400000000825	15080301	-004	Cochise	T23S	R25E	8	dcb
MG2	at "Inn at Castle Rock", Bisbee	510400000001900	15080301	-004	Cochise	T23S	R24E	9	ccb
	WILLCOX PLAYA BASIN								
PCR1	Post Creek at Hwy. 366 on Mt. Graham	203112000000515	15050201	-001	Graham	T8S	R24E	—	—
RF1	Riggs Flat Lake on Mt. Graham	203112111000503	15040005	1210	Graham	T8S	R23E	26	—
	RIO SONOYTA BASIN								
QS1	Quitobaquito Spring near Lukeville	904100000000046	15080102	-000	Pima	T17S	R7W	18	—

NOTES:

(1) Definition of protected use designations

FBC = full body contact
IHC = incidental human contact
A&W = aquatic and wildlife
A&Wc = aquatic and wildlife-cold water fishery
AgI = agricultural irrigation
AgL = agricultural livestock watering
DWS = domestic water source
* = tentative (until confirmed)

Table 2. ADEQ FIXED STATION NETWORK SITES, COLORADO RIVER MAIN STEM BASIN

BASIN SUMMARY

The Colorado River Main Stem Basin encompasses approximately 246,700 square miles including all closed basins entirely within the drainage boundary, and 3,959 square miles in the Great Divide basin in southern Wyoming (referenced from USGS Water Resources Data, Arizona, 1987). The Colorado River enters Arizona from Utah on the north and flows westerly to form the Arizona-Nevada border as well as the Arizona-California border on the west. The Colorado ultimately flows into Mexico from the southwestern extremity of the state and drains into the Gulf of California. The San Juan, Little Colorado, Virgin, Bill Williams and the Gila Rivers all contribute to the Colorado River. The Colorado River drains most of the state and has 7 major dams located along its watercourse from Page to Yuma. Its primary uses include public and agricultural water supplies and supports recreational areas and wildlife refuges.

SITE ID	SITE LOCATION DESCRIPTION
BC013	Burro Creek below Boulder Creek. This site is located below rock outcrops approximately 300 yards downstream of Boulder Creek confluence.
BC014	Burro Creek above Boulder Creek. This site is located on south bank at downstream end of large pool at Old Cypress pumphouse upstream of Boulder Creek confluence.
BC015	Burro Creek below Francis Creek. This site is located at riffle 150 yards below line shack, approximately 0.75 miles below Francis Creek.
BC031	Francis Creek above Burro Creek. This site is located in sandy-bottomed pool below riffle approximately 50 yards above Burro Creek confluence.
SP-1	South Peoples Canyon Spring. This site is located approximately 10 miles southwest of the intersection of U.S. Highway 93 and State Highway 97 near Bagdad. Spring is in a tributary canyon of the Santa Maria River.
BS-1	Big Sandy River at U.S. Highway 93 bridge. This site is located just downstream of U.S. Highway 93 bridge approximately 4 miles south of Wickieup.
SM-1	Santa Maria River below U.S. Highway 93. This site is located just downstream of the U.S. Highway 93 bridge near Bagdad below the confluence with the South Fork Santa Maria River.

Table 3. ADEQ FIXED STATION NETWORK SITES, LITTLE COLORADO RIVER BASIN

BASIN SUMMARY

The Little Colorado River Basin encompasses 26,361 square miles in Apache, Navajo, and Coconino counties, Arizona. Most of the drainage area is composed of plains and desert grassland, with some mountain meadow grassland. The Little Colorado River drains most of the northern one-third of the state, flowing west from the northern slopes of the White Mountains to its confluence with the Colorado River in the Grand Canyon.

SITE ID	SITE LOCATION DESCRIPTION
ECC-1	East Clear Creek near Winslow. Site is located within the Coconino National Forest at discontinued USGS gaging station 09399000.
WLC-1	West Fork Little Colorado River at Government Springs. Site is located within Apache Sitgreaves National Forest across from the picnic area parking lot near Greer.

Table 4. ADEQ FIXED STATION NETWORK SITES, SALT RIVER BASIN

BASIN SUMMARY

The Salt River Basin encompasses 7,121 square miles in Maricopa, Gila, Apache, and Navajo counties and contains 2,023 river miles. Most of the drainage area is Sonoran desert and dry grassland, with some mountain forest and meadow grassland. The entire basin is drained by the Salt River and its tributaries. The Salt River is regulated by the Roosevelt, Horse Mesa, Mormon Flat, and Stewart Mountain dams. Thirty-three lakes are listed in this basin, totaling 20,163 acres. For many years, the Salt River has been a major source of surface water for municipal and agricultural users in the Metropolitan Phoenix area.

SITE ID	SITE LOCATION DESCRIPTION
CRZ-1	Carrizo Creek near Carrizo. Site is 1000 feet upstream of State Highway 77 bridge, 2 miles south of Carrizo.
PC-1	Pinto Creek at Henderson ford. Site is 100 feet upstream from Henderson Ranch Road crossing near Roosevelt.
TC-1	Tonto Creek near Gun Creek. Site is just inside the mouth of the canyon, 200 yards upstream of USGS gaging station 09499000 and 400 yards upstream of the confluence with Gun Creek.
WR-1	White River near Fort Apache. Site is approximately 500 feet downstream of Indian Route 9 bridge and 50 feet upstream of the discontinued USGS water quality station 09494000 cableway.

Table 5. ADEQ FIXED STATION NETWORK SITES, UPPER GILA RIVER BASIN

BASIN SUMMARY

The Upper Gila River Basin encompasses 8,493 square miles in Greenlee, Graham, Gila, Pinal, and Cochise counties. Most of the drainage area is Sonoran desert scrub, desert grasslands, mountain meadow grassland and mixed forest. The basin is drained by the Gila River and its tributaries, excluding the San Pedro River, upstream of the Ashurst-Hayden Diversion Dam near Kelvin, Arizona. The Arizona Game and Fish Department lists 7 lakes totaling 851 acres in this basin.

SITE ID	SITE LOCATION DESCRIPTION
AC-1	Ash Creek below Cabins on Mt. Graham. This site is located near the headwaters of Ash Creek immediately below a small group of summer homes within the Coronado National Forest.
BLR-1	Blue River near Clifton. Site is located on U.S. Forest Service land approximately 20 miles northeast of Clifton. Access is gained by taking the Juan Miller Campground turnoff from Highway 666.
SCR-1	San Carlos River at U.S. Highway 70 bridge. Site is at the U.S. Highway 70 bridge near Peridot.
SFR-2	San Francisco River near Clifton. Site is 1 mile downstream of Clifton at USGS water quality station 09444500.

Table 6. ADEQ FIXED STATION NETWORK SITES, MIDDLE GILA RIVER BASIN

BASIN SUMMARY

The Middle Gila River Basin encompasses approximately 50,000 square miles in Greenlee, Graham, Gila, Maricopa, Pima, Pinal, Santa Cruz, Yavapai, Coconino and Cochise counties. Most of the drainage area is Sonoran desert scrub, desert grasslands, mountain meadow grassland and mixed forest. The basin is drained by the Gila, San Pedro, Santa Cruz, Salt, Verde, Agua Fria and Hassayampa Rivers and their tributaries.

SITE ID	SITE LOCATION DESCRIPTION
HR-1	Hassayampa River near Wickenburg. This site is located downstream of the town of Wickenburg within the Nature Conservancy's Hassayampa River Preserve.

Table 7. ADEQ FIXED STATION NETWORK SITES, VERDE RIVER BASIN

BASIN SUMMARY

The Verde River Basin encompasses 6,590 square miles in Coconino, Yavapai, Maricopa and Gila counties. Desert grassland chaparral characterizes most of the drainage area. The basin is drained entirely by the Verde River and its tributaries. The Verde River is a significant recreational and water supply resource. Its flow is regulated by Bartlett and Horseshoe dams.

SITE ID	SITE LOCATION DESCRIPTION
BTC-1	Bitter Creek near Clarkdale. Site is located 0.25 miles upstream of Verde River confluence in Clarkdale and upstream of BTC-1A.
BTC-1A	Bitter Creek at Clarkdale. Site is located 200 feet upstream of Verde River confluence at end of River Road near Clarkdale. Site is downstream of BTC-1.
DBC-1	Dry Beaver Creek at Old Highway Bridge. Site is located 200 yards upstream of U.S. Highway 179 in the Coconino National Forest at USGS gaging station 09505350.
EVR-2	East Verde River at State Highway 87 bridge. Site is at State Highway 87 bridge 7 miles north of Payson.
VRC-2	Verde River below Camp Verde. Site is located 4.4 miles upstream of Chasm Creek at Beasley Flat, across from limestone caves in opposite cliffs.
VRP-1	Verde River near Perkinsville. Site is located 80 feet downstream of Perkinsville Road bridge.
WBC-1	Wet Beaver Creek at Camp Verde. Site is located just north of Camp Verde, and one half mile above confluence with the Verde River.
WBC-2	Wet Beaver Creek near Rimrock. Site is 3 miles north of Rimrock within the Coconino National Forest at USGS gaging station 09505200.

Table 8. ADEQ FIXED STATION NETWORK SITES, SAN PEDRO RIVER BASIN

BASIN SUMMARY

The San Pedro River Basin encompasses 3,760 square miles in Cochise, Pima, Graham, Santa Cruz and Pinal counties. The drainage area consists primarily of desert grassland and Sonoran desert scrub vegetation. This basin contains no major lakes. The San Pedro basin is drained entirely by the San Pedro River, which enters the United States from Sonora, Mexico. It flows northward toward its confluence with the Gila River near Winkelman, Arizona. Where perennial flow exists, well-developed riparian habitats are found.

SITE ID	SITE LOCATION DESCRIPTION
SP1	San Pedro River at Palominas. Site is just downstream of the State Highway 92 bridge, approximately 0.3 miles from the U.S. - Mexico border. International Boundary and Water Commission gaging station 09470500 is located here.
SP2	San Pedro River at U.S. Highway 80 bridge. Site is near the river's intersection with Dragoon Wash, approximately 200 feet downstream of the bridge.
SP2.5	San Pedro River 0.4 miles upstream of Hwy 80 bridge. Site is located along the San Pedro River, 0.4 miles upstream from the Arizona Route 80 Bridge, about 1 mile southwest of St. David.
SP5	San Pedro River 0.8 miles south of the U.S. Highway 80 bridge. Site is 0.8 miles upstream of the U.S. Highway 80 bridge, near St. David, where the river intersects with an unnamed wash (informally called the "Burning Ground Wash").

Table 9. ADEQ FIXED STATION NETWORK SITES, SANTA CRUZ RIVER BASIN

BASIN SUMMARY

The Santa Cruz River Basin encompasses 8,188 square miles in Santa Cruz, Pima, and Pinal counties. Most of the drainage area consists of Sonoran desert scrub and dry grassland. The Santa Cruz River drains the entire basin. Perennial flow generally occurs only in effluent dominated sections. The river originates in the United States, flows into Mexico and re-enters the United States near Nogales.

SITE ID	SITE LOCATION DESCRIPTION
SC1	Santa Cruz River at Cortaro Road bridge. Site is at the old washed out bridge site on Cortaro Road where discontinued USGS gaging station 09486500 was formerly located. This site is approximately 500 feet downstream of new bridge. Effluent dominated reach.
SC2	Santa Cruz River at Rio Rico bridge. Site is at Rio Rico, about 100 feet downstream of the Calabasas Road bridge. Effluent dominated reach.
SC4	East Nogales Wash at Morley Avenue Tunnel. Site is located in Nogales, Arizona where tunnel opens into channel. Water enters Arizona from Mexico via this tunnel.
SC5	Santa Cruz River at International Boundary. Site is located 300 feet downstream of barbed wire fence that marks the U.S. - Mexico border on the Buena Vista Ranch.
SC6	Sonoita Creek below Patagonia Wastewater Treatment Plant. Site is 0.5 miles west of Patagonia below the wastewater treatment plant, within the Nature Conservancy's Patagonia-Sonoita Creek Sanctuary.
SC7	Cienega Creek at Marsh Station Road. Site is just below the Pantano Road (Marsh Station Road) bridge, 2.5 miles northeast of the Mountain View Interchange on Interstate 10 (Sonoita exit). It is within the Pima County Cienega Creek Natural Preserve and on the segment nominated for Unique Waters status.
SC8	Cienega Creek at Tilted Bed Site. Site is located 1.8 miles downstream of Interstate 10 bridge. It is within the Pima County Cienega Creek Natural Preserve and on the segment nominated for Unique Waters status.

Table 9 (Continued)

SC9	Cienega Creek near Agua Verde Wash. Site is located 2100 feet upstream of USGS gaging station 09484600 and 1900 feet downstream of Agua Verde Wash. It is within the Pima County Cienega Creek Natural Preserve and on the segment nominated for Unique Waters status.
SC10	Sabino Creek near Tucson. Site is located 12 miles northeast of downtown Tucson within the Coronado National Forest Sabino Canyon Recreation Area. USGS gaging station 09484000 is located immediately upstream of site.
SC11	Tanque Verde Creek at Sabino Canyon Road. Site is located 0.8 miles north of Tucson city limits on Sabino Canyon Road. USGS gaging station 09484500 is located on bridge.

Table 10. ADEQ FIXED STATION NETWORK SITES, WHITEWATER DRAW BASIN

BASIN SUMMARY

The Whitewater Draw Basin, located in the Sulphur Springs Valley, encompasses 1,584 square miles in Cochise County, Arizona. The drainage area is composed primarily of desert grassland. Fixed station network sites in this basin are located on Whitewater Draw and Mule Gulch. These sites were established in January 1987 to determine the need for setting water quality standards. Whitewater Draw discharges into the Rio Yaqui in Mexico which ultimately drains into the Gulf of California.

SITE ID	SITE LOCATION DESCRIPTION
MG1	Mule Gulch at Elfrida Cutoff. Site is located 500 feet upstream of the U.S. Highway 80 bridge, 7 miles east of Bisbee in the eastern foothills of the Mule Mountains.
MG2	Mule Gulch at 'Inn at Castle Rock', Bisbee, Az. Site is located directly in front of the Inn on Tombstone Canyon Road in Bisbee. Mule Gulch flows in a concrete-lined ditch here.
WD1A	Whitewater Draw at International Boundary. Site is located 10 feet north of the barbed wire fence that marks the border between U.S. and Mexico due south of slag piles from Phelps Dodge Smelter. Site is 1 mile west of Douglas, Arizona.
WD1	Whitewater Draw at U.S. Highway 80 Bridge. Site is located 30 feet north of the U.S. Highway 80 bridge near the International Boundary and Water Commission gaging station 09537500, north of the Phelps-Dodge smelter, near Douglas, Arizona.

Table 11. WILLCOX PLAYA BASIN

BASIN SUMMARY

The Willcox Playa Basin, located in the Sulphur Springs Valley, encompasses approximately 1,748 square miles in Cochise and Graham Counties, Arizona. The drainage area is composed of diverse vegetation ranging from desert grassland at low elevations to alpine forest in the Pinaleno Mountains. Fixed station network sites in this basin are located on Mt. Graham. These sites were established at the request of the Coronado National Forest to assist in assessing various impacts (telescopes, campgrounds) whose construction is planned in the near future. The Willcox Playa is a terminal basin with no outlet. All surface-water drainage originating within this basin ultimately ends up ponded in the playa.

SITE ID	SITE LOCATION DESCRIPTION
PCR1	Post Creek at Highway 366 on Mt. Graham. Site is located immediately upstream of the road crossing within the Coronado National Forest. Post Creek is a tributary to Grant Creek.
RF1	Riggs Flat Lake on Mt. Graham. Site is located near boat launching ramp within the Coronado National Forest.

Table 12. RIO SONOYTA BASIN

BASIN SUMMARY

The Rio Sonoyta Basin occupies approximately 396 square miles in Pima County, Arizona but encompasses a much larger drainage area in Sonora, Mexico. The drainage area in Arizona is composed primarily of Sonoran desert scrub and dry grassland. The fixed station network site in this basin is located at Quitobaquito Spring in Arizona. This site was established as a one-time sample point in an attempt to gather water quality information in an area that is largely arid and without perennial surface-water flows. Quitobaquito Spring discharges into a channel that feeds a large pond located immediately north of the International Boundary.

SITE ID	SITE LOCATION DESCRIPTION
QS1	Quitobaquito Spring near Lukeville. Site is located at USGS gaging station 09535900 within Organ Pipe Cactus National Monument. Site is 12.8 miles northwest of Lukeville, Arizona.

IV. ADEQ FIXED STATION NETWORK PARAMETERS

Parameters selected for the ADEQ FSN program are dependent on data collection objectives. If water quality standards compliance evaluation is an objective, parameters must include those regulated by A.A.C. Title 18, Chapter 11, Articles 1, 2 and 3. If more comprehensive data are needed for program decisions or trend analyses, coverage is expanded. If "surrogate" or "indicator" constituents are needed for special purposes these constituents are included in with a wide range of parameters. When the necessary correlations are made, data for only the surrogate or indicator constituents may be collected.

The decision on what parameters are to be evaluated establishes what is to be done in the field, methods of collecting and handling samples and the use of analytical laboratories. Detailed data concerning each site in the FSN program are in Appendix A.

Field instruments are utilized to collect on-site data. This includes air temperature and water temperatures, dissolved oxygen, electrical conductivity, pH and streamflow measurements. Samples are collected and submitted for laboratory analysis of physical, chemical and biological constituents to define general and specific properties. Table 13 contains detailed information on these parameters such as reporting units, STORET codes and analytical methods.

Other on-site data are collected. These include field notes pertaining to general field conditions, observations of anthropogenic activities, observed aquatic life, livestock and wildlife and unusual field conditions. Archive-quality color transparency photographs are also taken at each site, looking both upstream and downstream. These data are maintained in the Point Source and Monitoring (PSM) Unit site files and are not contained in this report.

Table 13. ANALYTICAL PARAMETERS ADEQ FIXED STATION NETWORK MONITORING SITES

PARAMETER	UNITS	STORET CODE		METHOD
Air Temperature	degrees C	P20		
Water Temperature	degrees C	P10		
Dissolved Oxygen	mg/l	P300		
Saturated Dissolved Oxygen	%	P301		
Field Electrical Conductivity	umhos/cm	P94		EPA 120.1
Field pH	SU	P406		EPA 150.1
Staff Gage	feet	P65		
Stream Width	feet			
Stream Depth	feet	P64		
Stream Velocity	feet	P55		
Stream Discharge	CFS	P61		
MICROBIOLOGICAL				
Fecal Coliform	CFU/100ml	P31613 & P31614		
Fecal Streptococci	CFU/100ml	P31673		
INORGANICS				
Alkalinity, Total	mg/l	P410		EPA 310.1
Alkalinity, Phenolphthalein	mg/l	P415		EPA 310.1
Ammonia as Nitrogen	mg/l	P610		EPA 350.3
Electrical Conductivity	umhos/cm	P95		EPA 120.1
Fluoride	mg/l	P951		EPA 340.2
Hardness, Total	mg/l	P900		EPA 130.2
Nitrogen, Total Kiedahl	mg/l	P625		EPA 351.2
NO2/NO3 as Nitrogen	mg/l	P630		EPA 353.2
pH	SU	P403		EPA 150.1
Phosphorus, Total	mg/l	P665		EPA 365.4
Total Dissolved Solids	mg/l	P70300		EPA 160.1
Total Suspended Solids	mg/l	P530		EPA 160.2
Turbidity	NTU	P82079		EPA 180.1
MAJOR CATIONS & ANIONS				
Calcium	mg/l	P916		EPA 200.7/215.1
Magnesium	mg/l	P927		EPA 200.7/242.1
Sodium	mg/l	P929		EPA 200.7/273.1
Potassium	mg/l	P937		EPA 258.1
Bicarbonate	mg/l	P440		CALC W/EPA
Carbonate	mg/l	P445		CALC W/EPA
Chloride	mg/l	P940		SM 407C
Hydroxide	mg/l	P71830		CALC W/EPA
Sulfate	mg/l	P945		EPA 375.2
TRACE METALS		(TOTAL) (RECOVERABLE)	(DISSOLVED)	
Antimony	ug/l	P1097	P1095	EPA 204.2
Arsenic	ug/l	P1002	P1000	EPA 206.2
Barium	ug/l	P1007	P1005	EPA 200.7/208.1
Beryllium	ug/l	P1012	P1010	EPA 210.2
Boron	ug/l	P1022	P1020	EPA 200.7/213.3
Cadmium	ug/l	P1027	P1025	EPA 213.2
Chromium	ug/l	P1034	P1030	EPA 218.2
Copper	ug/l	P1042	P1040	EPA 220.1/220.2
Iron	ug/l	P1045	P1046	EPA 200.7/236.1
Lead	ug/l	P1051	P1049	EPA 239.2
Manganese	ug/l	P1055	P1056	EPA 200.7/243.1
Mercury	ug/l	P71900	P71890	EPA 245.1
Nickel	ug/l	P1067	P1065	EPA 249.1
Selenium	ug/l	P1147	P1145	EPA 270.2
Silver	ug/l	P1077	P1075	EPA 272.2
Strontium	ug/l	P1082	P1080	EPA 200.7
Thallium	ug/l	P1059	P1057	EPA 279.2
Zinc	ug/l	P1092	P1090	EPA 289.1

V. RESULTS AND SUMMARY OF CONSTITUENT VALUES THAT EXCEED WATER QUALITY STANDARDS LIMITS

During the period from January through September 1989, surface water quality limits were exceeded for some constituents. These reported constituent values, the applicable limits and remarks about possible causes are listed in Table 14. Data from USGS were not reviewed for this list because it is contained in the ADEQ's 1990 Water Quality Assessment Report [Section 305(b)]. The data reported by ATI Laboratories for 12 sites in southern Arizona for samples collected during June through September 1989 showed an exceedingly high violation rate, inconsistent with numerous previous results. Detective work concerning this problem was delayed until January 1990 because of an extended vacancy of a key field position. Reconstruction of the facts suggest contamination in either the sample bottles or sample holding coolers, both of which are supplied by the laboratory. These data are reported as BLV (Bad Laboratory Value) in Appendix A.

The water quality standards limits for turbidity are exceeded most frequently. Reported high values have no apparent anthropogenic source and may be exempt from surface water quality standards (A.A.C. R18-11-211.G). However, documented poor range condition, historic alterations of watercourses, and arid region precipitation extremes are confounding factors. Low dissolved oxygen (DO) is the next most common water quality problem. The DO limits were typically exceeded during not more than one sampling date at a particular site during the report period. The only exceptions were at a spring and at Nogales Wash. Unionized ammonia is the next most frequent violation of standards, primarily within the San Pedro and Santa Cruz River Basins. Sixty percent of the constituent values that exceeded water quality standards limits in the Saint David and Nogales areas are associated with well documented sources of pollution that contain high concentrations of nitrogenous materials. The next most frequent constituent that exceeded water quality limits is cadmium, sixty six percent of which are in the Whitewater Draw watershed below Bisbee. One selenium value exceeding water quality limits was reported near Clarkdale downstream from an inactive mine.

TABLE 14. CONSTITUENT VALUES THAT EXCEED WATER QUALITY STANDARDS LIMITS

ADEQ FIXED STATION NETWORK MONITORING SITES
January - September 1989

Site ID	Date (yymmdd)	Time (hrs)	Site Name	Parameter	Units	Limit	Value	Remarks
COLORADO RIVER MAIN STEM								
SP-1	890628	1515	South Peoples Canyon Spring	Oxygen(D)	mgO/l	6.0 min	5.75	Spring discharge
LITTLE COLORADO RIVER BASIN								
WLC-1	890710	1615	W. Fork Little Colorado River	Fecal Coli	cfu/100ml	200	539	
ECC-1	890321	1415	East Clear Creek near Winslow	Turbidity	NTU	10	14.0	
SALT RIVER BASIN								
WR-1	890313	1310	White River near Fort Apache	Turbidity	NTU	10	26.0	Flood event
	890710	1330		Fecal Coli	cfu/100ml	800	3210	
	890731	1300		Turbidity	NTU	10	18.0	
	890913	1600		Turbidity	NTU	10	16.1	
TC-1	890912	1100	Tonto Creek near Gun Creek	Turbidity	NTU	10	18.0	
CRZ-1	890214	1430	Carrizo Creek near Carrizo	Turbidity	NTU	10	30.0	
	890710	1120		Fecal Coli	cfu/100ml	800	4160	
	890913	1400		Turbidity	NTU	10	10.1	
UPPER GILA RIVER BASIN								
SFR-2	890110	1540	San Francisco River near Clifton	Turbidity	NTU	10	18.7	
	890711	1400		Ammonia	mgN/l	0.02	0.043	
	890801	1700		Turbidity	NTU	10	35	
	890801	1700		Cadmium(T)	ug/l	10	11	
	890914	1345		Turbidity	NTU	10	16.7	
BLR-1	890711	1100	Blue River near Clifton	Turbidity	NTU	10	43	
	890801	1100		Turbidity	NTU	10	41	
	890914	1410		Oxygen(D)	mgO/l	6.0 min	5.8	
SCR-1	890111	0830	San Carlos River at Hwy 70 Bridge	Oxygen(D)	mgO/l	6.0 min	4.75	
	890711	1715		Fecal Coli	cfu/100ml	800	5200	
	890711	1715		Turbidity	NTU	50	185	
(QC)	890711	1715		Fecal Coli	cfu/100ml	800	5600	
	890801	1700		Ammonia	mgN/l	0.02	0.021	

TABLE 14. CONSTITUENT VALUES THAT EXCEED WATER QUALITY STANDARDS LIMITS

ADEQ FIXED STATION NETWORK MONITORING SITES
January - September 1989

Site ID	Date (yymmdd)	Time (hrs)	Site Name	Parameter	Units	Limit	Value	Remarks
MIDDLE GILA RIVER BASIN								
HR-1	890306	0900	Hassayampa River near Wickenburg	Oxygen(D)	mgO/l	6.0 min	5.1	
VERDE RIVER BASIN								
EVR-2	890515	1230	East Verde River at Hwy 87 Bridge	Turbidity	NTU	10	15	
	890613	1210		Turbidity	NTU	10	16.1	
	890613	1210		Oxygen(D)	mgO/l	6.0 min	5.58	
	890717	1345		Turbidity	NTU	10	15.2	
	890812	1615		Turbidity	NTU	10	17.0	
	890919	1245		Turbidity	NTU	10	18.7	
	890613	1410		Oxygen(D)	mgO/l	6.0 min	5.7	
BTC-1A	890322	1350	Bitter Creek at Clarkdale	Selenium(T)	ug/l	20	28	
WBC-1	890117	1520	Wet Beaver Creek at Camp Verde	Oxygen(D)	mgO/l	6.0 min	5.7	
	890222	1520		Turbidity	NTU	10	23	
	890322	1315		Turbidity	NTU	10	10.3	
	890418	1200		Turbidity	NTU	10	27	
	890516	1300		Turbidity	NTU	10	200	
	890516	1300		Cadmium(T)	ug/l	10	13	
	890614	0940		Turbidity	NTU	10	23	
	890718	1110		Turbidity	NTU	10	40	
	890813	1145		Turbidity	NTU	10	26	
	890919	1100		Turbidity	NTU	10	19.9	
WBC-2	890222	1145	Wet Beaver Creek near Rimrock	Turbidity	NTU	10.0	40	
(QC)	890222	1145		Turbidity	NTU	10.0	25	
SP-1(QC)	890829	1330		Ammonia	mgN/l	0.02	0.037	
SP5	890228	1630	San Pedro River 0.8 mi. S. of Hwy 80	Ammonia	mgN/l	0.02	0.066	
SP2.5	890228	1630		NO_3mg/l	mgN/l	10.0	15.1	*
SP2	890228	1735	San Pedro River at Hwy 80 Bridge	NO_3mg/l	mgN/l	10.0	14.6	*
	890426	1030		NO_3mg/l	mgN/l	10.0	14.3	*
(QC)	890426	1030		NO_3mg/l	mgN/l	10.0	16.6	*
	890627	1415		NO_3mg/l	mgN/l	10.0	22.7	*
	890830	1000		NO_3mg/l	mgN/l	10.0	11.3	*

TABLE 14. CONSTITUENT VALUES THAT EXCEED WATER QUALITY STANDARDS LIMITS

ADEQ FIXED STATION NETWORK MONITORING SITES
January - September 1989

Site ID	Date (yymmdd)	Time (hrs)	Site Name	Parameter	Units	Limit	Value	Remarks
SC2	890724	0845	Santa Cruz River at Rio Rico Bridge	Fecal Coli	cfu/100ml	4000	8000	Effluent Dominated
SC4	890124	1315	East Nogales Wash at Morley Avenue	Mercury(T)	ug/l	0.2	0.2	
	890522	1100		Ammonia	mgN/l	0.02	0.04	
	890522	1100		Oxygen(D)	mgO/l	6.0 min	5.5	
	890724	1015		Ammonia	mgN/l	0.02	0.035	
	890724	1015		Oxygen(D)	mgO/l	6.0 min	4.65	
	890724	1015		Fecal Coli	cfu/100ml	4000	90,000	
(QC)	890724	1015		Ammonia	mgN/l	0.02	0.035	
	890925	0945		Oxygen(D)	mgO/l	6.0 min	5.33	
SC7	890725	0950	Cienega Creek at Marsh Station Road	Oxygen(D)	mgO/l	6.0 min	5.32	Recent flash flood
SC9	890725	1045	Cienega Creek near Agua Verde Wash	Oxygen(D)	mgO/l	6.0 min	4.5	Recent flash flood
SC11	890801	1600	Tanque Verde Ck. at Sabino Canyon Rd.	Ammonia	mgN/l	0.02	0.053	
WHITEWATER DRAW BASIN								
WD1A	890228	1025	Whitewater Draw at Int'l. Boundary	Oxygen(D)	mgO/l	6.0 min	5.69	Spring discharge
	890228	1025		Cadmium(T)	ug/l	10	13	
	890627	0930		Oxygen(D)	mgO/l	6.0 min	4.42	Spring discharge
	890627	0930		Cadmium(T)	ug/l	10	11	
(QC)	890627	0930		Cadmium(T)	ug/l	10	11	
	890829	1110		Cadmium(T)	ug/l	10	11	
MG1	890730	1400	Mule Gulch at Elfrida Cutoff	Cadmium(T)	ug/l	10	11	
WILLCOX PLAYA BASIN								
RF1	890928	1515	Riggs Flat Lake on Mt. Graham	pH	SU	6.5-9.0	9.36	
RIO SONOYTA BASIN								
QS1	890823	0910	Quitobaquito Spring near Lukeville	Oxygen(D)	mgO/l	6.0 min	5.69	Spring discharge

* Suggested source associated with former Apache Powder Company Operations

NOTE: Reported value is (NO_3+NO_2)-N which has been shown to be >95% as NO_3-N.

APPENDIX A

ADEQ FIXED STATION NETWORK DATA

SITE ID	PAGE NUMBER
BC013 (890306) thru ECC-1(QC) (890417)	A-1 thru A-6
PC-1 (890111) thru CRZ-2 (890913)	A-7 thru A-12
SFR-2 (890110) thru AC-1 (890928)	A-13 thru A-18
HR-1 (890306) thru BTC-1A (890322)	A-19 thru A-24
BTC-1 (890418) thru SP1 (890829)	A-25 thru A-30
SP5 (890228) thru SC4 (890925)	A-31 thru A-36
SC4(QC) (890925) thru WD1 (890829)	A-37 thru A-42
MG1 (890228) thru QS1 (890823)	A-43 thru A-48

The following abbreviations are used in Appendix A:

BLV = Bad Laboratory Value
D = Dissolved Constituent
K = Less Than (<) Value shown
LLM = Employee initial
MI = Matrix Interference
P = Too Numerous To Count (Bacteria)
QC = Quality Control Split Sample
SRP = Salt River Project
T = Total Recoverable
USGS = United States Geological Survey
X-CONT = Dissolved Fraction exceeds Total Recoverable Fraction for Constituents Identified. Causes not specifically known.

AZ Department of Environmental Quality
Fixed Station Network Data
January - September 1989

Site ID	Date (yymmdd)	Time (hrs)	No.	STORET (#)	Basin	HUC (#)	Agency	Air (oC)	H2O (oC)	DO (mg/O2/l)	Sat. (%)	Fld EC (uS/cm)	Fld pH (SU)	Staff (ft)	Width (ft)	Depth avg/ft	Velocity avg/fps
								Field Parameters									
COLORADO RIVER MAIN STEM																	
	Burro Creek below Boulder Creek																
BCO13	890306	1450		106710000004250	CMS	15030202	ADEQ	25.0	16.0	9.00	103.8%	490	8.49		24.21	0.95	0.35
	Burro Creek above Boulder Creek																
BCO14	890306	1400		106710000004345	CMS	15030202	ADEQ	25.0	14.7	9.95	112.3%	446	8.37		22.60	0.86	0.17
	Burro Creek below Francis Creek																
BCO15	890306	1830		106710000006140	CMS	15030202	ADEQ	25.0	16.0	7.95	93.9%	378	8.32		24.02	0.65	0.39
BCO15(QC)	890306	1830		106710000006140	CMS	15030202	ADEQ	25.0	16.0	7.95	93.9%	378	8.32		24.02	0.65	0.39
BCO15	890628	1015		106710000006140	CMS	15030202	ADEQ	36.0	25.0	9.20	130.0%	320	8.57		23.10	0.78	0.38
	Francis Creek above Burro Creek																
BCO31	890306	1800		106711000000005	CMS	15030202	ADEQ	27.4	17.0	8.20	98.8%	335	8.51		14.99	0.71	0.26
BCO31	890628	1100		106711000000005	CMS	15030202	ADEQ	36.0	26.0	10.2	147.0%	304	8.36		23.00	0.81	0.24
	Big Sandy River @ Hwy 93 Bridge																
BS-1	890307	0930		106700050005280	CMS	15030201	ADEQ	27.0	14.0	7.10	74.9%	647	8.00		16.70	0.24	0.51
BS-1	890627	1415		106700050005280	CMS	15030201	ADEQ	40.0	32.0	10.0	154.0%	1100	8.15		6.60	0.28	0.19
	Santa Maria River below Hwy 93																
SM-1	890306	1115		106708200003390	CMS	15030203	ADEQ	22.0	17.0	9.22	106.1%	672	8.67		21.49	0.34	1.44
SM-1	890627	1300		106708200003390	CMS	15030203	ADEQ	34.0	33.0	10.8	167.6%	731	8.95		3.10	0.24	0.08
	South Peoples Canyon Spring																
SP-1	890307	1150		106708250000483	CMS	15030203	ADEQ	18.0	16.5	7.90	90.0%	371	7.63		6.00	0.29	0.11
SP-1	890628	1515		106708250000483	CMS	15030203	ADEQ	37.0	23.5	5.75	77.0%	433	7.28		2.50	0.14	0.17
SP-1(QC)	890628	1515		106708250000483	CMS	15030203	ADEQ	37.0	23.5	5.75	77.0%	433	7.28		2.50	0.14	0.17
LITTLE COLORADO RIVER BASIN																	
	Fork Little Colorado @ Gov't Springs																
WLC-1	890109	1610		300010000000130	LCR	15020001	ADEQ	0.0	8.0	10.4	118.8%	56.2	7.07		11.70	0.65	0.89
WLC-1	890215	1015		300010000000130	LCR	15020001	ADEQ	-5.0	0.9	10.1	96.2%	77.7	7.45		12.60	0.63	0.76
WLC-1	890313	1610		300010000000130	LCR	15020001	ADEQ	7.1	5.5	8.40	90.1%	50.9	7.38		17.60	0.85	2.05
WLC-1	890410	1530		300010000000130	LCR	15020001	ADEQ	12.0	12.5	7.68	97.6%	55.0	7.75		17.00	0.67	0.97
WLC-1	890508	1610		300010000000130	LCR	15020001	ADEQ	22.0	15.0	7.00	93.9%	52.1	7.34		17.60	0.69	1.15
WLC-1	890606	0835		300010000000130	LCR	15020001	ADEQ	20.0	8.0	8.98	103.0%	61.0	7.80		17.10	0.56	1.08
WLC-1	890710	1615		300010000000130	LCR	15020001	ADEQ	25.0	14.0	9.10	120.0%	69.0	7.35		14.20	0.54	0.61
WLC-1	890731	1545		300010000000130	LCR	15020001	ADEQ	27.0	16.0	7.30	100.0%	67.0	7.99		14.30	0.58	0.96
WLC-1	890914	O740		300010000000130	LCR	15020001	ADEQ	3.0	6.0	9.00	97.3%	81.6	6.52		14.20	0.53	1.41
	East Clear Creek near Winslow																
ECC-1	890118	1100		307300500009590	LCR	15020008	ADEQ	13.0	1.5	12.9	113.8%	380	8.12		11.48	0.59	0.27
ECC-1	890221	1545		307300500009590	LCR	15020008	ADEQ	10.0	2.0	9.65	86.2%	128	6.96	4.04			
ECC-1	890321	1415		307300500009590	LCR	15020008	ADEQ		9.0	8.50	90.8%	72	8.46	4.8			
ECC-1	890417	1625		307300500009590	LCR	15020008	ADEQ	20.0	18.0	7.74	99.8%	151	8.34		17.20	1.56	0.34
ECC-1(QC)	890417	1625		307300500009590	LCR	15020008	ADEQ	20.0	18.0	7.74	99.8%	151	8.34		17.20	1.56	0.34

Site ID	Date (yymmdd)	Time (hrs)	Discharge (cfs)	Lab EC (uS/cm)	Lab pH (SU)	Hardness EDTA (mg/l)	TDS Evap (mg/l)	TSS (mg/l)	Turbidity (NTU)	Cations Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	OH (mg/l)	Anions CO3 (mg/l)	HCO3 (mg/l)	SO4 (mg/l)
COLORADO RIVER MAIN STEM																	
	Burro Creek below Boulder Creek																
BCO13	890306	1450	7.57	455	8.50	165	299	6	5.50	45.7	22.80	38.5	4.34		24.00	207	33.1
	Burro Creek above Boulder Creek																
BCO14	890306	1400	5.74	417	8.50	146	306	6	7.60	38.4	20.80	35.7	4.13		24.00	232	7.9
	Burro Creek below Francis Creek																
BCO15	890306	1830	5.26	356	8.60	133	255	9	6.20	39.8	18.50	24.6	4.55		36.00	171	6.7
BCO15(QC)	890306	1830	5.26	362	8.60	127	239	7	8.60	36.4	18.60	23.5	4.64		24.00	196	23.5
BCO15	890628	1015	1.97	334	7.8	125	233	2	1.55	38.6	7.37	18	6.5		38.6	174	18
	Francis Creek above Burro Creek																
BCO31	890306	1800	2.35	316	8.70	112	255	10	9.50	36.0	14.80	21.2	5.55		24.00	146	7.3
BCO31	890628	1100	2.36	333	8.2	137	238	2	1.48	40.1	14.1	17.9	6.4		16.4	169	7.1
	Big Sandy River @ Hwy 93 Bridge																
BS-1	890307	0930	6.19	959	8.23	292	606	14	5.00	73.0	26.30	113.0	5.70		1.00	365	109.0
BS-1	890627	1415	0.17	1140	8.18	294	728	4	0.5	67.1	26.70	142.0	8.00		1.00	405	111.0
	Santa Maria River below Hwy 93																
SM-1	890306	1115	9.40	643	8.46	218	399	5	0.52	49.1	22.50	81.2	4.40		5.00	299	63.1
SM-1	890627	1300	0.02														
	South Peoples Canyon Spring																
SP-1	890307	1150	0.08	365	7.70	125	239		2.70	50.8	9.56	21.2	4.66		24.00	146	21.2
SP-1	890628	1515	0.05	436	7.60	166	291	2	0.01	60.9	9.34	21.5	7.00		6.50	212	12.8
SP-1(QC)	890628	1515	0.05	432	7.80	162	293	2	0.14	63.0	9.85	20.6	6.80		12.00	203	13.0
LITTLE COLORADO RIVER BASIN																	
	West Fork Little Colorado at Gov't Springs																
WLC-1	890109	1610	5.71	66.9	7.77	28	70	8.0	1.40	8.0	2.1	2.5	2.00		1.0	36.7	5.0
WLC-1	890215	1015	3.93	79	7.55	29	75	2.0	0.71	7.6	2.1	2.5	1.90		1.0	38.0	5.0
WLC-1	890313	1610	35.49														
WLC-1	890410	1530	12.86	55	7.08	22	60	6.0	4.20	7.8	1.7	2.5	1.80		1.0	26.8	5.0
WLC-1	890508	1610	11.61	53	6.59	22.4	50	26.0	2.50	6.2	1.4	2.5	1.70		1.0	7.3	5.0
WLC-1	890606	0835	5.10	83.8	6.60	24.8	24.8	2.0	0.40	8.4	2.0	2.5	3.50		1.0	36.6	5.0
WLC-1	890710	1615	3.90	72.2	7.24	31	74	2.0	0.83	7.7	2.2	2.5	2.30		1.0	40.0	5.0
WLC-1	890731	1545	5.60	69.8	7.80	25.3	60	5	1.70	6.5	2.2	4.0	2.30		0.5		6.0
WLC-1	890914	O740	7.85	74.8	6.44	31	82	2	0.90	8.4	2.1	2.5	2.20		1.0	43.0	
	East Clear Creek near Winslow																
ECC-1	890118	1100	1.26	387	8.31	222.0	199	2	0.23	47.7	26.2	2.5	0.50		1.0	259	5
ECC-1	890221	1545	49.40	128	8.00	72.0	78	2	9.70	15.7	7.4	2.5	0.25		1.0	76	5
ECC-1	890321	1415		63.2	6.75	41.0	70	2	14.00	9.1	3.4	2.5	0.60		1.0	35.4	5
ECC-1	890417	1625	6.22	154	7.25	81.0	95	2	1.40	19.4	8.3	2.5	0.25		1.0	92	5
ECC-1(QC)	890417	1625	6.22	149	8.30	80.0	91	2	2.20	18.8	8.4	2.5	0.25		1.0	90	5

Site ID	Date (yymmdd)	Time (hrs)	Cl (mg/l)	Alk, T (mg/l)	Alk, P (mg/l)	F (mg/l)	TKN (mgN/l)	NO2+NO3 (mgN/l)	Ammonia (mgN/l)	Ammonia Un-ionized	TP (mgP/l)	Bacteria FC (cfu/100ml)	Bacteria FS (cfu/100ml)	Trace Metals Ag, T (ug/l)	Trace Metals Ag, D (ug/l)
COLORADO RIVER MAIN STEM															
	Burro Creek below Boulder Creek														
BCO13	890306	1450	17.7	206		0.66	4.60	0.4 K	0.25 K	0.025	0.045	2	9	20 K	
	Burro Creek above Boulder Creek														
BCO14	890306	1400	16.5	212		0.37	6.80	0.4 K	0.25 K	0.018	0.03	8	10	20 K	
	Burro Creek below Francis Creek														
BCO15	890306	1830	13.3	178		0.33	2.30	0.4 K	0.25 K	0.018	0.19	4	72	20 K	
BCO15(QC)	890306	1830	13.5	180		0.33	1.20	0.4 K	0.25 K	0.018	0.11		194	20 K	
BCO15	890628	1015	14	162		0.32	0.2 K	0.4 K	0.25 K	0.009	0.05	2		1 K	
	Francis Creek above Burro Creek														
BCO31	890306	1800	13.6	150		0.31	2.30	0.5	0.25 K	0.028	0.22	2	204	20 K	
BCO31	890628	1100	14.1	159		0.32	0.2 K	0.3	0.25 K	0.037	0.05	4		1 K	
	Big Sandy River @ Hwy 93 Bridge														
BS-1	890307	0930	83.0	299	1.0	1.61	0.09	0.1 K	0.1 K	0.003	0.1	8		1 K	
BS-1	890627	1415	107.0	332	1.0	2.15		0.1 K	0.1 K	0.001				1 K	
	Santa Maria River below Hwy 93														
SM-1	890306	1115	49.0	255	4.0	1.40	0.11	0.1 K	0.1 K	0.016	0.07	2	8	1 K	
SM-1	890627	1300													
	South Peoples Canyon Spring														
SP-1	890307	1150	24.3	155		0.37	1.50	0.5	0.25 K	0.004	0.23	1		20 K	
SP-1	890628	1515	28.9	184		0.45	0.20 K	0.25 K	0.25 K	0.003	0.07	49		1 K	
SP-1(QC)	890628	1515	29.0	190		0.43	0.20 K	0.4 K	0.25 K	0.003	0.06			1 K	
LITTLE COLORADO RIVER BASIN															
	West Fork Little Colorado at Gov't Springs														
WLC-1	890109	1610	3.3	30.1	1.0	2.00 K	0.10	0.10 K	0.10 K	0.000	0.05 K			1 K	
WLC-1	890215	1015	2.3	31	1.0	0.20 K	0.14	0.15	0.10 K	0.000	0.05 K			1 K	1 K
WLC-1	890313	1610										62	2		
WLC-1	890410	1530	1.1	22	1.0	0.41	0.16	0.10 K	0.10 K	0.002	0.06			1 K	
WLC-1	890508	1610	0.5	6	1.0	0.20 K	0.20	0.10 K	0.10 K	0.001	0.11			1 K	1 K
WLC-1	890606	0835	0.5	30	1.0	0.20 K	0.05 K	0.10 K			0.05			1 K	
WLC-1	890710	1615	1.3	33	1.0		0.28	0.10 K	0.10 K	0.001	0.10 K	539	1130	1 K	
WLC-1	890731	1545	0.6	34	0.5	0.08	0.10	0.06 K	0.05	0.002	0.12			10 K	10 K
WLC-1	890914	0740	2.0	35	1.0	0.20 K	0.08	0.1 K	0.1 K	0.000	0.14			1 K	
	East Clear Creek near Winslow														
ECC-1	890118	1100	5.0	212	1.0	0.20 K	0.05 K	0.10 K	0.1 K	0.001	0.05 K			1 K	
ECC-1	890221	1545	1.9	62	1.0	0.20 K	0.25	0.10 K	0.1 K	0.000	0.07			1 K	1 K
ECC-1	890321	1415	0.5	29	1.0	0.20 K	0.37	0.10 K	0.1 K	0.006	0.06	0	9	1 K	
ECC-1	890417	1625	0.5	75	1.0	0.20 K	0.14	0.10 K	0.1 K	0.008	0.05 K			1 K	
ECC-1(QC)	890417	1625	0.5	74	1.0	0.20 K	0.17	0.10 K	0.1 K	0.008	0.05 K			1 K	

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	As, T (ug/l)	As, D (ug/l)	Ba, T (ug/l)	Ba, D (ug/l)	B, T (ug/l)	B, D (ug/l)	Be, T (ug/l)	Be, D (ug/l)	Cd, T (ug/l)	Cd, D (ug/l)	Cr, T (ug/l)	Cr, D (ug/l)	Cu, T (ug/l)
COLORADO RIVER MAIN STEM															
	Burro Creek below Boulder Creek														
BCO13	890306	1450	9		95		14				2 K		29		10 K
	Burro Creek above Boulder Creek														
BCO14	890306	1400	8		130		18				2 K		27		10 K
	Burro Creek below Francis Creek														
BCO15	890306	1830	6		37		18				2 K		18		10 K
BCO15(QC)	890306	1830			39		23				2 K				10 K
BCO15	890628	1015	4 K		83		54				1		2 K		4 K
	Francis Creek above Burro Creek														
BCO31	890306	1800	6		43		45				2 K		18		10 K
BCO31	890628	1100	4 K		55		49				0.7		2 K		4 K
	Big Sandy River @ Hwy 93 Bridge														
BS-1	890307	0930	10 K		100 K		500		0.5 K		1 K		10 K		10 K
BS-1	890627	1415	22		620		100 K		0.5 K		0.5 K		10 K		10 K
	Santa Maria River below Hwy 93														
SM-1	890306	1115	10 K		100 K		500 K		0.5 K		1 K		10 K		10 K
SM-1	890627	1300													
	South Peoples Canyon Spring														
SP-1	890307	1150	5 K		63		10				2 K		27		10 K
SP-1	890628	1515	4 K		26		2				0.7 K		2 K		4 K
SP-1(QC)	890628	1515	4 K		26		1				0.7 K		2 K		4 K
LITTLE COLORADO RIVER BASIN															
	West Fork Little Colorado at Gov't Springs														
WLC-1	890109	1610	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
WLC-1	890215	1015	10 K	10 K	100 K	100 K	100 K	100	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
WLC-1	890313	1610													
WLC-1	890410	1530	10 K		50 K		100 K		0.5 K		1 K		10 K		10 K
WLC-1	890508	1610	10 K	10 K	100 K	100 K	100 K	100	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
WLC-1	890606	0835	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
WLC-1	890710	1615	10 K		100 K		100 K		0.5 K		0.5 K		10 K		10 K
WLC-1	890731	1545	5 K	5 K	20 K	20 K	100 K	100	5.0 K	5 K	5 K	5 K	20 K	20 K	10 K
WLC-1	890914	O740	10 K		50 K		50 K		0.5 K		1 K		10 K		10 K
	East Clear Creek near Winslow														
ECC-1	890118	1100	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
ECC-1	890221	1545	10 K	10 K	100 K	100 K	150	100	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
ECC-1	890321	1415	10 K		500 K		100 K		0.5 K		1 K		10 K		10 K
ECC-1	890417	1625	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
ECC-1(QC)	890417	1625	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	Cu, D (ug/l)	Fe, T (ug/l)	Fe, D (ug/l)	Hg, T (ug/l)	Hg, D (ug/l)	Mn, T (ug/l)	Mn, D (ug/l)	Ni, T (ug/l)	Ni, D (ug/l)	Pb, T (ug/l)	Pb, D (ug/l)	Sb, T (ug/l)	Sb, D (ug/l)
COLORADO RIVER MAIN STEM															
	Burro Creek below Boulder Creek														
BCO13	890306	1450		215		1 K		8				20 K		5 K	
	Burro Creek above Boulder Creek														
BCO14	890306	1400		290		1 K		11				20 K		5 K	
	Burro Creek below Francis Creek														
BCO15	890306	1830		373		1 K		24				20 K		5 K	
BCO15(QC)	890306	1830				1 K		16				20 K			
BCO15	890628	1015		165		1 K		16				41		4 K	
	Francis Creek above Burro Creek														
BCO31	890306	1800		297		1 K		28				20 K		4 K	
BCO31	890628	1100		199		1 K		13				20 K		4 K	
	Big Sandy River @ Hwy 93 Bridge														
BS-1	890307	0930		540		0.5 K		110		50 K		10 K		5 K	
BS-1	890627	1415		190		0.5 K		110		50 K		10 K		5 K	
	Santa Maria River below Hwy 93														
SM-1	890306	1115		100 K		0.5 K		50 K		50 K		10 K		5 K	
SM-1	890627	1300													
	South Peoples Canyon Spring														
SP-1	890307	1150		84		1 K		3				20 K		5 K	
SP-1	890628	1515		47		1 K		1				20 K		4 K	
SP-1(QC)	890628	1515		49		1 K		2				20 K		4 K	
LITTLE COLORADO RIVER BASIN															
	West Fork Little Colorado at Gov't Springs														
WLC-1	890109	1610		110		0.5 K		50 K		50 K		10 K		5 K	
WLC-1	890215	1015	10 K	100 K	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10	10 K	5 K	5 K
WLC-1	890313	1610													
WLC-1	890410	1530		220		0.5 K		50 K		50 K		10 K		5 K	
WLC-1	890508	1610	10 K	210	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	100 K	10 K	5 K	5 K
WLC-1	890606	0835		150		0.5 K		50 K		50 K		10 K		50 K	
WLC-1	890710	1615		210		0.5 K		50 K		50 K		10 K		5 K	
WLC-1	890731	1545	10 K	325	191	0.2 K	0.2 K	20	10 K	30 K	30 K	2 K	2 K	10 K	10 K
WLC-1	890914	O740		270		0.5 K		50 K		50 K		10 K		5 K	
	East Clear Creek near Winslow														
ECC-1	890118	1100		100 K		0.5 K		50 K		50 K		10 K		5 K	
ECC-1	890221	1545	10 K	240	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
ECC-1	890321	1415		1550		0.5 K		50 K		50 K		10 K		5 K	
ECC-1	890417	1625		100 K		0.5 K		50 K		50 K		10 K		5 K	
ECC-1(QC)	890417	1625		100 K		0.5 K		50 K		50 K		10 K		5 K	

Site ID	Date (yymmdd)	Time (hrs)	Se, T (ug/l)	Se, D (ug/l)	Sr, T (ug/l)	Sr, D (ug/l)	Tl, T (ug/l)	Tl, D (ug/l)	Zn, T (ug/l)	Zn, D (ug/l)	Lab	Remarks
COLORADO RIVER MAIN STEM												
	Burro Creek below Boulder Creek											
BCO13	890306	1450							12 K		AAL	
	Burro Creek above Boulder Creek											
BCO14	890306	1400							12		AAL	
	Burro Creek below Francis Creek											
BCO15	890306	1830							13		AAL	
BCO15(QC)	890306	1830							12 K		AAL	
BCO15	890628	1015							6		AAL	
	Francis Creek above Burro Creek											
BCO31	890306	1800							11		AAL	
BCO31	890628	1100							8		AAL	
	Big Sandy River @ Hwy 93 Bridge											
BS-1	890307	0930	5 K				5 K		50 K		ADHS	
BS-1	890627	1415	5 K				5 K		50 K		ADHS	
	Santa Maria River below Hwy 93											
SM-1	890306	1115	5 K				5 K		50 K		ADHS	
SM-1	890627	1300										
	South Peoples Canyon Spring											
SP-1	890307	1150							20		AAL	
SP-1	890628	1515							5 K		AAL	
SP-1(QC)	890628	1515							5 K		AAL	
LITTLE COLORADO RIVER BASIN												
	West Fork Little Colorado at Gov't Springs											
WLC-1	890109	1610	5 K				5 K		50 K		ADHS	
WLC-1	890215	1015	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
WLC-1	890313	1610									ADHS	Field error, no lab results available-LLM
WLC-1	890410	1530	5 K				5 K		50 K		ADHS	
WLC-1	890508	1610	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
WLC-1	890606	0835	5 K				5 K		50 K		ADHS	
WLC-1	890710	1615	5 K				5 K		50 K		ADHS	
WLC-1	890731	1545	5 K	5 K			5 K	5 K	26	10 K	ATI	
WLC-1	890914	0740	5 K				5 K		50 K		ADHS	
	East Clear Creek near Winslow											
ECC-1	890118	1100	5 K				5 K		50 K		ADHS	
ECC-1	890221	1545	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
ECC-1	890321	1415	5 K				5 K		50 K		ADHS	
ECC-1	890417	1625	5 K				5 K		50 K		ADHS	
ECC-1(QC)	890417	1625	5 K				5 K		50 K		ADHS	

Site ID	Date (yymmdd)	Time (hrs)	No.	STORET (#)	Basin	HUC (#)	Agency	Air (oC)	H2O (oC)	DO (mg/O2/l)	Sat. (%)	Fld EC (uS/cm)	Fld pH (SU)	Staff (ft)	Width (ft)	Depth avg/ft	Velocity avg/fps
								Field Parameters									
SALT RIVER BASIN																	
	Pinto Creek at Henderson Ford																
PC-1	890111	1150		604500000001070	SR	15060103	ADEQ	14.0	10.5	10.5	103.4%	786	8.34		10.60	0.47	0.55
PC-1	890216	1215		604500000001070	SR	15060103	ADEQ	15.0	14.8	11.7	127.7%	756	8.40		11.61	0.36	0.44
PC-1	890315	1015		604500000001070	SR	15060103	ADEQ	21.0	14.0	10.9	116.9%	762	8.47		9.71	0.36	0.37
PC-1	890412	1015		604500000001070	SR	15060103	ADEQ	26.0	18.0	11.2	130.2%	770	8.45		12.51	0.40	0.33
PC-1	890510	1055		604500000001070	SR	15060103	ADEQ	32.0	23.5	11.8	152.8%	772	8.17		7.30	0.26	0.07
	White River near Fort Apache																
WR-1	890109	1255		SR-WR1	SR	15060102	ADEQ	10.0	1.0	12.2	106.1%	333	8.27		58.50	0.62	1.50
WR-1(QC)	890109	1255		SR-WR1	SR	15060102	ADEQ	10.0	1.0	12.2	106.1%	333	8.27		58.50	0.62	1.50
WR-1	890214	1615		SR-WR1	SR	15060102	ADEQ	10.0	6.5	9.70	90.7%	274	7.98	1.97	60.37	0.99	2.13
WR-1	890313	1310		SR-WR1	SR	15060102	ADEQ	21.5	10.0	9.15	95.5%	114	7.80	3.71			
WR-1	890410	1330		SR-WR1	SR	15060102	ADEQ	19.0	19.8	9.95	126.4%	144	8.46	3.55			
WR-1	890508	1345		SR-WR1	SR	15060102	ADEQ	42.0	22.0	8.20	110.6%	277	8.45		58.80	0.84	1.63
WR-1	890605	1410		SR-WR1	SR	15060102	ADEQ	35.0	23.0	8.25	115.0%	387	8.55		58.00	0.72	0.92
WR-1	890605	1410		SR-WR1	SR	15060102	ADEQ	35.0	23.0	8.25	115.0%	387	8.55		58.00	0.72	0.92
WR-1	890710	1330		SR-WR1	SR	15060102	ADEQ	33.0	25.0	7.50	108.0%	380	8.45	1.15	45.80	0.84	0.59
WR-1	890731	1300		SR-WR1	SR	15060102	ADEQ	33.0	23.5	7.52	106.0%	342	8.51	1.54	59.20	0.64	1.49
WR-1	890913	1600		SR-WR1	SR	15060102	ADEQ	30.0	23.0	8.40	114.9%	437	8.16	0.90	56.00	0.41	0.73
	Tonto Creek near Gun Creek																
TC-1	890119	0930		605500000004360	SR	15060105	ADEQ	5.0	5.5	10.6	94.5%	489	8.11	4.40	47.90	0.97	0.70
TC-1	890221	1100		605500000004360	SR	15060105	ADEQ	15.0	10.0	10.1	99.6%	334	8.07		58.40	1.04	1.30
TC-1	890321	0915		605500000004360	SR	15060105	ADEQ	20.0	12.0	9.10	94.0%	379	8.54	4.57	46.50	0.95	1.11
TC-1	890417	1055		605500000004360	SR	15060105	ADEQ	23.0	21.0	7.98	99.6%	426	8.58	4.49			
TC-1	890515	1025		605500000004360	SR	15060105	ADEQ	23.0	18.8	8.40	100.1%	472	8.47	4.36	42.10	0.77	0.35
TC-1	890613	1100		605500000004360	SR	15060105	ADEQ	34.0	26.0	9.59	119.7%	456	8.71		30.70	0.70	0.26
TC-1	890717	1145		605500000004360	SR	15060105	ADEQ	39.0	33.0	8.00	124.2%	478	8.38		24.93	0.43	0.13
TC-1	890812	1100		605500000004360	SR	15060105	ADEQ	37.0	28.0	8.65	123.0%	492	8.53		30.30	0.72	0.22
TC-1	890918	1110		605500000004360	SR	15060105	ADEQ	31.0	24.0	7.65	100.0%	602	8.52		28.40	0.63	0.12
	Carrizo Creek near Carrizo																
CRZ-1	890109	1115		601000000004090	SR	15060104	ADEQ	6.0	1.0	11.0	95.7%	1258	8.10	1.49	31.00	0.52	0.91
CRZ-1	890214	1430		601000000004090	SR	15060104	ADEQ	6.0	6.0	9.60	95.3%	471	8.27	1.90	34.60	1.01	1.59
CRZ-1	890313	1115		601000000004090	SR	15060104	ADEQ	22.3	12.8	8.99	105.5%	676	8.45		33.50	0.67	1.21
CRZ-1	890410	1130		601000000004090	SR	15060104	ADEQ	25.0	18.0	8.58	112.2%	736	8.56		32.00	0.69	0.99
CRZ-1	890508	1130		601000000004090	SR	15060104	ADEQ	25.0	21.0	7.32	101.5%	637	8.62		32.60	0.64	0.82
CRZ-1	890605	1215		601000000004090	SR	15060104	ADEQ	30.0	23.0	8.49	122.0%	1144	8.25		17.10	0.46	0.02
CRZ-1	890710	1120		601000000004090	SR	15060104	ADEQ	32.0	24.5	8.90	132.0%	1030	8.40	1.08	19.90	0.46	0.29
CRZ-1	890731	1145		601000000004090	SR	15060104	ADEQ	31.0	24.0	6.95	102.0%	1244	8.25		22.00	0.53	0.40
CRZ-1	890913	1400		601000000004090	SR	15060104	ADEQ	31.0	25.0	11.8	173.4%	1100	8.23	1.12	24.10	0.42	0.32

Site ID	Date (yymmdd)	Time (hrs)	Discharge (cfs)	Lab EC (uS/cm)	Lab pH (SU)	Hardness EDTA (mg/l)	TDS Evap (mg/l)	TSS (mg/l)	Turbidity (NTU)	Cations Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	Anions OH (mg/l)	CO3 (mg/l)	HCO3 (mg/l)	SO4 (mg/l)
SALT RIVER BASIN																	
	Pinto Creek at Henderson Ford																
PC-1	890111	1150	2.32	704	8.32	373	483	6.0	0.30	96.5	29.0	26.9	2.30		1	256	184.0
PC-1	890216	1215	1.21	773	8.35	347	510	2.0	0.10	87.2	28.7	25.2	1.80		4	355	167.0
PC-1	890315	1015	1.19	716	8.30	362	464	2.0	0.20	95.8	30.3	25.3	2.50		1	259	175.0
PC-1	890412	1015	0.82	736	8.28	340	482	2.0	0.29	102.0	32.0	27.2	2.20		1	254	17.5
PC-1	890510	1055	0.09	730	8.28	336	496	4.0	0.32	90.8	29.4	29.8	2.30		1	163	168.0
	White River near Fort Apache																
WR-1	890109	1255	48.00	330	8.40	162	222	6.0	3.30	49.2	9.6	7.7	2.10		3	144	44.4
WR-1(QC)	890109	1255	48.00	338	8.30	168	221	6.0	3.30	51.4	10.4	8.2	2.10		1	151	44.8
WR-1	890214	1615	123.50	264	8.31	135	195	10.0	5.50	39.1	8.3	6.8	1.60		1	137	39.4
WR-1	890313	1310		138	7.65	84	95	134.0	26.00	22.2	4.8	2.5	1.60		1	61	10.8
WR-1	890410	1330		163	7.99	75	103	12.0	7.10	25.8	4.8	2.5	1.40		1	73.2	17.3
WR-1	890508	1345	81.09	288	8.41	139	197	18.0	1.01	42.5	8.2	6.0	2.10		2	39	37.7
WR-1	890605	1410	24.40	382	8.57	186	259	2.0	0.80	57.6	12.9	10.3	4.30		6	151	66.5
WR-1	890605	1410	24.40	386	8.27	194	265	17.0	0.40	57.6	12.9	10.2	4.30		1	161	70.4
WR-1	890710	1330	18.10	411	8.27	194	273	5.0	5.30	51.0	14.2	10.0	2.60		1	139	83.2
WR-1	890731	1300	55.68	254	8.40	169	220	20.0	18.00	50.1	10.7	9.0	2.40		4	130	56.0
WR-1	890913	1600	17.67	424	8.22	203	294	18.0	16.10	55.0	16.4	12.9	2.40		1	155	84.9
	Tonto Creek near Gun Creek																
TC-1	890119	0930	27.35	498	8.34	176	280	2.0	1.50	52.4	12.4	33.5	2.10		1	198	13.7
TC-1	890221	1100	66.78	350	8.26	139	201	2.0	3.50	42.3	9.3	20.3	1.60		1	161	10.2
TC-1	890321	0915	45.35	381	8.21	152	225	2.0	0.59	43.9	9.3	22.8	1.50		1	170	10.8
TC-1	890417	1055	26.11	429	8.38	163	229	2.0	0.30	49.4	10.6	25.5	1.90		5	178	12.6
TC-1	890515	1025	8.86	449	7.66	157	271	19.0	0.31	46.2	11.7	30.6	2.10		1	189	12.3
TC-1	890613	1100	4.30	449	8.34	152	256	2.0	0.30	43.1	11.4	35.5	2.20		1	172	12.0
TC-1	890717	1145	0.33	525	8.06	183	307	13.0	5.80	51.7	13.7	40.0	3.00		1	203	10.3
TC-1	890812	1100	3.27	466	8.40	152	300	60.0	18.00	41.6	11.6	43.0	2.50		4	141	8.0
TC-1	890918	1110	2.13	529	7.97	170	297	2	1.30	45.0	13.7	44.1	3.38		1	182	5.0
	Carrizo Creek near Carrizo																
CRZ-1	890109	1115	12.96	1170	8.18	691	975	11.0	7.20	203.0	47.2	14.0	1.90		1.00	193	522.0
CRZ-1	890214	1430	49.20	499	8.08	234	362	7.0	30.00	63.4	16.5	5.7	1.50		1.00	104	150.0
CRZ-1	890313	1115	25.10	659	8.31	360	490	10.0	6.30	101.0	25.0	7.7	2.00		1.00	137	251.0
CRZ-1	890410	1130	22.93	696	8.39	376	511	4.0	6.60	114.0	27.5	8.5	1.70		2.40	132	267.0
CRZ-1	890508	1130	16.07	609	8.37	304	443	4.0	4.60	83.5	22.4	7.4	1.80		1.00	30.5	201.0
CRZ-1	890605	1215	0.76	1150	7.47	631	974	2.0	1.00	189.0	52.7	15.1	4.20		1.00	127	529.0
CRZ-1	890710	1120	2.50	1050	7.52	605	867	5.0	4.70	146.0	48.0	12.7	2.40		1.00	99	376.0
CRZ-1	890731	1145	2.80	1250	8.30	675	1050	20.0	5.90	187.0	50.6	16.0	2.40		0.50	120	610.0
CRZ-1	890913	1400	1.75	1080	8.10	648	920	2.0	10.10	161.0	48.9	16.4	2.10		1.00	122	500.0

Site ID	Date (yymmdd)	Time (hrs)	Cl (mg/l)	Alk, T (mg/l)	Alk, P (mg/l)	F (mg/l)	TKN (mgN/l)	NO2+NO3 (mgN/l)	Ammonia (mgN/l)	Ammonia Un-ionized	TP (mgP/l)	Bacteria FC (cfu/100ml)	Bacteria FS (cfu/100ml)	Trace Metals Ag, T (ug/l)	Trace Metals Ag, D (ug/l)
SALT RIVER BASIN															
	Pinto Creek at Henderson Ford														
PC-1	890111	1150	21.8	210	1.0	0.51	0.16	0.1 K	0.1 K	0.005	0.05 K			1 K	
PC-1	890216	1215	22.3	297	3.0	0.49	0.18	0.1 K	0.1 K	0.008	0.05 K			1 K	1 K
PC-1	890315	1015	11.0	212	1.0	0.55	0.17	0.1 K	0.1 K	0.008	0.12	46	148	1 K	
PC-1	890412	1015	21.3	208	1.0	0.58	0.27	0.1 K	0.1 K	0.011	0.05 K			1 K	
PC-1	890510	1055	21.6	134	1.0	0.64	0.13	0.1 K	0.1 K	0.009	0.05 K			1 K	1 K
	White River near Fort Apache														
WR-1	890109	1255	6.5	123	2.4	0.20 K	0.12	0.1 K	0.1 K	0.002	0.05 K			1 K	
WR-1(QC)	890109	1255	7.3	124	1.0	0.20 K	0.14	0.1 K	0.1 K	0.002	0.05 K			1 K	
WR-1	890214	1615	4.0	112	1.0	0.20 K	0.21	0.1 K	0.1 K	0.002	0.05 K			1 K	1 K
WR-1	890313	1310	4.0	50	1.0	0.20 K	0.31	0.1 K	0.1 K	0.001	0.12	51	176	1 K	
WR-1	890410	1330	4.3	60	1.0	0.20 K	0.18	0.1 K	0.1 K	0.012	0.05 K			1 K	
WR-1	890508	1345	5.0	35	1.0	0.20 K	0.19	0.1 K	0.1 K	0.014	0.09			1 K	1 K
WR-1	890605	1410	7.3	134	5.0	0.20	0.20	0.1 K			0.05 K			1 K	
WR-1	890605	1410	6.5	132	1.0	0.18	0.23	0.1 K			0.07			1 K	
WR-1	890710	1330	9.6	114	1.0	0.20 K	0.32	0.1 K	0.1 K	0.017	0.05 K	3210	88	1 K	
WR-1	890731	1300	4.4	134	2.0	0.13	0.10 K	0.06 K	0.06	0.000	0.13			10 K	10 K
WR-1	890913	1600	13.0	127	1.0	0.20 K	0.23	0.1 K	0.1 K	0.008	0.05			1 K	
	Tonto Creek near Gun Creek														
TC-1	890119	0930	54.8	162	1.0	0.46	0.13	0.1 K	0.1 K	0.002	0.05 K			1 K	
TC-1	890221	1100	29.4	132	1.0	0.32	0.27	0.1 K	0.1 K	0.003	0.05 K			1 K	1 K
TC-1	890321	0915	33.3	139	1.0	0.39	0.17	0.1 K	0.1 K	0.009	0.06			1 K	
TC-1	890417	1055	32.6	154	4.0	0.20 K	0.08	0.1 K	0.1 K	0.017	0.05 K			1 K	
TC-1	890515	1025	48.4	155	1.0	0.41	0.05 K	0.1 K	0.1 K	0.012	0.08			1 K	1 K
TC-1	890613	1100	55.2	141	1.0	0.41		0.1 K	0.1 K	0.029		14	405	1 K	
TC-1	890717	1145	63.0	166	1.0	0.40	0.10	0.1 K	0.1 K	0.023	0.05 K			1 K	
TC-1	890812	1100	75.0	145	2.0	0.30	0.30	0.06 K	0.05 K	0.012	0.08			10 K	10 K
TC-1	890918	1110	80.0	149	1.0	0.40		0.1 K	0.1 K	0.018				1 K	
	Carrizo Creek near Carrizo														
CRZ-1	890109	1115	15.5	158	1.0	0.49	0.16	0.10 K	0.10 K	0.001	0.05 K			1 K	
CRZ-1	890214	1430	7.2	85	1.0	0.20 K	0.42	0.10 K	0.10 K	0.003	0.05 K			1 K	1 K
CRZ-1	890313	1115	10	112	1.0	0.26	0.35	0.10 K	0.10 K	0.007	0.08	8	0	1 K	
CRZ-1	890410	1130	7.9	112	2.0	0.31	0.40	0.10 K	0.10 K	0.013	0.21			1 K	
CRZ-1	890508	1130	9.2	25	1.0	0.26	0.34	0.10 K	0.10 K	0.018	0.13			1 K	1 K
CRZ-1	890605	1215	14.7	104	1.0	0.45	0.25	0.1 K			0.07			1 K	
CRZ-1	890710	1120	10.5	81	1.0	0.43	0.44	0.1 K	0.1 K	0.015	0.05 K	4160	174	1 K	
CRZ-1	890731	1145	14.0	120	0.5	0.36	0.10	0.06 K	0.06 K	0.006	0.07 K			10 K	10 K
CRZ-1	890913	1400	11.0	100	2.0	0.45	0.17	0.1 K	0.1 K	0.011	0.05 K			1 K	

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	As, T (ug/l)	As, D (ug/l)	Ba, T (ug/l)	Ba, D (ug/l)	B, T (ug/l)	B, D (ug/l)	Be, T (ug/l)	Be, D (ug/l)	Cd, T (ug/l)	Cd, D (ug/l)	Cr, T (ug/l)	Cr, D (ug/l)	Cu, T (ug/l)
SALT RIVER BASIN															
	Pinto Creek at Henderson Ford														
PC-1	890111	1150	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
PC-1	890216	1215	10 K	10 K	100 K	100 K	100 K	100 K	0.5 K	0.5 K	1 K	1.1	10 K	10 K	10 K
PC-1	890315	1015	10 K		500 K		100 K		0.5 K		1 K		10 K		10 K
PC-1	890412	1015	10 K		50 K		100 K		0.5 K		1 K		10 K		10 K
PC-1	890510	1055	10 K	10 K	100 K	100 K	100 K	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
	White River near Fort Apache														
WR-1	890109	1255	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
WR-1(QC)	890109	1255	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
WR-1	890214	1615	10 K	10 K	100 K	100 K	100 K	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
WR-1	890313	1310	10 K		500 K		100 K		0.5 K		1 K		10 K		10 K
WR-1	890410	1330	10 K		50 K		100 K		0.5 K		1 K		10 K		10 K
WR-1	890508	1345	10 K	10 K	100 K	100 K	100 K	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
WR-1	890605	1410	10 K		100 K		110		0.5 K		1 K		10 K		10 K
WR-1	890605	1410	10 K		100 K		210		0.5 K		1 K		10 K		10 K
WR-1	890710	1330	10 K		100 K		100 K		0.5 K		0.5 K		10 K		10 K
WR-1	890731	1300	5 K	5 K	50	50	100 K	100 K	5 K	5 K		5 K	20 K	20 K	10 K
WR-1	890913	1600	10 K		50 K		50 K		0.5 K		1 K		10 K		10 K
	Tonto Creek near Gun Creek														
TC-1	890119	0930	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
TC-1	890221	1100	10 K	10 K	110	100	130	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
TC-1	890321	0915	10 K		500 K		100 K		0.5 K		1 K		10 K		10 K
TC-1	890417	1055	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
TC-1	890515	1025	10 K	10 K	100 K	100 K	100 K	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
TC-1	890613	1100	10 K		100 K		0.16		0.5 K		1 K		10 K		10 K
TC-1	890717	1145	10 K		130		100 K		0.5 K		1 K		10 K		10 K
TC-1	890812	1100	9	8	100	100	100 K	100 K	5 K	5 K	5 K	5 K	20 K	20 K	10 K
TC-1	890918	1110	10 K		100 K		50 K		0.5 K		1 K		10 K		10 K
	Carrizo Creek near Carrizo														
CRZ-1	890109	1115	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
CRZ-1	890214	1430	10 K	10 K	100 K	100 K	100	100 K	0.5 K	5 K	1 K	1 K	10 K	10 K	10 K
CRZ-1	890313	1115	10 K		500 K		100 K		0.5		1 K		10 K		10 K
CRZ-1	890410	1130	10 K		50 K		100 K		0.5		1 K		10 K		10 K
CRZ-1	890508	1130	10 K	10 K	100 K	100 K	100 K	100 K	0.5	0.5 K	1 K	1 K	10 K	10 K	10 K
CRZ-1	890605	1215	10 K		100 K		130		0.5		1 K		10 K		10 K
CRZ-1	890710	1120	10 K		100 K		100 K		0.5		0.5 K		10 K		10 K
CRZ-1	890731	1145	5 K	5 K	90	90 K	110	100 K	5.0	5.0 K	6 K	5 K	20 K	20 K	10 K
CRZ-1	890913	1400	10 K		60		50 K		0.5		1 K		10 K		10 K

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	Cu, D (ug/l)	Fe, T (ug/l)	Fe, D (ug/l)	Hg, T (ug/l)	Hg, D (ug/l)	Mn, T (ug/l)	Mn, D (ug/l)	Ni, T (ug/l)	Ni, D (ug/l)	Pb, T (ug/l)	Pb, D (ug/l)	Sb, T (ug/l)	Sb, D (ug/l)
SALT RIVER BASIN															
	Pinto Creek at Henderson Ford														
PC-1	890111	1150		100 K		0.5 K		50 K		50 K		10 K		5 K	
PC-1	890216	1215	10 K	100 K	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
PC-1	890315	1015		100 K		0.5 K		50 K		50 K		10 K		5 K	
PC-1	890412	1015		50 K		0.5 K		50 K		50 K		10 K		5 K	
PC-1	890510	1055	10 K	100 K	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
	White River near Fort Apache														
WR-1	890109	1255		130		0.5 K		50 K		50 K		10 K		5 K	
WR-1(QC)	890109	1255		140		0.5 K		50 K		50 K		10 K		5 K	
WR-1	890214	1615	10 K	220	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
WR-1	890313	1310		3450		0.5 K		110		50 K		10 K		5 K	
WR-1	890410	1330		230		0.5 K		50 K		50 K		10 K		5 K	
WR-1	890508	1345	10 K	100 K	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
WR-1	890605	1410		100 K		0.5 K		50 K		50 K		10 K		5 K	
WR-1	890605	1410		100 K		0.5 K		50 K		50 K		12		5 K	
WR-1	890710	1330		190		0.5 K		50 K		50 K		10 K		5 K	
WR-1	890731	1300	10 K	639	27	0.2 K	0.2 K	30	10 K	30 K	30 K	2 K	2 K	10 K	10 K
WR-1	890913	1600		290		0.5 K		50 K		50 K		10 K		5 K	
	Tonto Creek near Gun Creek														
TC-1	890119	0930		100 K		0.5 K		50 K		50 K		10 K		5 K	
TC-1	890221	1100	10 K	120	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
TC-1	890321	0915		100 K		0.5 K		50 K		50 K		10 K		5 K	
TC-1	890417	1055		100 K		0.5 K		50 K		50 K		10 K		5 K	
TC-1	890515	1025	10 K	100 K	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
TC-1	890613	1100		110		0.5 K		50 K		50 K		10 K		5 K	
TC-1	890717	1145		310		0.5 K		50		50 K		10 K		5 K	
TC-1	890812	1100	10 K	1130	65	0.2 K	0.2 K	59	10 K	9	30 K	9	2 K	10 K	10 K
TC-1	890918	1110		180		0.5 K		50 K		50 K		10 K		5 K	
	Carrizo Creek near Carrizo														
CRZ-1	890109	1115		280		0.5 K		50 K		50 K		10 K		5 K	
CRZ-1	890214	1430	10 K	1390	210	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
CRZ-1	890313	1115		310		0.5 K		50 K		50 K		10 K		5 K	
CRZ-1	890410	1130		230		0.5 K		50 K		130		10 K		5 K	
CRZ-1	890508	1130	10 K	190	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
CRZ-1	890605	1215		140		0.5 K		50 K		50 K		10 K		5 K	
CRZ-1	890710	1120		240		0.5 K		50 K		50 K		10 K		5 K	
CRZ-1	890731	1145	10 K	378	98	0.2 K	0.2 K	61	45 K	30 K	30 K	2 K	2 K	10 K	10 K
CRZ-1	890913	1400		260		0.5 K		50 K		50 K		10 K		5 K	

Site ID	Date (yymmdd)	Time (hrs)	Se, T (ug/l)	Se, D (ug/l)	Sr, T (ug/l)	Sr, D (ug/l)	Tl, T (ug/l)	Tl, D (ug/l)	Zn, T (ug/l)	Zn, D (ug/l)	Lab	Remarks
SALT RIVER BASIN												
	Pinto Creek at Henderson Ford											
PC-1	890111	1150	5 K				5 K		50 K		ADHS	
PC-1	890216	1215	5 K	5 K			5 K	5 K	50 K		ADHS	
PC-1	890315	1015	5 K				5 K		50 K		ADHS	
PC-1	890412	1015	5 K				5 K		50 K		ADHS	
PC-1	890510	1055	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
	White River near Fort Apache											
WR-1	890109	1255	5 K				5 K		50 K		ADHS	
WR-1(QC)	890109	1255	5 K				5 K		50 K		ADHS	
WR-1	890214	1615	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
WR-1	890313	1310	5 K				5 K		50 K		ADHS	High flow, discharge from USGS
WR-1	890410	1330	5 K				5 K		50 K		ADHS	High flow, discharge from USGS
WR-1	890508	1345	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
WR-1	890605	1410	5 K				5 K		50 K		ADHS	
WR-1	890605	1410	5 K				5 K		50 K		ADHS	
WR-1	890710	1330	5 K				5 K		50 K		ADHS	
WR-1	890731	1300	5 K	5 K			5 K	5 K	19	10 K	ATI	
WR-1	890913	1600	5 K				5 K		50 K		ADHS	
	Tonto Creek near Gun Creek											
TC-1	890119	0930	5 K				5 K		50 K		ADHS	
TC-1	890221	1100	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
TC-1	890321	0915	5 K				5 K		50 K		ADHS	
TC-1	890417	1055	5 K				5 K		50 K		ADHS	Discharge provided by SRP.
TC-1	890515	1025	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
TC-1	890613	1100	5 K				5 K		50 K		ADHS	
TC-1	890717	1145	5 K				5 K		50 K		ADHS	
TC-1	890812	1100	5 K	5 K			5 K	5 K	10 K	10 K	ATI	
TC-1	890918	1110	5 K				5 K		50 K		ADHS	
	Carrizo Creek near Carrizo											
CRZ-1	890109	1115	5 K				5 K		50 K		ADHS	
CRZ-1	890214	1430	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
CRZ-1	890313	1115	5 K				5 K		50 K		ADHS	
CRZ-1	890410	1130	5 K				5 K		50 K		ADHS	
CRZ-1	890508	1130	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
CRZ-1	890605	1215	5 K				5 K		50 K		ADHS	
CRZ-1	890710	1120	5 K				5 K		50 K		ADHS	
CRZ-1	890731	1145	5 K	5 K			5 K	5 K	34	10	ATI	
CRZ-1	890913	1400	5 K				5 K		50 K		ADHS	

Site ID	Date (yymmdd)	Time (hrs)	No.	STORET (#)	Basin	HUC (#)	Agency	Air (oC)	H2O (oC)	DO (mg/O2/l)	Sat. (%)	Fld EC (uS/cm)	Fld pH (SU)	Staff (ft)	Width (ft)	Depth avg/ft	Velocity avg/fps
								Field Parameters									
UPPER GILA RIVER BASIN																	
	San Francisco River near Clifton																
SFR-2	890110	1540		401000000001002	UGR	15040004	ADEQ	13.0	10.0	9.50	95.8%	882	8.12		62.80	1.49	1.67
SFR-2	890215	1800		401000000001002	UGR	15040004	ADEQ	9.5	14.0	8.50	93.8%	742	8.53		62.00	1.37	1.53
SFR-2	890314	1400		401000000001002	UGR	15040004	ADEQ	31.7	19.5	8.35	104.6%	510			62.90	1.43	1.56
SFR-2	890411	1320		401000000001002	UGR	15040004	ADEQ	28.5	27.0	8.10	115.7%	864	8.70		61.90	1.09	1.24
SFR-2	890509	1430		401000000001002	UGR	15040004	ADEQ	38.0	24.5	8.00	109.3%	1616	8.54		55.70	0.80	1.09
SFR-2(QC)	890509	1430		401000000001002	UGR	15040004	ADEQ	38.0	24.5	8.00	109.3%	1616	8.54		55.70	0.80	1.09
SFR-2	890606	1545		401000000001002	UGR	15040004	ADEQ	37.5	29.0	7.20	107.0%	1953	8.61		55.20	0.70	1.11
SFR-2	890711	1400		401000000001002	UGR	15040004	ADEQ	37.0	32.0	8.99	140.0%	1892	8.77		56.40	0.68	0.94
SFR-2	890801	1700		401000000001002	UGR	15040004	ADEQ	41.0	32.0	6.00	92.0%	906	8.11		31.80	0.72	2.06
SFR-2	890914	1345		401000000001002	UGR	15040004	ADEQ	38.0	28.0	6.30	92.0%	522	7.81		65.20	1.72	2.34
	Blue River near Clifton																
BLR-1	890110	1300		401002000002000	UGR	15040004	ADEQ	19.0	9.0	9.22	95.0%	450	8.43	4.89	26.00	1.30	1.14
BLR-1	890215	1515		401002000002000	UGR	15040004	ADEQ	15.0	13.0	8.75	98.9%	498	8.70		25.30	1.28	0.98
BLR-1	890314	1025		401002000002000	UGR	15040004	ADEQ	15.4	13.0	10.05	113.7%	387	8.62		26.30	1.36	1.57
BLR-1(QC)	890314	1025		401002000002000	UGR	15040004	ADEQ	15.4	13.0	10.05	113.7%	387	8.62		26.30	1.36	1.57
BLR-1	890411	1015		401002000002000	UGR	15040004	ADEQ	18.0	15.0	8.90	105.2%	397	8.51	4.75	25.00	1.15	0.62
BLR-1	890509	1055		401002000002000	UGR	15040004	ADEQ	40.0	22.0	8.50	111.3%	479	8.56	4.30	24.00	1.07	0.26
BLR-1	890606	1300		401002000002000	UGR	15040004	ADEQ	33.0	26.5	8.30	122.0%	485	8.60		21.90	1.09	0.24
BLR-1	890711	1100		401002000002000	UGR	15040004	ADEQ		26.0	9.50	140.0%	475	8.61		24.00	0.90	0.23
BLR-1	890801	1100		401002000002000	UGR	15040004	ADEQ	33.0	23.5	6.55	92.0%	345	8.12		26.30	1.49	1.30
BLR-1	890914	1410		401002000002000	UGR	15040004	ADEQ	32.0	29.0	5.80	88.5%	521	8.55		36.20	0.83	0.14
	San Carlos River at Hwy 70 Bridge																
SCR-1	890111	0830		405000000001370	UGR	15040007	ADEQ	2.0	8.0	4.75	45.1%	646	8.30	2.66	27.70	0.63	1.30
SCR-1	890216	0945		405000000001370	UGR	15040007	ADEQ	10.0	11.5	10.4	106.1%	702	8.33	2.76	31.00	0.72	0.97
SCR-1	890315	0815		405000000001370	UGR	15040007	ADEQ	16.4	14.0	8.60	92.9%	736	8.37		27.50	0.61	0.76
SCR-1	890412	0830		405000000001370	UGR	15040007	ADEQ	18.0	16.0	8.70	98.1%	750	8.18		26.50	0.44	0.83
SCR-1	890510	0900		405000000001370	UGR	15040007	ADEQ	30.0	21.0	8.30	103.6%	745	8.14		24.60	0.33	0.82
SCR-1	890607	0915		405000000001370	UGR	15040007	ADEQ	28.0	23.0	10.6	138.0%	645	8.25		21.30	0.23	0.60
SCR-1	890711	1715		405000000001370	UGR	15040007	ADEQ	37.0	30.0	7.40	109.0%	737	8.54		25.50	0.49	1.18
SCR-1(QC)	890711	1715		405000000001370	UGR	15040007	ADEQ	37.0	30.0	7.40	109.0%	737	8.54		25.50	0.49	1.18
SCR-1	890801	1700		405000000001370	UGR	15040007	ADEQ	41.0	32.0	6.00	92.0%	906	8.11		31.80	0.72	2.06
SCR-1(QC)	890801	1700		405000000001370	UGR	15040007	ADEQ	41.0	32.0	6.00	92.0%	906	8.11		31.80	0.72	2.06
SCR-1	890915	O900		405000000001370	UGR	15040007	ADEQ	30.0	19.5	9.50	114.1%	638	8.24		16.00	0.45	0.78
	Ash Creek below Cabins on Mt. Graham																
AC-1	890928	1115			UGR	15040005	ADEQ	17.0	8.0	9.00	107.2%	33	6.62				

Site ID	Date (yymmdd)	Time (hrs)	Discharge (cfs)	Lab EC (uS/cm)	Lab pH (SU)	Hardness EDTA (mg/l)	TDS Evap (mg/l)	TSS (mg/l)	Turbidity (NTU)	Cations Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	Anions OH (mg/l)	CO3 (mg/l)	HCO3 (mg/l)	SO4 (mg/l)
UPPER GILA RIVER BASIN																	
	San Francisco River near Clifton																
SFR-2	890110	1540	142.12	842	8.33	210	539	45.0	18.70	62.7	11.6	101.0	7.20		1.0	198	24.4
SFR-2	890215	1800	121.48	977	8.36	199	551	5.0	2.30	60.7	11.3	108.0	7.40		2.0	194	28.3
SFR-2	890314	1400	129.89														
SFR-2	890411	1320	82.44	1170	8.43	221	675	6.0	1.89	79.4	12.6	141.0	11.00		5.0	182	29.7
SFR-2	890509	1430	48.22	1620	8.59	275	947	30.0	3.70	91.2	12.9	200.0	14.90		2.4	64.7	32.5
SFR-2(QC)	890509	1430	48.22	1610	8.57	278	944	18.0	2.70	88.3	12.5	198.0	14.80		2.0	71.0	33.6
SFR-2	890606	1545	38.10	1960	8.65	317	1220	6.0	0.70	108.0	14.7	261.0	26.60		11.0	172.0	38.6
SFR-2	890711	1400	38.90	1870	8.43	310	1150	16.0	3.00	95.4	13.4	250.0	17.80		5.0	170	27.9
SFR-2	890801	1700	36.30	355	7.90	118	310	2050.0	35.00	32.9	8.6	56.0	5.30		0.5	104	16.0
SFR-2	890914	1345	242.10	1700	8.25	292	1020	31	16.7	92.5	14.8	252	18.2		1.0	195	32.9
	Blue River near Clifton																
BLR-1	890110	1300	30.00	429	8.37	183	299	12.0	1.10	49.7	13.3	30.0	1.60		1.0	212	17.4
BLR-1	890215	1515	23.21	523	8.42	182	310	2.0	0.10	51.2	13.9	30.1	1.30		4.0	209	20.7
BLR-1	890314	1025	58.11	378	8.30	163	254	30.0	4.55	44.3	12.0	22.9	1.50		1.0	185	15.0
BLR-1(QC)	890314	1025	58.11	393	8.33	166	250	32.0	5.30	45.4	12.3	23.5	1.50		1.0	185	12.9
BLR-1	890411	1015	19.62	465	8.43	175	281	2.0	0.63	55.0	14.1	28.5	1.60		4.1	198	17.9
BLR-1	890509	1055	5.99	490	8.43	187	318	2.0	0.37	54.1	13.5	29.0	2.10		1.0	78	19.2
BLR-1	890606	1300	4.00	492	8.54	187	319	2.0	0.10	55.4	14.6	32.9	2.90		7.2	200	20.2
BLR-1	890711	1100	3.60	521	8.37	201	315	102.0	43.00	51.5	14.2	24.5	2.20		4.0	206	11.5
BLR-1	890801	1100	37.80	365	8.00	140	210	920.0	41.00	38.6	10.5	23.3	1.80		0.5	134	14.0
BLR-1	890914	1410	3.03	531	8.27	208	347	6.0	3.1	55.6	16.5	34.1	2.40		1.0	217	20.1
	San Carlos River at Hwy 70 Bridge																
SCR-1	890111	0830	22.52	653	8.22	214	394	51.0	16.90	52.7	19.3	60.4	4.20		1.0	261	24.4
SCR-1	890216	0945	19.57	730	8.31	224	401	18.0	5.00	50.7	20.2	60.2	3.60		1.0	273	28.3
SCR-1	890315	0815	10.71	705	8.17	240	411	68.0	7.20	58.9	22.3	64.2	4.40		1.0	281	26.4
SCR-1	890412	0830	9.44	700	8.30	230	392	7.0	2.50	62.0	23.0	63.0	3.90		1.0	289	29.2
SCR-1	890510	0900	6.04	713	8.31	228	430	12.0	3.90	57.1	21.9	59.2	4.00		1.0	122	28.2
SCR-1	890607	0915	2.38	673	7.91	212	416	5.0	0.80	51.1	21.5	62.7	5.40		1.0	284	29.6
SCR-1	890711	1715	11.00	761	8.13	289	456	373.0	185.00	69.5	20.9	61.9	6.30		1.0	316	61.9
SCR-1(QC)	890711	1715	11.00														
SCR-1	890801	1700	36.30	650	8.2	184	490	760	25	42.6	18.8	117	5.6		0.5	203	14
SCR-1(QC)	890801	1700	36.30	642	8.3	184	490	840	34	42.2	19.0	118	5.5		0.5	202	14
SCR-1	890915	O900	5.58	722	8.21	242	445	31	21	51.6	21.2	60.6	3.8		1	304	26.4
	Ash Creek below Cabins on Mt. Graham																
AC-1	890928	1115	0.01	37.7	7.3	12.8	30	10	0.8	3.51	0.97	2.5	0.5	0.5	0.5	14	7.5

Site ID	Date (yymmdd)	Time (hrs)	Cl (mg/l)	Alk, T (mg/l)	Alk, P (mg/l)	F (mg/l)	TKN (mgN/l)	NO2+NO3 (mgN/l)	Ammonia (mgN/l)	Ammonia Un-ionized	TP (mgP/l)	Bacteria FC (cfu/100ml)	Bacteria FS (cfu/100ml)	Trace Metals Ag, T (ug/l)	Trace Metals Ag, D (ug/l)
UPPER GILA RIVER BASIN															
	San Francisco River near Clifton														
SFR-2	890110	1540	166.0	162	1.0	0.64	0.05 K	0.10 K	0.10 K	0.003	0.12			1.5	
SFR-2	890215	1800	183.0	163	1.0	0.64	0.05 K	0.10 K	0.10 K	0.010	0.46			1 K	1 K
SFR-2	890314	1400										0	268		
SFR-2	890411	1320	160.0	157	4.2	0.84	0.05 K	0.10 K	0.10 K	0.030	0.09			1 K	
SFR-2	890509	1430	388.0	57	2.0	0.90	0.06	0.10 K	0.10 K	0.019	0.12			1 K	1 K
SFR-2(QC)	890509	1430	392.0	62	1.0	0.88	0.05 K	0.10 K	0.10 K	0.019	0.12			1 K	1 K
SFR-2	890606	1545	528.0	159	9.2	0.96	0.05 K	0.10 K			0.07			1 K	
SFR-2	890711	1400	496.0	147	4.0		0.11	0.10 K	0.10	0.043	0.21	211	135	1 K	
SFR-2	890801	1700	93.0	104	0.5	0.41	0.50	0.65	0.07	0.009	1.40			10 K	10 K
SFR-2	890914	1345	422	160	1	0.97	0.05 K	0.1 K	0.10 K	0.005	0.26			1 K	
	Blue River near Clifton														
BLR-1	890110	1300	40.8	174	1.0	0.26	0.06	0.10 K	0.10 K	0.005	0.10			1 K	
BLR-1	890215	1515	43.5	178	3.0	0.23	0.09	0.10 K	0.10 K	0.013	0.17			1 K	2 K
BLR-1	890314	1025	31.0	152	1.0	0.24	0.10 K	0.10 K	0.10 K	0.011	0.08	8	113	1 K	
BLR-1(QC)	890314	1025	29.5	152	1.0	0.22	0.10 K	0.10 K	0.10 K	0.011	0.13	8	95	1 K	
BLR-1	890411	1015	4.3	169	3.4	0.28	0.08	0.10 K	0.10 K	0.010	0.09			1 K	
BLR-1	890509	1055	44.2	64	1.0	0.28	0.22	0.10 K	0.10 K	0.017	0.17			1 K	1 K
BLR-1	890606	1300	45.3	176	6.0	0.28	0.06	0.10 K			0.05			1 K	
BLR-1	890711	1100	48.2	175	3.0	0.29	0.13	0.10 K	0.10 K	0.024	0.23	235	206	1 K	
BLR-1	890801	1100	30.0	134	0.5	0.29	0.40	0.27	0.13	0.010	1.00			10 K	10 K
BLR-1	890914	1410	55.0	178	1.0	0.26	0.06	0.10 K	0.10 K	0.026	0.05 K			1 K	
	San Carlos River at Hwy 70 Bridge														
SCR-1	890111	0830	73.6	214	1.0	0.34	0.32	0.10 K	0.10 K	0.004	0.12			1.2	
SCR-1	890216	0945	75.8	224	1.0	0.30	0.24	0.10 K	0.10 K	0.005	0.09			1 K	1 K
SCR-1	890315	0815	78.0	230	1.0	0.34	0.12	0.10 K	0.10 K	0.007	0.10	8	148	1 K	
SCR-1	890412	0830	72.2	237	1.0	0.42	0.17	0.10 K	0.10 K	0.005	0.09			1 K	
SCR-1	890510	0900	84.6	100	1.0	0.38	0.10	0.10 K	0.10 K	0.007	0.13			1 K	1 K
SCR-1	890607	0915	66.5	233	1.0	0.39	0.15	0.10 K			0.07			1 K	
SCR-1	890711	1715	92.7	259	1.0	0.37	0.10	0.10 K	0.10 K	0.027	0.46	5200	1900	1 K	
SCR-1(QC)	890711	1715										5600	1075		
SCR-1	890801	1700	170	203	0.5	0.27	0.4	0.06 K	0.16	0.021	0.73			10	
SCR-1(QC)	890801	1700	170	202	0.5	0.24	0.3	0.06 K	0.12	0.015	0.54			10 K	10 K
SCR-1	890915	O900	79	249	1	0.37	0.08	0.10 K	0.10 K	0.008	0.05 K			1 K	
	Ash Creek below Cabins on Mt. Graham														
AC-1	890928	1115	0.71	14	0.5	0.05	0.1 K	0.06 K	0.03 K	0.000	0.05 K			10 K	10 K

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	As, T (ug/l)	As, D (ug/l)	Ba, T (ug/l)	Ba, D (ug/l)	B, T (ug/l)	B, D (ug/l)	Be, T (ug/l)	Be, D (ug/l)	Cd, T (ug/l)	Cd, D (ug/l)	Cr, T (ug/l)	Cr, D (ug/l)	Cu, T (ug/l)
UPPER GILA RIVER BASIN															
	San Francisco River near Clifton														
SFR-2	890110	1540	10 K		100 K		100		0.5 K		1 K		10 K		10 K
SFR-2	890215	1800	10 K	10 K	100 K	100 K	100 K	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
SFR-2	890314	1400													
SFR-2	890411	1320	10 K		50 K		100 K		0.5 K		1 K		10 K		10 K
SFR-2	890509	1430	10 K	10 K	100 K	100 K	170	100	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
SFR-2(QC)	890509	1430	10 K	10 K	100 K	100 K	160	100	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
SFR-2	890606	1545	10 K		100		220		0.5 K		1 K		10 K		10 K
SFR-2	890711	1400	10 K		100 K		120		0.5 K		0.5 K		10 K		46
SFR-2	890801	1700	46	5 K	340	30	100 K	100 K	5.0 K	5 K	11	5 K	30	20 K	233
SFR-2	890914	1345	10 K		90		100		0.5 K		1 K		10 K		15 K
	Blue River near Clifton														
BLR-1	890110	1300	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
BLR-1	890215	1515	10 K	10 K	100 K	100 K	100 K	100 K	5.0 K	5 K	1 K	1 K	10 K	10 K	10 K
BLR-1	890314	1025	10 K		500 K		100 K		0.5 K		1 K		12		10 K
BLR-1(QC)	890314	1025	10 K		500 K		100 K		0.5 K		1 K		10 K		10 K
BLR-1	890411	1015	10 K		50 K		100 K		0.5 K		1 K		10 K		10 K
BLR-1	890509	1055	10 K	10 K	100 K	100 K	100 K	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
BLR-1	890606	1300	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
BLR-1	890711	1100	10 K		100 K		100 K		0.5 K		0.5 K		10 K		10 K
BLR-1	890801	1100	24	5 K	150	40	100 K	100 K	5.0 K	5 K	6 K	5 K	20 K	20 K	49
BLR-1	890914	1410	10 K		50 K		50 K		0.5 K		1 K		10 K		10 K
	San Carlos River at Hwy 70 Bridge														
SCR-1	890111	0830	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
SCR-1	890216	0945	10 K	10 K	100	100 K	100	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
SCR-1	890315	0815	10 K		500 K		100 K		0.5 K		1 K		10 K		10 K
SCR-1	890412	0830	10 K		50		120		0.5 K		1 K		10 K		10 K
SCR-1	890510	0900	10 K	10 K	100 K	100 K	110	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
SCR-1	890607	0915	10 K		100 K		160		0.5 K		1 K		10 K		10 K
SCR-1	890711	1715	14		150		100 K		0.5 K		0.5 K		10 K		32
SCR-1(QC)	890711	1715													
SCR-1	890801	1700	32		190		100 K		5 K		10		20 K		97
SCR-1(QC)	890801	1700	29	9	180	70	100 K	100 K	5 K	5 K	10	5 K	20 K	20 K	96
SCR-1	890915	O900	10		60		50 K		0.5 K		1 K		10 K		10 K
	Ash Creek below Cabins on Mt. Graham														
AC-1	890928	1115	5 K	5 K	20 K	20 K	100 K	100 K	5 K	5 K	5 K	5 K	20 K	20 K	20 K

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	Cu, D (ug/l)	Fe, T (ug/l)	Fe, D (ug/l)	Hg, T (ug/l)	Hg, D (ug/l)	Mn, T (ug/l)	Mn, D (ug/l)	Ni, T (ug/l)	Ni, D (ug/l)	Pb, T (ug/l)	Pb, D (ug/l)	Sb, T (ug/l)	Sb, D (ug/l)
UPPER GILA RIVER BASIN															
	San Francisco River near Clifton														
SFR-2	890110	1540		470		0.5 K		50 K		50 K		10 K		5 K	
SFR-2	890215	1800	10 K	110	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
SFR-2	890314	1400													
SFR-2	890411	1320		60		0.5 K		5 K		50 K		10 K		5 K	
SFR-2	890509	1430	10 K	190	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
SFR-2(QC)	890509	1430	10 K	120	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
SFR-2	890606	1545		100 K		0.5 K		50 K		50 K		10 K		5 K	
SFR-2	890711	1400		190		0.5 K		80		50 K		10 K		5 K	
SFR-2	890801	1700	18	33300	255	0.2 K	0.2 K	1300	10 K	120	30 K	31	2 K	10 K	10 K
SFR-2	890914	1345		620		0.5 K		50 K		50 K		10 K		5 K	
	Blue River near Clifton														
BLR-1	890110	1300		100 K		0.5 K		50 K		50 K		10 K		5 K	
BLR-1	890215	1515	10 K	100 K	100 K	5.0 K	5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
BLR-1	890314	1025		270		0.5 K		50 K		50 K		10 K		5 K	
BLR-1(QC)	890314	1025		270		0.5 K		50 K		50 K		10 K		5 K	
BLR-1	890411	1015		50 K		0.5 K		50 K		50 K		10 K		5 K	
BLR-1	890509	1055	10 K	100 K	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
BLR-1	890606	1300		100 K		0.5 K		50 K		50 K		10 K		5 K	
BLR-1	890711	1100		740		0.5 K		50 K		50 K		10 K		5 K	
BLR-1	890801	1100	10 K	10900	85	0.2 K	0.2 K	448	11	70	30 K	7	2 K	10 K	10 K
BLR-1	890914	1410		220		0.5 K		50 K		50 K		10 K		5 K	
	San Carlos River at Hwy 70 Bridge														
SCR-1	890111	0830		730		0.5 K		70		50 K		10 K		5 K	
SCR-1	890216	0945	10 K	380	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
SCR-1	890315	0815		890		0.5 K		60		50 K		10 K		5 K	
SCR-1	890412	0830		130		0.5 K		50 K		50 K		10 K		5 K	
SCR-1	890510	0900	10 K	200	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
SCR-1	890607	0915		120		0.5 K		50 K		50 K		10 K		5 K	
SCR-1	890711	1715		4740		0.5 K		320		50 K		10 K		5 K	
SCR-1(QC)	890711	1715													
SCR-1	890801	1700		20800		0.2 K		572		50		28		10 K	
SCR-1(QC)	890801	1700	10	19000	119	0.2 K	0.2 K	601	10 K	40	30 K	16	2 K	10 K	10 K
SCR-1	890915	0900		1010		0.5 K		60 K		50 K		10		5 K	
	Ash Creek below Cabins on Mt. Graham														
AC-1	890928	1115	10 K	234	231	0.2 K	0.4	10 K	10 K	30 K	30 K	2 K	2 K	10 K	10 K

Site ID	Date (yymmdd)	Time (hrs)	Se, T (ug/l)	Se, D (ug/l)	Sr, T (ug/l)	Sr, D (ug/l)	Tl, T (ug/l)	Tl, D (ug/l)	Zn, T (ug/l)	Zn, D (ug/l)	Lab	Remarks
UPPER GILA RIVER BASIN												
	San Francisco River near Clifton											
SFR-2	890110	1540	5 K				5 K		50 K		ADHS	
SFR-2	890215	1800	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
SFR-2	890314	1400										Field error, no lab results available-LLM
SFR-2	890411	1320	5 K				5 K		50 K		ADHS	
SFR-2	890509	1430	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
SFR-2(QC)	890509	1430	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
SFR-2	890606	1545	5 K				5 K		50 K		ADHS	
SFR-2	890711	1400	5 K				5 K		50 K		ADHS	
SFR-2	890801	1700	5 K	5 K			5 K		30		ATI	
SFR-2	890914	1345	5 K				5 K		50 K		ADHS	
	Blue River near Clifton											
BLR-1	890110	1300	1 K				5 K		50 K		ADHS	
BLR-1	890215	1515	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
BLR-1	890314	1025	5 K				5 K		50 K		ADHS	
BLR-1(QC)	890314	1025	5 K				5 K		50 K		ADHS	
BLR-1	890411	1015	5 K				5 K		50 K		ADHS	
BLR-1	890509	1055	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
BLR-1	890606	1300	5 K				5 K		50 K		ADHS	
BLR-1	890711	1100	5 K				5 K		50 K		ADHS	
BLR-1	890801	1100	5 K	5 K			5 K	5 K	80	12	ATI	
BLR-1	890914	1410	5 K				5 K		50 K		ADHS	
	San Carlos River at Hwy 70 Bridge											
SCR-1	890111	0830	5 K				5 K		50 K		ADHS	
SCR-1	890216	0945	10 K	5 K			5 K	5 K	50 K	50 K	ADHS	
SCR-1	890315	0815	5 K				5 K		50 K		ADHS	
SCR-1	890412	0830	5 K				5 K		50 K		ADHS	
SCR-1	890510	0900	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
SCR-1	890607	0915	5 K				5 K		50 K		ADHS	
SCR-1	890711	1715	5 K				5 K		50 K		ADHS	
SCR-1(QC)	890711	1715										
SCR-1	890801	1700	5 K				5 K		131		ATI	
SCR-1(QC)	890801	1700	5 K	5 K			5 K	5 K	126	11	ATI	
SCR-1	890915	O900	5 K				5 K		50 K		ADHS	
	Ash Creek below Cabins on Mt. Graham											
AC-1	890928	1115	5 K	5 K	20 K	20 K	5 K	5 K	10 K	23	ATI	X-CONT Hg(D), Zn(D)

Site ID	Date (yymmdd)	Time (hrs)	No.	STORET (#)	Basin	HUC (#)	Agency	Air (oC)	H2O (oC)	DO (mg/O2/l)	Sat. (%)	Fld EC (uS/cm)	Fld pH (SU)	Staff (ft)	Width (ft)	Depth avg/ft	Velocity avg/fps
								Field Parameters									
MIDDLE GILA RIVER BASIN																	
	Hassayampa River near Wickenburg																
HR-1	890306	0900		408000000009180	MGR	15070103	ADEQ	17.0	21.0	5.10	62.3%	615	7.57		10.00	0.34	1.71
HR-1	890627	1030		408000000009180	MGR	15070103	ADEQ	36.5	14.0	6.10	64.4%	736	7.44		10.20	0.24	0.76
VERDE RIVER BASIN																	
	East Verde River at Hwy 87 Bridge																
EVR-2	890118	1600		706500000004300	VR	15060203	ADEQ	13.0	6.0	12.3	113.7%	436	8.23		22.51	0.64	0.40
EVR-2	890221	1230		706500000004300	VR	15060203	ADEQ	12.0	9.5	10.2	101.7%	408	8.28	4.69	23.00	0.68	0.54
EVR-2	890321	1100		706500000004300	VR	15060203	ADEQ	38.0	11.5	9.40	98.2%	418	8.57		22.00	0.74	0.48
EVR-2	890417	1315		706500000004300	VR	15060203	ADEQ	29.0	19.5	6.85	85.9%	405	8.61		21.10	0.67	0.48
EVR-2	890515	1230		706500000004300	VR	15060203	ADEQ	26.0	22.5	8.40	110.2%	212	8.39		28.10	0.71	1.14
EVR-2	890613	1210		706500000004300	VR	15060203	ADEQ	37.0	22.0	5.58	73.6%	234	8.17		26.00	0.51	1.82
EVR-2	890717	1345		706500000004300	VR	15060203	ADEQ	39.0	28.5			197	8.03		24.60	0.43	0.54
EVR-2	890812	1615		706500000004300	VR	15060203	ADEQ	33.0	25.0			226	8.17		24.80	0.81	1.00
EVR-2	890919	1245		706500000004300	VR	15060203	ADEQ	29.0	19.5	8.40	104.4%	222	8.60		25.10	0.84	1.05
	Verde River below Camp Verde																
VRC-2	890117	1245		700000000014400	VR	15060202	ADEQ	15.0	9.9	6.00	59.2%	567	8.44		70.21	1.67	2.16
VRC-2	890222	1445		700000000014400	VR	15060202	ADEQ	21.0	14.0	10.01	108.1%	467	8.26		70.87	2.04	2.41
VRC-2	890321	1750		700000000014400	VR	15060202	ADEQ		20.0	8.70	106.6%	577	8.50		56.70	1.38	1.90
VRC-2	890418	1405		700000000014400	VR	15060202	ADEQ	24.5	23.0	9.00	119.5%	655	8.50		52.30	1.41	1.91
VRC-2	890516	1030		700000000014400	VR	15060202	ADEQ	19.0	18.0	8.90	98.9%	862	8.26		51.50	1.42	1.78
VRC-2(QC)	890516	1030		700000000014400	VR	15060202	ADEQ	19.0	18.0	8.90	98.9%	862	8.26		51.50	1.42	1.78
VRC-2	890613	1410		700000000014400	VR	15060202	ADEQ	36.0	26.5	5.70	82.6%	966	8.36		49.10	1.16	1.44
VRC-2	890718	1245		700000000014400	VR	15060202	ADEQ	41.0	28.0			922			39.37	0.92	2.55
VRC-2	890813	1330		700000000014400	VR	15060202	ADEQ	39.5	28.5	8.20	121.5%	761	8.04		50.80	1.48	2.12
VRC-2	890919	1215		700000000014400	VR	15060202	ADEQ	32.0	21.0	8.30	107.2%	864	7.94		48.00	1.21	1.56
	Verde River near Perkinsville																
VRP-1	890117	1020		700000000025860	VR	15060202	ADEQ	8.0	4.5	11.0	98.7%	570	8.35		36.52	1.20	0.65
VRP-1	890222	1745		700000000025860	VR	15060202	ADEQ	12.0	13.5	9.80	110.1%	550	8.33		43.31	1.61	0.40
VRP-1	890322	1530		700000000025860	VR	15060202	ADEQ	25.0	17.2	11.9	143.4%	554	8.66		42.00	1.56	0.52
VRP-1	890418	1820		700000000025860	VR	15060202	ADEQ	20.0	22.5	8.92	120.0%	619	8.02		41.00	1.50	0.47
VRP-1	890516	1810		700000000025860	VR	15060202	ADEQ		19.0	8.20	103.0%	554	8.22		45.20	1.48	0.36
VRP-1	890614	1420		700000000025860	VR	15060202	ADEQ	34.0	27.0	9.60	140.4%	528	8.16		44.50	1.49	0.33
VRP-1	890718	1630		700000000025860	VR	15060202	ADEQ	40.0	30.0			528	8.00		33.80	1.24	0.46
VRP-1	890813	1715		700000000025860	VR	15060202	ADEQ	33.0	29.0	6.75	100.6%	630	8.15		27.60	1.11	0.83
VRP-1(QC)	890813	1715		700000000025860	VR	15060202	ADEQ	33.0	29.0	6.75	100.6%	630	8.15		27.60	1.11	0.83
VRP-1	890919	1630		700000000025860	VR	15060202	ADEQ	26.0	22.0	8.70	114.9%	583	8.15		19.00	1.12	1.01
VRP-1(QC)	890919	1630		700000000025860	VR	15060202	ADEQ	26.0	22.0	8.70	114.9%	583	8.15		19.00	1.12	1.01
	Bitter Creek at Clarkdale																
BTC-1A	890117	1130		702600000000006	VR	15060202	ADEQ	14.0	8.0	15.5	148.9%	814	8.46		1.80	0.22	0.19
BTC-1A	890222	1630		702600000000006	VR	15060202	ADEQ	21.0	17.4	8.70	103.6%	643	8.60		1.80	0.21	0.05
BTC-1A	890322	1350		702600000000006	VR	15060202	ADEQ	36.0	23.5	8.50	113.9%	1236	8.51		1.60	0.12	0.00

Site ID	Date (yymmdd)	Time (hrs)	Discharge (cfs)	Lab EC (uS/cm)	Lab pH (SU)	Hardness EDTA (mg/l)	TDS Evap (mg/l)	TSS (mg/l)	Turbidity (NTU)	Cations Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	OH (mg/l)	CO3 (mg/l)	Anions HCO3 (mg/l)	SO4 (mg/l)
MIDDLE GILA RIVER BASIN																	
	Hassayampa River near Wickenburg																
HR-1	890306	0900	3.41	617	7.75	227	389	2	0.10	62.6	19.50	46.6	3.10		1.00	282	54.2
HR-1	890627	1030	1.71	632	7.52	246	402	2	0.24	64.8	19.3	37.7	2.7		1.00	287	50.8
VERDE RIVER BASIN																	
	East Verde River at Hwy 87 Bridge																
EVR-2	890118	1600	4.81	294	8.41	248.0	196	2	1.90	62.5	22.6	2.5	1.12		3.8	278	10.0
EVR-2	890221	1230	8.36	418	8.33	230.0	213	2	2.10	57.7	23.1	2.5	0.90		1.0	273	5.0
EVR-2	890321	1100	6.84	317	8.33	238.0	206	6	2.10	56.9	22.0	2.5	0.80		1.0	275	5.0
EVR-2	890417	1315	5.07	402	8.20	219.0	239	4	4.30	52.0	23.0	2.5	0.80		1.0	265	5.0
EVR-2	890515	1230	22.30	245	8.10	134.0	163	22	15.00	34.3	12.4	2.5	0.80		1.0	155	5.0
EVR-2	890613	1210	20.47	231	8.34	134.0	173	13	16.10	34.7	11.9	2.5	0.80		1.0	154	5.0
EVR-2	890717	1345	6.33	216	8.45	124.0	133	7	15.20	31.9	10.8	2.5	0.90		4.0	127	5.0
EVR-2	890812	1615	16.27	210	8.40	123.0	150	40	17.00	30.6	11.3	1.8	0.50		4.0	114	4.4
EVR-2	890919	1245	18.00	205	7.98	119.0	123	20	18.7	27.8	10.4	2.5	1.74		1	139	5.0
	Verde River below Camp Verde																
VRC-2	890117	1245	212.80	601	8.42	266.0	321	7	3.00	56.3	31.7	31.1	2.50		4.8	293	59.2
VRC-2	890222	1445	308.21	475	8.42	230.0	277	37	21.00	50.7	26.8	21.9	2.20		6.0	234	
VRC-2	890321	1750	126.03	643	8.43	288.0	391	26	5.20	57.2	35.8	40.2	2.80		4.2	290	
VRC-2	890418	1405	120.56	729	8.46	318.0	481	16	9.40	60.9	40.1	46.0	3.60		7.0	304	112.0
VRC-2	890516	1030	99.90	893	7.91	356.0	588	39	11.10	70.3	48.3	59.9	3.60		1.0	355	151.0
VRC-2(QC)	890516	1030	99.90	890	8.08	356.0	591	31	11.40	67.5	42.9	57.9	4.10		1.0	357	159.0
VRC-2	890613	1410	64.78	943	8.34	428.0	646	2	0.20	87.1	54.7	43.6	2.50		2.0	256	226.0
VRC-2	890718	1245	83.20	903	8.32	364.0	582	19	9.60	67.7	47.2	64.7	4.20		2.0	354	155.0
VRC-2	890813	1330	139.60	711	8.40	281.0	450	110	18.00	51.8	36.9	56.3	3.60		8.0	255	100.0
VRC-2	890919	1215	79.26	816	8.14	363.0	527	37	15.4	66.6	45.7	58.0	6.48		1.0	367	
	Verde River near Perkinsville																
VRP-1	890117	1020	24.30	584	8.30	221.0	319	8	3.80	48.1	24.4	51.3	3.50		1.0	338	19.7
VRP-1	890222	1745	21.04	556	8.32	201.0	333	17	5.40	42.3	24.5	54.4	3.40		2.0	317	16.7
VRP-1	890322	1530	23.60	553	8.48	217.0	313	51	12.00	42.9	24.4	51.4	3.60		7.2	310	23.5
VRP-1	890418	1820	21.76	557	8.37	204.0	354	37	14.00	42.0	24.1	46.1	3.70		8.0	312	16.6
VRP-1	890516	1810	16.97	578	8.00	207.0	366	27	8.30	42.7	25.7	49.0	3.20		1.0	328	
VRP-1	890614	1420	15.21	560	8.36	206.0	357	15	13.10	41.9	25.3	52.5	3.60		3.6	321	15.4
VRP-1	890718	1630	17.33	557	8.34	215.0	370	64	27.00	40.6	21.6	43.4	4.00		4.0	328	17.0
VRP-1	890813	1715	19.64	520	8.50	192.0	350	190	43.00	38.8	23.0	58.3	3.50		14.0	252	17.0
VRP-1(QC)	890813	1715	19.64	528	8.50	188.0	340	200	42.00	38.5	22.2	58.4	3.40		12.0	254	15.0
VRP-1	890919	1630	18.20	549	8.23	215.0	334	46	27.00	41.6	25.5	48.9	6.13		1.0	337	15.7
VRP-1(QC)	890919	1630	18.20	549	8.01	218.0	339	49	28.00	36.9	22.6	43.9	3.00		1.0	333	16.4
	Bitter Creek at Clarkdale																
BTC-1A	890117	1130	0.55	832	8.33	397.0	533	2	0.58	80.9	46.6	34.2	2.30		1.0	260	184.0
BTC-1A	890222	1630	0.02	742	8.46	344.0	519	5	0.50	58.4	42.4	32.2	2.40		5.0	190	181.0
BTC-1A	890322	1350	0.03	1230	8.40	580.0	867	5	0.81	112.0	76.4	48.5	2.60		3.6	198	376.0

Site ID	Date (yymmdd)	Time (hrs)	Cl (mg/l)	Alk, T (mg/l)	Alk, P (mg/l)	F (mg/l)	TKN (mgN/l)	NO2+NO3 (mgN/l)	Ammonia (mgN/l)	Ammonia Un-ionized	TP (mgP/l)	Bacteria FC (cfu/100ml)	Bacteria FS (cfu/100ml)	Trace Metals Ag, T (ug/l)	Trace Metals Ag, D (ug/l)
MIDDLE GILA RIVER BASIN															
	Hassayampa River near Wickenburg														
HR-1	890306	0900	35.0	231	1.0	0.67	0.06	0.75	0.1 K	0.002	0.16	32	6	1 K	
HR-1	890627	1030	30.6	235	1.0	0.67		0.63	0.1 K	0.001	0.05 K			1 K	
VERDE RIVER BASIN															
	East Verde River at Hwy 87 Bridge														
EVR-2	890118	1600	5.7	234	3.2	0.20 K	0.05 K	0.10 K	0.1 K	0.003	0.05 K			1 K	
EVR-2	890221	1230	3.8	224	1.0	0.20 K	0.12	0.10 K	0.1 K	0.004	0.09			1 K	1 K
EVR-2	890321	1100	3.6	227	1.0	0.20 K	0.16	0.10 K	0.1 K	0.009	0.05 K	8	17	1 K	
EVR-2	890417	1315	2.9	217	1.0	0.20 K	0.10	0.10 K	0.1 K	0.016	0.05 K			1 K	
EVR-2	890515	1230	4.4	127	1.0	0.20 K	0.10	0.10 K	0.1 K	0.013	0.13			1 K	1 K
EVR-2	890613	1210	2.4	126	1.0	0.20 K	0.13	0.10 K	0.1 K	0.008	0.14	8	165	1 K	
EVR-2	890717	1345	3.0	110	3.0	0.20 K	0.29	0.10 K	0.1 K	0.009	0.05 K			1 K	
EVR-2	890812	1615	1.4	118	2.0	0.09	0.20	0.06 K	0.1 K	0.005	0.07			10 K	10 K
EVR-2	890919	1245	2.0	114	1.0	0.20 K		0.05 K	0.05 K	0.008				1 K	
	Verde River below Camp Verde														
VRC-2	890117	1245	22.4	248	4.0	0.28	0.05 K	0.10 K	0.1 K	0.006	0.05 K			1 K	
VRC-2	890222	1445	13.9	204	3.0	0.20 K	0.31	0.10 K	0.1 K	0.005	0.05			1 K	1 K
VRC-2	890321	1750	23.4	245	3.5	0.28	0.22	0.10 K	0.1 K	0.014	0.06	0	201	1 K	
VRC-2	890418	1405	26.5	263	6.0	0.33	0.17	0.10 K	0.1 K	0.016	0.05 K			1 K	
VRC-2	890516	1030	40.3	291	1.0	0.36	0.11	0.10 K	0.1 K	0.007	0.08			1 K	
VRC-2(QC)	890516	1030	39.9	293	1.0	0.36	0.22	0.10 K	0.1 K	0.000	0.08			1 K	
VRC-2	890613	1410	53.8	214	2.0	0.40	0.21	0.18	0.1 K	0.015	0.05 K	2	266	1 K	
VRC-2	890718	1245	43.7	294	2.0	0.39	0.28	0.10 K	0.1 K	0.000	0.05 K			1 K	
VRC-2	890813	1330	32.0	263	4.0	0.30	0.20	0.06 K	0.1	0.004	0.14			10 K	10 K
VRC-2	890919	1215	38.0	301	1.0	0.37		0.10 K	0.05 K	0.002				1 K	
	Verde River near Perkinsville														
VRP-1	890117	1020	23.6	277	1.0	0.53	0.05 K	0.66	0.1 K	0.003	0.05 K			1 K	
VRP-1	890222	1745	22.1	264	2.0	0.48	0.10	0.46	0.1 K	0.006	0.16			1 K	1 K
VRP-1	890322	1530	22.3	266	6.0	0.54	0.11	0.29	0.1 K	0.016	0.19			1 K	
VRP-1	890418	1820	19.1	272	6.4	0.55	0.16	0.29	0.1 K	0.006	0.08			1 K	
VRP-1	890516	1810	22.6	269	1.0	0.49	0.11	0.27	0.1 K	0.007	0.09			1 K	
VRP-1	890614	1420	21.3	269	3.0	0.51	0.07	0.20	0.1 K	0.011	0.27	20	1132	1 K	
VRP-1	890718	1630	21.4	275	3.0	0.54	0.43	0.18	0.1 K	0.009	0.17			10 K	
VRP-1	890813	1715	24.0	266	7.0	0.46	0.20	0.43	0.05 K	0.006	0.18			10 K	10 K
VRP-1(QC)	890813	1715	24.0	266	6.0	0.46	0.20	0.44	0.05 K	0.006	0.05 K			10 K	10 K
VRP-1	890919	1630	21.0	276	1.0	0.51	0.12	0.31	0.1 K	0.007	0.26			1 K	
VRP-1(QC)	890919	1630	21.7	273	1.0	0.52	0.3	0.32	0.1 K	0.007	0.21			1 K	
	Bitter Creek at Clarkdale														
BTC-1A	890117	1130	39.7	213	1.0	0.30	0.05 K	1.23	0.1 K	0.005	0.05 K			1 K	
BTC-1A	890222	1630	41.2	165	4.0	0.29	0.21	0.99	0.1 K	0.014	0.09			1 K	1 K
BTC-1A	890322	1350	100.0	168	3.0	0.35	0.26	1.17	0.1 K	0.017	0.05 K			1 K	

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	As, T (ug/l)	As, D (ug/l)	Ba, T (ug/l)	Ba, D (ug/l)	B, T (ug/l)	B, D (ug/l)	Be, T (ug/l)	Be, D (ug/l)	Cd, T (ug/l)	Cd, D (ug/l)	Cr, T (ug/l)	Cr, D (ug/l)	Cu, T (ug/l)
MIDDLE GILA RIVER BASIN															
	Hassayampa River near Wickenburg														
HR-1	890306	0900	10 K		100 K		500		0.5 K		2.3		10 K		10 K
HR-1	890627	1030	10 K		190		100 K		0.5 K		0.5 K		10 K		10 K
VERDE RIVER BASIN															
	East Verde River at Hwy 87 Bridge														
EVR-2	890118	1600	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
EVR-2	890221	1230	10 K	10 K	100 K	100 K	100 K	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
EVR-2	890321	1100	10 K		500 K		100 K		0.5 K		1 K		10 K		10 K
EVR-2	890417	1315	10 K		100 K		100 K		0.5 K		1 K		10 K		10 K
EVR-2	890515	1230	10 K	10 K	100 K	100 K	100 K	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
EVR-2	890613	1210	10 K		100 K		120		0.5 K		1 K		10 K		10 K
EVR-2	890717	1345	10 K		100 K		100 K		0.5 K		0.5 K		10 K		10 K
EVR-2	890812	1615	5 K	5 K	30	30	100 K	100 K	5 K	5 K	5 K	5 K	20 K	20 K	10 K
EVR-2	890919	1245	10 K		100 K		50 K		0.5 K		1 K		10 K		10 K
	Verde River below Camp Verde														
VRC-2	890117	1245	14		130		180		0.5 K		1 K		10 K		10
VRC-2	890222	1445	12	10	150	130	180	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
VRC-2	890321	1750	16		500 K		170		0.5 K		1 K		10 K		10 K
VRC-2	890418	1405	19		110		210		0.5 K		1 K		10 K		10 K
VRC-2	890516	1030	17		100 K		280		0.5 K		1 K		10 K		10 K
VRC-2(QC)	890516	1030	20		100 K		300		0.5 K		1 K		10 K		10 K
VRC-2	890613	1410	10 K		100 K		270		0.5 K		1 K		10 K		10 K
VRC-2	890718	1245	25		110		250		0.5 K		0.5 K		10 K		11 K
VRC-2	890813	1330	21	18	120	110	190	170	5 K	5 K	5 K	5 K	20 K	20 K	10 K
VRC-2	890919	1215	23		111		222		0.5 K		1 K		10 K		10 K
	Verde River near Perkinsville														
VRP-1	890117	1020	21		100 K		300		0.5 K		1 K		10 K		10 K
VRP-1	890222	1745	24	22	100	100 K	300	210	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
VRP-1	890322	1530	25		500 K		270		0.5 K		1 K		25		10 K
VRP-1	890418	1820	19		100 K		260		0.5 K		1 K		10 K		10 K
VRP-1	890516	1810	22		100 K		310		0.5 K		1 K		10 K		10 K
VRP-1	890614	1420	19		100 K		360		0.5 K		1 K		10 K		10 K
VRP-1	890718	1630	27		100 K		220		0.5 K		0.5 K		10 K		10 K
VRP-1	890813	1715	25	21	100	80	210	190	0.5 K	5 K	5 K	5 K	20 K	20 K	10 K
VRP-1(QC)	890813	1715	25	22	111	70	210	120	0.5 K	5 K	5 K	5 K	20 K	20 K	10 K
VRP-1	890919	1630	25		100 K		210		0.5 K		1 K		10 K		10 K
VRP-1(QC)	890919	1630	25		100 K		210		0.5 K		1 K		10 K		57
	Bitter Creek at Clarkdale														
BTC-1A	890117	1130	10 K		100 K		180		0.5 K		1 K		10 K		10 K
BTC-1A	890222	1630	10 K	10 K	100 K	100 K	230	130	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
BTC-1A	890322	1350	10 K		500 K		200		0.5 K		1 K		10 K		10 K

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	Cu, D (ug/l)	Fe, T (ug/l)	Fe, D (ug/l)	Hg, T (ug/l)	Hg, D (ug/l)	Mn, T (ug/l)	Mn, D (ug/l)	Ni, T (ug/l)	Ni, D (ug/l)	Pb, T (ug/l)	Pb, D (ug/l)	Sb, T (ug/l)	Sb, D (ug/l)
MIDDLE GILA RIVER BASIN															
	Hassayampa River near Wickenburg														
HR-1	890306	0900		100 K		0.5 K		50 K		50 K		10 K		5 K	
HR-1	890627	1030		100 K		0.5 K		50 K		50 K		10 K		5 K	
VERDE RIVER BASIN															
	East Verde River at Hwy 87 Bridge														
EVR-2	890118	1600		100 K		0.5 K		50 K		50 K		10 K		5 K	
EVR-2	890221	1230	10 K	100 K	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
EVR-2	890321	1100		100 K		0.5 K		50 K		50 K		10 K		5 K	
EVR-2	890417	1315		160		0.5 K		50 K		50 K		10 K		5 K	
EVR-2	890515	1230	10 K	470	250	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
EVR-2	890613	1210		340		0.5 K		50 K		50 K		10 K		5 K	
EVR-2	890717	1345		0.76		0.5 K		50 K		50 K		10 K		5 K	
EVR-2	890812	1615	10 K	973	135	0.2 K	0.2 K	44	10 K	30 K	30 K	2 K	v	10 K	10 K
EVR-2	890919	1245		610		0.5 K		50 K		50 K		10 K		5 K	
	Verde River below Camp Verde														
VRC-2	890117	1245		100 K		0.5 K		50 K		50 K		10 K		5 K	
VRC-2	890222	1445	10 K	440	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
VRC-2	890321	1750		160		0.5 K		50 K		50 K		10 K		5 K	
VRC-2	890418	1405		220		0.5 K		50 K		50 K		10 K		5 K	
VRC-2	890516	1030		360		0.5 K		50 K		5 K		10 K		50 K	
VRC-2(QC)	890516	1030		210		0.5 K		190		50 K		10 K		5 K	
VRC-2	890613	1410		100 K		0.5 K		50 K		50 K		10 K		5 K	
VRC-2	890718	1245		430		0.5 K		50 K		50 K		10 K		5 K	
VRC-2	890813	1330	10 K	1450	64	0.2 K	0.2 K	47	18	30 K	30 K	2 K	2 K	10 K	10 K
VRC-2	890919	1215		620		0.5 K		50 K		50 K		10 K		5 K	
	Verde River near Perkinsville														
VRP-1	890117	1020		100 K		0.5 K		50 K		50 K		10 K		5 K	
VRP-1	890222	1745	10 K	130	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
VRP-1	890322	1530		310		0.5 K		50 K		50 K		10 K		14	
VRP-1	890418	1820		360		0.5 K		50 K		50 K		10 K		5 K	
VRP-1	890516	1810		220		0.5 K		50 K		50 K		10 K		5 K	
VRP-1	890614	1420		260		0.5 K		50 K		50 K		10 K		5 K	
VRP-1	890718	1630		840		0.5 K		50 K		50 K		10 K		5 K	
VRP-1	890813	1715	10 K	2650	62	0.2 K	0.2 K	87	12	30 K	30 K	5	2 K	10 K	10 K
VRP-1(QC)	890813	1715	10 K	3440	56	0.2 K	0.2 K	99	14	30 K	30 K	5	2 K	10 K	10 K
VRP-1	890919	1630		720		0.5 K		50 K		50 K		10 K		5 K	
VRP-1(QC)	890919	1630		830		0.5 K		50 K		50 K		28		5 K	
	Bitter Creek at Clarkdale														
BTC-1A	890117	1130		100 K		0.5 K		50 K		50 K		10 K		5 K	
BTC-1A	890222	1630	10 K	100 K	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
BTC-1A	890322	1350		100 K		0.5 K		50 K		50 K		10 K		5 K	

Site ID	Date (yymmdd)	Time (hrs)	Se, T (ug/l)	Se, D (ug/l)	Sr, T (ug/l)	Sr, D (ug/l)	Tl, T (ug/l)	Tl, D (ug/l)	Zn, T (ug/l)	Zn, D (ug/l)	Lab	Remarks
MIDDLE GILA RIVER BASIN												
	Hassayampa River near Wickenburg											
HR-1	890306	0900	5 K				5 K		50 K		ADHS	
HR-1	890627	1030	5 K				5 K		50 K		ADHS	
VERDE RIVER BASIN												
	East Verde River at Hwy 87 Bridge											
EVR-2	890118	1600	5 K				5 K		50 K		ADHS	
EVR-2	890221	1230	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
EVR-2	890321	1100	5 K				5 K		50 K		ADHS	
EVR-2	890417	1315	5 K				5 K		50 K		ADHS	
EVR-2	890515	1230	5 K				5 K	5 K	50 K	50 K	ADHS	
EVR-2	890613	1210	5 K				5 K		50 K		ADHS	
EVR-2	890717	1345	5 K				5 K		50 K		ADHS	
EVR-2	890812	1615	5 K	5 K			5 K	5 K	10 K	10 K	ATI	
EVR-2	890919	1245	5 K				5 K		50 K		ADHS	Holding times exceeded for TKN,TP
	Verde River below Camp Verde											
VRC-2	890117	1245	5 K				5 K		50 K		ADHS	
VRC-2	890222	1445	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
VRC-2	890321	1750	5 K				5 K		50 K		ADHS	
VRC-2	890418	1405	5 K				5 K		50 K		ADHS	
VRC-2	890516	1030	5 K				5 K		50 K		ADHS	
VRC-2(QC)	890516	1030	5 K				5 K		50 K		ADHS	
VRC-2	890613	1410	5 K				5 K		50 K		ADHS	
VRC-2	890718	1245	5 K				5 K		50 K		ADHS	
VRC-2	890813	1330	5 K	5 K			5 K	5 K	13	10 K	ATI	
VRC-2	890919	1215	5 K				5 K		50 K		ADHS	
	Verde River near Perkinsville											
VRP-1	890117	1020	5 K				5 K		50 K		ADHS	
VRP-1	890222	1745	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
VRP-1	890322	1530	5 K				5 K		50 K		ADHS	
VRP-1	890418	1820	5 K				5 K		50 K		ADHS	
VRP-1	890516	1810	5 K				5 K		50 K		ADHS	
VRP-1	890614	1420	5 K				5 K		50 K		ADHS	
VRP-1	890718	1630	5 K				5 K		50 K		ADHS	
VRP-1	890813	1715	5 K	5 K			5 K	5 K	10 K	10 K	ATI	
VRP-1(QC)	890813	1715	5 K	5 K			5 K	5 K	25	10 K	ATI	
VRP-1	890919	1630	5 K				5 K		50 K		ADHS	
VRP-1(QC)	890919	1630	5 K				5 K		50 K		ADHS	
	Bitter Creek at Clarkdale											
BTC-1A	890117	1130	5 K				5 K		50 K		ADHS	
BTC-1A	890222	1630	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
BTC-1A	890322	1350	28				5 K		50 K		ADHS	

Site ID	Date (yymmdd)	Time (hrs)	No.	STORET (#)	Basin	HUC (#)	Agency	Air (oC)	H2O (oC)	DO (mg/O2/l)	Sat. (%)	Fld EC (uS/cm)	Fld pH (SU)	Staff (ft)	Width (ft)	Depth avg/ft	Velocity avg/fps
								Field Parameters									
VERDE RIVER BASIN																	
	Bitter Creek near Clarkdale																
BTC-1	890418	1640		702600000000095	VR	15060202	ADEQ	23.0	24.5	7.48	102.1%	1332	8.18		2.71	0.22	0.59
BTC-1	890516	1640		702600000000095	VR	15060202	ADEQ	24.0	20.5	7.80	98.7%	648	8.35		4.00	0.25	0.74
BTC-1	890613	1545		702600000000095	VR	15060202	ADEQ	38.0	28.5	8.20	73.0%	771	8.38		3.00	0.23	0.44
BTC-1	890718	1420		702600000000095	VR	15060202	ADEQ	36.0	32.0			827	8.10		4.27	0.21	0.23
BTC-1	890813	1515		702600000000095	VR	15060202	ADEQ	38.0	29.0	6.38	92.9%	902	8.13		4.00	0.28	0.38
BTC-1	890919	1500		702600000000095	VR	15060202	ADEQ	31.0	23.0	7.20	94.0%	853	8.32		3.50	0.61	0.42
	Wet Beaver Creek at Camp Verde																
WBC-1	890117	1520		704600100000105	VR	15060202	ADEQ	20.0	7.0	5.70	53.4%	322	8.29		42.50	0.82	0.53
WBC-1	890222	1315		704600100000105	VR	15060202	ADEQ	22.0	11.8	9.70	102.4%	243	8.35		40.68	0.97	1.17
WBC-1	890322	1200		704600100000105	VR	15060202	ADEQ	23.0	14.8	9.15	102.8%	445	8.49		42.80	0.73	0.43
WBC-1	890418	1300		704600100000105	VR	15060202	ADEQ	21.0	22.0	8.40	109.5%	490	8.56		38.00	0.79	0.40
WBC-1	890516	1210		704600100000105	VR	15060202	ADEQ	20.0	18.0	8.90	107.0%	575	8.72		35.70	0.73	0.31
WBC-1	890614	0940		704600100000105	VR	15060202	ADEQ	35.0	24.5	6.90	94.2%	477	8.18		36.80	0.69	0.09
WBC-1	890718	1110		704600100000105	VR	15060202	ADEQ	39.0	28.0			494			42.65	0.69	0.10
WBC-1	890813	1145		704600100000105	VR	15060202	ADEQ	40.0	30.0	8.20	121.0%	437	8.20		32.00	0.56	0.02
WBC-1	890919	1100		704600100000105	VR	15060202	ADEQ	32.0	21.0	7.60	96.0%	526	8.00		34.30	1.05	0.30
	Wet Beaver Creek near Rimrock at USGS Gage																
WBC-2	890117	1620		704600100003870	VR	15060202	ADEQ	15.0	9.0	8.80	86.6%	237	8.15	3.02			
WBC-2	890222	1145		704600100003870	VR	15060202	ADEQ	15.0	7.5	9.90	94.1%	108	7.90	3.64			
WBC-2(QC)	890222	1145		704600100003870	VR	15060202	ADEQ	15.0	7.5	9.90	94.1%	108	7.90	3.64			
WBC-2	890322	1040		704600100003870	VR	15060202	ADEQ	26.0	13.5	10.1	110.3%	229	8.47	3.04			
WBC-2	890418	1100		704600100003870	VR	15060202	ADEQ	19.0	12.0	8.65	91.3%	277	8.17	3.02			
WBC-2	890516	1400		704600100003870	VR	15060202	ADEQ	20.0	16.5	8.15	97.2%	240	8.35	3.00			
WBC-2(QC)	890614	1130		704600100003870	VR	15060202	ADEQ	39.0	21.5	8.55	110.3%	239	8.54	2.96			
WBC-2	890614	1130		704600100003870	VR	15060202	ADEQ	39.0	21.5	8.55	110.3%	239	8.54	2.96			
WBC-2	890718	0950		704600100003870	VR	15060202	ADEQ		21.8			235	7.99	2.98			
WBC-2	890813	1015		704600100003870	VR	15060202	ADEQ	32.5	21.5	7.35	93.8%	239	8.14	2.97			
WBC-2	890919	0945		704600100003870	VR	15060202	ADEQ	28.0	17.5	8.00	94.7%	255	8.02	2.98			
	Dry Beaver Creek near Sedona																
DBC-1	890222	1015		704600200000100	VR	15060202	ADEQ	12.0	6.0	10.08	92.1%	82	7.60		42.98	1.57	0.62
DBC-1	890322	0940		704600200000100	VR	15060202	ADEQ	18.0	11.5	8.50	88.8%	175	8.19		1.30	0.15	0.84
SAN PEDRO RIVER BASIN																	
	San Pedro River at Palominas																
SP1	890228	1340		500000000022200	SPR	15050202	ADEQ	22.5	22.0	7.00	92.7%	490	8.25	3.1	18.40	0.30	1.00
SP1(QC)	890228	1350	(QC)	500000000022200	SPR	15050202	ADEQ	22.5	22.0	7.00	92.7%	490	8.25	3.1	18.40	0.30	1.00
SP1	890425	1324		500000000022200	SPR	15050202	ADEQ										
SP1	890627	1030		500000000022200	SPR	15050202	ADEQ										
SP1	890829	1330		500000000022200	SPR	15050202	ADEQ	33.0	32.0	7.10	112.6%	475	8.12		6.10	0.10	0.10
SP1(QC)	890829	1330	(QC)	500000000022200	SPR	15050202	ADEQ	33.0	32.0	7.10	112.6%	475	8.12		6.10	0.10	0.10

Site ID	Date (yymmdd)	Time (hrs)	Discharge (cfs)	Lab EC (uS/cm)	Lab pH (SU)	Hardness EDTA (mg/l)	TDS Evap (mg/l)	TSS (mg/l)	Turbidity (NTU)	Cations Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	OH (mg/l)	Anions CO3 (mg/l)	HCO3 (mg/l)	SO4 (mg/l)
VERDE RIVER BASIN																	
	Bitter Creek near Clarkdale																
BTC-1	890418	1640	0.31	1300	8.31	629.0	906	2	0.20	137.0	79.5	45.7	2.80		1.0	240	442.0
BTC-1	890516	1640	0.42	985	8.29	457.0	694	7	0.20	98.4	58.7	41.6	2.50		1.0	270	339.0
BTC-1	890613	1545	0.20	943	8.34	428.0	646	2	0.20	87.1	54.7	43.6	2.50		2.0	256	226.0
BTC-1	890718	1420	0.12	839	8.39	368.0	590	2	0.40	69.7	44.9	42.1	2.50		5.0	229	
BTC-1	890813	1515	0.30	822	8.50	352.0	560	5	0.35	65.7	45.6	52.5	2.30		14.0	198	180.0
BTC-1	890919	1500	0.04	803	8.11	367.0	537	2	0.15	70.7	46.7	43.0	3.20		1.0	262	
	Wet Beaver Creek at Camp Verde																
WBC-1	890117	1520	14.40	405	8.44	249.0	248	9	5.20	54.0	26.9	19.6	2.24		4.5	279	24.4
WBC-1	890222	1315	45.20	273	8.16	137.0	167	13	23.00	31.6	12.4	9.3	1.70		1.0	161	5.0
WBC-1	890322	1200	9.28	442	8.32	226.0	253	15	10.30	48.0	23.7	17.7	2.20		1.0	266	16.6
WBC-1	890418	1300	8.66	500	8.56	245.0	306	39	27.00	51.1	28.9	20.8	2.30		12.0	271	25.0
WBC-1	890516	1210	5.82	520	8.39	245.0	332	57	200.00	52.1	31.3	20.5	2.60		4.8	292	24.3
WBC-1	890614	0940	1.53	520	8.29	259.0	316	31	23.00	52.6	31.5	21.8	2.60		1.0	295	25.8
WBC-1	890718	1110	2.00	548	8.45	264.0	312	43	40.00	53.7	29.8	21.8	3.10		8.0	287	24.7
WBC-1	890813	1145	0.35	447	8.50	215.0	280	30	26.00	45.4	24.6	20.8	3.20		12.0	208	20.0
WBC-1	890919	1100	8.28	509	8.19	265.0	302	34	19.90	51.7	31.4	21.7	3.41		1.0	311	23.2
	Wet Beaver Creek near Rimrock at USGS Gage																
WBC-2	890117	1620	7.15	243	8.39	126.0	142	2	0.17	27.0	13.8	5.5	1.60		1.0	153	5.0
WBC-2	890222	1145	29.26	108	7.94	61.0	116	2	40.00	12.6	5.8	2.5	1.00		1.0	66	5.0
WBC-2(QC)	890222	1145	29.26	264	8.12	129.0	170	8	25.00	31.9	12.4	9.2	1.60		1.0	157	5.0
WBC-2	890322	1040	7.51	226	8.09	121.0	134	2	0.39	24.4	12.9	5.3	1.40		1.0	145	5.0
WBC-2	890418	1100	7.15	245	7.95	120.0	150	2	0.20	24.6	13.7	8.6	1.50		1.0	154	5.0
WBC-2	890516	1400	6.80	249	8.24	116.0	150	41	0.19	25.1	14.0	5.1	1.60		1.0	157	5.0
WBC-2(QC)	890614	1130	6.19	245	8.33	126.0	148	2	0.28	27.4	14.5	5.7	1.50		1.0	159	5.0
WBC-2	890614	1130	6.19	244	8.26	126.0	153	2	0.20	27.1	14.5	5.8	1.50		1.0	161	5.0
WBC-2	890718	0950	6.50	248	8.24	129.0	143	2	0.30	27.2	14.7	6.8	1.70		1.0	162	5.0
WBC-2	890813	1015	6.34	237	8.30	125.0	160	5	0.36	25.6	14.8	6.7	1.50		0.5	133	3.2
WBC-2	890919	0945	6.50	240	7.75	126.0	131	2	0.10	25.9	16.4	6.2	2.09		1.0	161	5.0
	Dry Beaver Creek near Sedona																
DBC-1	890222	1015	30.32	81	7.73	52.0	88	2	3.50	11.9	4.1	2.5	0.70		1.0	43	5.0
DBC-1	890322	0940	0.15	174	7.65	98.2	113	8	2.90	23.1	8.3	2.5	1.10		1.0	111	5.0
SAN PEDRO RIVER BASIN																	
	San Pedro River at Palominas																
SP1	890228	1340	4.94	539	8.3	218	360	5	4.4	69.9	10.6	36.9	3.1	0.5	0.5	195	84.4
SP1(QC)	890228	1350	4.94	530	8.4	232	336	22	4.5	74.6	11.2	36	3	0.5	8	177	79.3
SP1	890425	1324	DRY														
SP1	890627	1030	DRY														
SP1	890829	1330	0.07	745	8.4	297	520	5	0.54	97.2	13.2	51.1	5.3	0.5	8	219	160
SP1(QC)	890829	1330	0.07	673	8.4	299	510	5	0.55	97.7	13.3	51.2	5.2	0.5	8	220	170

Site ID	Date (yymmdd)	Time (hrs)	Cl (mg/l)	Alk, T (mg/l)	Alk, P (mg/l)	F (mg/l)	TKN (mgN/l)	NO2+NO3 (mgN/l)	Ammonia (mgN/l)	Ammonia Un-ionized	TP (mgP/l)	Bacteria FC (cfu/100ml)	Bacteria FS (cfu/100ml)	Trace Metals Ag, T (ug/l)	Trace Metals Ag, D (ug/l)
VERDE RIVER BASIN															
	Bitter Creek near Clarkdale														
BTC-1	890418	1640	66.6	197	1.0	0.39	0.16	0.89	0.1 K	0.009	0.05 K			1 K	
BTC-1	890516	1640	59.4	221	1.0	0.36	0.05	0.57	0.1 K	0.010	0.05 K			1 K	
BTC-1	890613	1545	53.8	214	1.0	0.40	0.21	0.18	0.1 K	0.018	0.05 K	102	798	1 K	
BTC-1	890718	1420	46.2	196	4.0		0.33	0.10 K			0.07			1 K	
BTC-1	890813	1515	52.0	212	7.0	0.35	0.30	0.24	0.05 K	0.006	0.17			10 K	10 K
BTC-1	890919	1500	48.0	215	1.0	0.36		0.29	0.05 K	0.006				1 K	
	Wet Beaver Creek at Camp Verde														
WBC-1	890117	1520	15.2	236	3.7	0.20	0.05 K	0.10 K	0.1 K	0.003	0.05 K			1 K	
WBC-1	890222	1315	6.8	132	1.0	0.20 K	0.44	0.10 K	0.1 K	0.006	0.07			1 K	1 K
WBC-1	890322	1200	12.7	218	1.0	0.20 K	0.16	0.10 K	0.1 K	0.009	0.10			1 K	
WBC-1	890418	1300	12.9	246	10.0	0.20 K	0.18	0.10 K	0.1 K	0.017	0.07			1 K	
WBC-1	890516	1210	16.8	247	4.0	0.20	0.13	0.10 K	0.1 K	0.019	0.15			1 K	
WBC-1	890614	0940	16.2	242	1.0	0.22	0.09	0.10 K	0.1 K	0.009	0.12	84	432	1 K	
WBC-1	890718	1110	15.1	249	7.0	0.23	0.46	0.10 K	0.1 K	0.000	0.13			1 K	
WBC-1	890813	1145	15.0	220	6.0	0.18	0.20	0.06 K	0.05 K	0.007	0.09			10 K	10 K
WBC-1	890919	1100	10.0	255	1.0	0.21		0.10 K	0.1 K	0.005				1 K	
	Wet Beaver Creek near Rimrock at USGS Gage														
WBC-2	890117	1620	4.8	125	1.0	0.20 K	0.12	0.10 K	0.1 K	0.003	0.05 K			1 K	
WBC-2	890222	1145	2.0	54	1.0	0.20 K	0.44	0.10 K	0.1 K	0.001	0.11			1 K	1 K
WBC-2(QC)	890222	1145	6.9	129	1.0	0.20	0.44	0.10 K	0.1 K	0.001	0.24			1 K	1 K
WBC-2	890322	1040	2.7	119	1.0	0.20 K	0.09	0.10 K	0.1 K	0.008	0.05 K			1 K	
WBC-2	890418	1100	0.5	126	1.0	0.20 K	0.08	0.11	0.1 K	0.004	0.05 K			1 K	
WBC-2	890516	1400	4.2	129	1.0	0.20 K	0.05	0.10 K	0.1 K	0.008	0.06			1 K	
WBC-2(QC)	890614	1130	3.1	130	1.0	0.20 K	0.07	0.10 K	0.1 K	0.016	0.10			1 K	
WBC-2	890614	1130	3.2	132	1.0	0.20 K	0.05	0.10 K	0.1 K	0.016	0.11	4	447	1 K	
WBC-2	890718	0950	5.0	133	1.0	0.22	0.14	0.11	0.1 K	0.005	0.06			1 K	
WBC-2	890813	1015	2.8	133	0.5	0.08	0.10	0.06 K	0.05 K	0.003	0.09			10 K	10 K
WBC-2	890919	0945	4.0	132	1.0	0.20 K		0.01 K	0.1 K	0.004				1 K	
	Dry Beaver Creek near Sedona														
DBC-1	890222	1015	1.6	35	1.0	0.20 K	0.23	0.10 K	0.1 K	0.001	0.09			1 K	1 K
DBC-1	890322	0940	0.5	91	1.0	0.20 K	0.24	0.10 K	0.1 K	0.004	0.05 K			1 K	
SAN PEDRO RIVER BASIN															
	San Pedro River at Palominas														
SP1	890228	1340	8.6	195	0.5	0.32	2.2	0.52	0.03 K	0.003	0.04			10 K	10 K
SP1(QC)	890228	1350	8.7	185	4	0.33	2.5	0.53	0.03 K	0.003	0.04			10 K	10 K
SP1	890425	1324								0.000					
SP1	890627	1030								0.000					
SP1	890829	1330	12	227	4	0.3	0.1	0.26	0.06	0.008	0.05 K	300	60	10 K	
SP1(QC)	890829	1330	12.3	228	4	0.3	0.2	0.4	0.28	0.037	0.05 K	34	80	10 K	

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	As, T (ug/l)	As, D (ug/l)	Ba, T (ug/l)	Ba, D (ug/l)	B, T (ug/l)	B, D (ug/l)	Be, T (ug/l)	Be, D (ug/l)	Cd, T (ug/l)	Cd, D (ug/l)	Cr, T (ug/l)	Cr, D (ug/l)	Cu, T (ug/l)
VERDE RIVER BASIN															
	Bitter Creek near Clarkdale														
BTC-1	890418	1640	10 K		100 K		210		0.5 K		1 K		14		10 K
BTC-1	890516	1640	10 K		100 K		200		0.5 K		1 K		10 K		10 K
BTC-1	890613	1545	10 K		100 K		270		0.5 K		1 K		10 K		10 K
BTC-1	890718	1420	10 K		100 K		150		0.5 K		0.5 K		10 K		13
BTC-1	890813	1515	5	6	30	40	160	140	0.5 K	5 K	5 K	5 K	20 K	20 K	10 K
BTC-1	890919	1500	10 K		100 K		150		0.5 K		1 K		10 K		10 K
	Wet Beaver Creek at Camp Verde														
WBC-1	890117	1520	13		150		140		0.5 K		1 K		10 K		10 K
WBC-1	890222	1315	10 K	10 K	140	110	170	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
WBC-1	890322	1200	13		500 K		160		0.5 K		1 K		10 K		10 K
WBC-1	890418	1300	12		150		150		0.5 K		1 K		10 K		10 K
WBC-1	890516	1210	13		150		170		0.5 K		13		10 K		10 K
WBC-1	890614	0940	14		150		230		0.5 K		1 K		10 K		10 K
WBC-1	890718	1110	17		160		110		0.5 K		0.5 K		10 K		16
WBC-1	890813	1145	16	16	140	140	100 K	100 K	5 K	5 K	5 K	5 K	20 K	20 K	10 K
WBC-1	890919	1100	14		140		100		0.5 K		1 K		10 K		10 K
	Wet Beaver Creek near Rimrock at USGS Gage														
WBC-2	890117	1620	11		330		100 K		0.5 K		1 K		10 K		10 K
WBC-2	890222	1145	10 K	10 K	150	130	100	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
WBC-2(QC)	890222	1145	10 K	10 K	140	110	160	100 K	0.5 K	0.5 K	1.3	1 K	10 K	10 K	100
WBC-2	890322	1040	10 K		500 K		100 K		0.5 K		1 K		10 K		10 K
WBC-2	890418	1100	10 K		280		100 K		0.5 K		1 K		10 K		10 K
WBC-2	890516	1400	10 K		280		100		0.5 K		1 K		10 K		10 K
WBC-2(QC)	890614	1130			300		100		0.5 K		1 K		10 K		10 K
WBC-2	890614	1130	11		300		100 K		0.5 K		1 K		10 K		10 K
WBC-2	890718	0950	13		310		100 K		0.5 K		0.5 K		10 K		14
WBC-2	890813	1015	10	11	270	290	100 K	100 K	5 K	5 K	5 K	5 K	20 K	20 K	10 K
WBC-2	890919	0945	12		300		50 K		0.5 K		1 K		10 K		10 K
	Dry Beaver Creek near Sedona														
DBC-1	890222	1015	10 K	10 K	100 K	100 K	100 K	100 K	0.5 K	0.5 K	1 K	1 K	10 K	10 K	10 K
DBC-1	890322	0940	10 K		500 K		100 K		0.5 K		1 K		10 K		10 K
SAN PEDRO RIVER BASIN															
	San Pedro River at Palominas														
SP1	890228	1340	5 K	5 K	90	80	200 K	200 K	5 K	5 K	3 K	3 K	20 K	20 K	19
SP1(QC)	890228	1350	5 K	5 K	90	70	200 K	200 K	5 K	5 K	3	3 K	20 K	20 K	27
SP1	890425	1324													
SP1	890627	1030													
SP1	890829	1330	5 K		90		100 K		5 K		5 K		20 K		17
SP1(QC)	890829	1330	5 K		100		100 K		5 K		5 K		20 K		19

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	Cu, D (ug/l)	Fe, T (ug/l)	Fe, D (ug/l)	Hg, T (ug/l)	Hg, D (ug/l)	Mn, T (ug/l)	Mn, D (ug/l)	Ni, T (ug/l)	Ni, D (ug/l)	Pb, T (ug/l)	Pb, D (ug/l)	Sb, T (ug/l)	Sb, D (ug/l)
VERDE RIVER BASIN															
	Bitter Creek near Clarkdale														
BTC-1	890418	1640		100 K		0.5 K		50 K		50 K		10 K		5 K	
BTC-1	890516	1640		100 K		0.5 K		50 K		50 K		10 K		5 K	
BTC-1	890613	1545		100 K		0.5 K		50 K		50 K		10 K		5 K	
BTC-1	890718	1420		120		0.5 K		50 K		50 K		10 K		5 K	
BTC-1	890813	1515	10 K	22	25	0.2 K	0.2 K	10 K	10 K	30 K	30 K	2	2 K	10 K	10 K
BTC-1	890919	1500		111		0.5 K		50 K		50 K		10 K		5 K	
	Wet Beaver Creek at Camp Verde														
WBC-1	890117	1520		130		0.5 K		50 K		50 K		10 K		5 K	
WBC-1	890222	1315	10 K	400	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
WBC-1	890322	1200		230		0.5 K		50 K		50 K		10 K		5 K	
WBC-1	890418	1300		900		0.5 K		50 K		50 K		10 K		5 K	
WBC-1	890516	1210		680		0.5 K		50 K		50 K		10 K		5 K	
WBC-1	890614	0940		570		0.5 K		50 K		50 K		10 K		5 K	
WBC-1	890718	1110		920		0.5 K		50 K		50 K		10 K		5 K	
WBC-1	890813	1145	10 K	725	62	0.2 K	0.2 K	39	21	30 K	30 K	2 K	2 K	10 K	10 K
WBC-1	890919	1100		670		0.5 K		50 K		50 K		10 K		5 K	
	Wet Beaver Creek near Rimrock at USGS Gage														
WBC-2	890117	1620		100 K		0.5 K		50 K		50 K		10 K		5 K	
WBC-2	890222	1145	10 K	820	200	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
WBC-2(QC)	890222	1145	10 K	310	100 K	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
WBC-2	890322	1040		100 K		0.5 K		50 K		50 K		10 K		5 K	
WBC-2	890418	1100		100 K		0.5 K		50 K		50 K		10 K		5 K	
WBC-2	890516	1400		100 K		0.5 K		50 K		50 K		10 K		5 K	
WBC-2(QC)	890614	1130		100 K		0.5 K		50 K		50 K		10 K		5 K	
WBC-2	890614	1130		100 K		0.5 K		50 K		50 K		10 K		5 K	
WBC-2	890718	0950		100 K		1 K		50 K		50 K		10 K		5 K	
WBC-2	890813	1015	10 K	44	33	0.2 K	0.2 K	10 K	10 K	30 K	30 K	2 K	2 K	10 K	10 K
WBC-2	890919	0945		100		0.5 K		50 K		50 K		MI 100 K		5 K	
	Dry Beaver Creek near Sedona														
DBC-1	890222	1015	10 K	560	220	0.5 K	0.5 K	50 K	50 K	50 K	50 K	10 K	10 K	5 K	5 K
DBC-1	890322	0940		100 K		0.5 K		50 K		50 K		10 K		5 K	
SAN PEDRO RIVER BASIN															
	San Pedro River at Palominas														
SP1	890228	1340	25	243	40	0.2 K	0.2 K	18	10 K	30 K	30 K	2 K	2 K	10 K	10 K
SP1(QC)	890228	1350	21	284	57	0.2 K	0.2 K	20	10 K	30 K	30 K	2 K	2 K	10 K	10 K
SP1	890425	1324													
SP1	890627	1030													
SP1	890829	1330		14		BLV		57		30 K		2 K		10 K	
SP1(QC)	890829	1330		17		BLV		57		30 K		2 K		10 K	

Site ID	Date (yymmdd)	Time (hrs)	Se, T (ug/l)	Se, D (ug/l)	Sr, T (ug/l)	Sr, D (ug/l)	Tl, T (ug/l)	Tl, D (ug/l)	Zn, T (ug/l)	Zn, D (ug/l)	Lab	Remarks
VERDE RIVER BASIN												
	Bitter Creek near Clarkdale											
BTC-1	890418	1640	5 K				5 K		50 K		ADHS	
BTC-1	890516	1640	6				5 K		50 K		ADHS	
BTC-1	890613	1545	5				5 K		50 K		ADHS	
BTC-1	890718	1420	5 K				5 K		50 K		ADHS	
BTC-1	890813	1515	5 K	5 K			5 K	5 K	10 K	10 K	ATI	
BTC-1	890919	1500	5 K				5 K		50 K		ADHS	Holding times exceeded for TKN, Sulfate,TP
	Wet Beaver Creek at Camp Verde											
WBC-1	890117	1520	5 K				5 K		50 K		ADHS	
WBC-1	890222	1315	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
WBC-1	890322	1200	5 K				5 K		50 K		ADHS	
WBC-1	890418	1300	5 K				5 K		50 K		ADHS	
WBC-1	890516	1210	5 K				5 K		50 K		ADHS	
WBC-1	890614	0940	5 K				5 K		50 K		ADHS	
WBC-1	890718	1110	5 K				5 K		50 K		ADHS	
WBC-1	890813	1145	5 K	5 K			5 K	5 K	10 K	66	ATI	
WBC-1	890919	1100	5 K				5 K		50 K		ADHS	
	Wet Beaver Creek near Rimrock at USGS Gage											
WBC-2	890117	1620	5 K				5 K		50 K		ADHS	Discharge from USGS
WBC-2	890222	1145	5 K	5 K			5 K	5 K	80		ADHS	Discharge from USGS
WBC-2(QC)	890222	1145	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	Discharge from USGS
WBC-2	890322	1040	5 K				5 K		50 K		ADHS	Discharge from USGS
WBC-2	890418	1100	5 K				5 K		50 K		ADHS	Discharge from USGS
WBC-2	890516	1400	5 K				5 K		50 K		ADHS	Discharge from USGS
WBC-2(QC)	890614	1130	5 K				5 K		50 K		ADHS	
WBC-2	890614	1130	5 K				5 K		5 K		ADHS	Discharge from USGS
WBC-2	890718	0950	5 K				5 K		50 K		ADHS	
WBC-2	890813	1015	5 K	5 K			5 K	5 K	10 K	10 K	ATI	
WBC-2	890919	0945	5 K				5 K		50 K		ADHS	Holding times exceeded for TKN, TP
	Dry Beaver Creek near Sedona											
DBC-1	890222	1015	5 K	5 K			5 K	5 K	50 K	50 K	ADHS	
DBC-1	890322	0940	5 K				5 K		50 K		ADHS	
SAN PEDRO RIVER BASIN												
	San Pedro River at Palominas											
SP1	890228	1340	5 K	5 K	480	490	5 K	5 K	10 K	18	ATI,TUR	
SP1(QC)	890228	1350	5 K	5 K	470	450	5 K	5 K	12	10 K	ATI,TUR	
SP1	890425	1324										
SP1	890627	1030										
SP1	890829	1330	5 K		510		5 K		10 K		ATI,TUR	
SP1(QC)	890829	1330	5 K		530		5 K		10 K		ATI,TUR	

Site ID	Date (yymmdd)	Time (hrs)	No.	STORET (#)	Basin	HUC (#)	Agency	Air (oC)	H2O (oC)	DO (mg/O2/l)	Sat. (%)	Fld EC (uS/cm)	Fld pH (SU)	Staff (ft)	Width (ft)	Depth avg/ft	Velocity avg/fps
								Field Parameters									
SAN PEDRO RIVER BASIN																	
	San Pedro River 0.8 mi. south of Hwy 80																
SP5	890228	1630		500000000014610	SPR	15050202	ADEQ	21.0	19.0	7.70	94.5%	825	8.15		40.30	0.30	1.20
SP5	890426	0915		500000000014610	SPR	15050202	ADEQ	16.0	18.0	6.80	81.8%	749	7.88		34.40	0.20	0.60
SP5	890627	1330		500000000014610	SPR	15050202	ADEQ	32.0	30.0	9.45	142.4%	710	6.94		10.60	0.20	0.70
SP5	890830	0910		500000000014610	SPR	15050202	ADEQ	25.0	23.0	7.50	99.6%	520	8.51		8.90	0.25	0.83
	San Pedro River near Hwy 80 Bridge																
SP2.5	890228	1735		500000000014480	SPR	15050202	ADEQ	17.0	17.2	7.10	83.3%	512	8.13		38.20	0.20	1.00
SP2	890426	1030		500000000014480	SPR	15050202	ADEQ	21.0	20.8	6.04	76.8%	853	8.15		35.10	0.20	0.80
SP2(QC)	890426	1030	(QC)	500000000014480	SPR	15050202	ADEQ	21.0	20.8	6.04	76.8%	853	8.15		35.10	0.20	0.80
SP2	890627	1415		500000000014480	SPR	15050202	ADEQ	34.0	30.5	10.4	149.2%	882	7.23		6.50	0.20	0.60
SP2	890830	1000		500000000014480	SPR	15050202	ADEQ	27.0	25.0	6.20	85.5%	500	8.39		12.60	0.18	0.52
SANTA CRUZ RIVER BASIN																	
	Santa Cruz River at International Boundary																
SC5	890124	1500		800000000030550	SCR	15050301	ADEQ	14.5	15.0	8.30	95.0%	390	8		17.00	0.30	0.90
SC5	890329	1355		800000000030550	SCR	15050301	ADEQ	26.0	24.0	7.10	97.2%	434	7.35		7.70	0.20	0.70
SC5(QC)	890329	1355	(QC)	800000000030550	SCR	15050301	ADEQ	26.0	24.0	7.10	97.2%	434	7.35		7.70	0.20	0.70
SC5	890522	1115		800000000030550	SCR	15050301	ADEQ	34.0	28.0	6.55	96.4%	451	7.66		4.00	0.20	0.70
SC5	890724	1115		800000000030550	SCR	15050301	ADEQ										
SC5	890925	1030		800000000030550	SCR	15050301	ADEQ										
	Santa Cruz River at Rio Rico Bridge																
SC2	890124	1020		800000000028170	SCR	15050301	ADEQ	16.0	12.0	8.80	93.0%	628	7.97		16.80	0.60	1.60
SC2	890329	1045		800000000028170	SCR	15050301	ADEQ	22.0	21.3	7.54	96.8%	706	8.25		15.50	0.50	1.80
SC2	890522	0850		800000000028170	SCR	15050301	ADEQ	29.0	22.5	5.42	71.3%	756	7.96		14.50	0.40	1.50
SC2	890724	0845		800000000028170	SCR	15050301	ADEQ	27.5	26.5	4.50	63.8%	810	7.61		10.40	0.52	1.51
SC2	890925	0830		800000000028170	SCR	15050301	ADEQ	23.0	21.5	3.02	39.0%	535	7.81		14.80	0.51	1.64
	Santa Cruz River at Cortaro Road Bridge																
SC1	890125	1400		800000000016960	SCR	15050301	ADEQ	15.5	22.1	6.80	84.0%	572	7.31		60.00	0.80	1.60
SC1(QC)	890125	1400	(QC)	800000000016960	SCR	15050301	ADEQ	15.5	22.1	6.80	84.0%	572	7.31		60.00	0.80	1.60
SC1	890329	0815		800000000016960	SCR	15050301	ADEQ	16.0	19.0	6.15	72.7%	791	7.8		39.70	0.40	1.60
SC1	890523	1500		800000000016960	SCR	15050301	ADEQ	39.0	30.9	5.65	83.0%	905	7.01		50.00	0.80	3.00
SC1	890725	1330		800000000016960	SCR	15050301	ADEQ	36.0	32.5	2.52	37.9%	827	7.25		56.00	0.60	1.76
SC1	890924	1345		800000000016960	SCR	15050301	ADEQ	35.0	33.5	4.30	65.8%	765	7.4		26.30	0.98	1.75
	East Nogales Wash at Morley Ave. Tunnel																
SC4	890124	1315		801005000001030	SCR	15050301	ADEQ	16.0	15.0	6.20	72.0%	518	8.01		6.00	0.20	2.00
SC4	890329	1300		801005000001030	SCR	15050301	ADEQ	27.0	22.0	6.80	90.7%	530	7.88		7.00	0.30	1.00
SC4	890522	1000		801005000001030	SCR	15050301	ADEQ	33.0	22.0	5.50	73.3%	557	8.16				
SC4(QC)	890522	1000	(QC)	801005000001030	SCR	15050301	ADEQ	33.0	22.0	5.50	73.3%	557	8.16				
SC4	890724	1015		801005000001030	SCR	15050301	ADEQ	30.5	26.0	4.65	66.8%	510	8.53		3.00	0.25	1.50
SC4(QC)	890724	1015	(QC)	801005000001030	SCR	15050301	ADEQ	30.5	26.0	4.65	66.8%	510	8.53		3.00	0.25	1.50
SC4	890925	0945		801005000001030	SCR	15050301	ADEQ	30.0	25.0	5.33	75.2%	570	8.55		6.00	0.40	1.00

Site ID	Date (yymmdd)	Time (hrs)	Discharge (cfs)	Lab EC (uS/cm)	Lab pH (SU)	Hardness EDTA (mg/l)	TDS Evap (mg/l)	TSS (mg/l)	Turbidity (NTU)	Cations Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	Anions OH (mg/l)	CO3 (mg/l)	HCO3 (mg/l)	SO4 (mg/l)
SAN PEDRO RIVER BASIN																	
	San Pedro River 0.8 mi. south of Hwy 80																
SP5	890228	1630	8.22	809	8.3	293	536	20	7.1	85.8	19.1	70.2	3.8	0.5	0.5	230	123
SP5	890426	0915	3.28	763	8.4	210	500	10	2.8	60.7	14.2	81	3.3	0.5	10	243	135
SP5	890627	1330	0.99	742	8.3	201	480	20	4.5	53.5	16.3	93	4.3	0.5	0.5	201	155
SP5	890830	0910	1.73	676	8.5	224	450	40	6.4	64.7	15.1	69.9	4.2	5	10	212	140
	San Pedro River near Hwy 80 Bridge																
SP2.5	890228	1735	8.02	839	8.4	297	576	16	6.4	87	19.4	73.2	3.6	0.5	8	240	129
SP2	890426	1030	4.64	868	8.3	243	590	10	2.5	70.9	16	83	3.7	0.5	0.5	249	132
SP2(QC)	890426	1030	4.64	873	8.3	287	570	10	2.5	83.7	19	83	3.7	0.5	0.5	250	140
SP2	890627	1415	0.63	918	8.1	242	610	30	3.4	66.7	18.4	100	4.2	0.5	0.5	200	159
SP2	890830	1000	1.26	776	8.3	261	530	30	9	76.2	17.2	79.6	4.4	0.5	0.5	235	140
SANTA CRUZ RIVER BASIN																	
	Santa Cruz River at International Boundary																
SC5	890124	1500	3.89	414	8.2	159	294	34	7.5	53.6	6.19	27.2	2.4	0.5	0.5	166	48
SC5	890329	1355	0.87	426	8.1	167	270	5	1	57	5.94	26.7	2.6	0.5	0.5	172	45
SC5(QC)	890329	1355	0.87	430	8.1	151	274	5	0.5	51.1	5.61	27.1	2.5	0.5	0.5	171	46
SC5	890522	1115	0.70	433	8.1	169	250	5	0.57	57.8	5.9	31.6	3.3	0.5	0.5	176	39
SC5	890724	1115	DRY														
SC5	890925	1030	DRY														
	Santa Cruz River at Rio Rico Bridge																
SC2	890124	1020	12.96	746	7.7	183	444	40	14	57.7	9.54	67.2	8.9	0.5	0.5	265	70
SC2	890329	1045	12.07	797	7.5	167	472	60	28	52.2	8.95	67.3	10.2	0.5	0.5	277	65
SC2	890522	0850	8.93	742	7.4	195	420	30	28	61.3	10.2	81.4	12.3	0.5	0.5	236	65
SC2	890724	0845	7.21	862	7.5	181	520	60	31	57.4	9.26	92.5	13.2	0.5	0.5	290	67.4
SC2	890925	0830	12.92	631	7.6	181	430	40	18	56.5	9.8	72.9	10.3	0.5	0.5	246	50
	Santa Cruz River at Cortaro Road Bridge																
SC1	890125	1400	59.97	854	7.5	143	526	66	28	47.4	5.88	121	12.1	0.5	0.5	234	74
SC1(QC)	890125	1400	59.97	904	7.5	140	486	62	25	46.5	5.84	108	11.8	0.5	0.5	210	70
SC1	890329	0815	20.69	968	7.3	143	546	34	24	46.5	6.59	101	10.2	0.5	0.5	191	102
SC1	890523	1500	112.50	887	7.4	153	530	20	11	50.4	6.52	115	12.1	0.5	0.5	211	80
SC1	890725	1330	53.54	849	7.6	141	510	30	17.5	46.6	5.96	113	11.8	0.5	0.5	206	82
SC1	890924	1345	54.14	792	7.6	136	460	50	16	44.9	5.74	104	11.6	0.5	0.5	221	40
	East Nogales Wash at Morley Ave. Tunnel																
SC4	890124	1315	3.00	639	8	245	404	12	7	73.6	14.8	44.7	5.7	0.5	0.5	244	41
SC4	890329	1300	2.30	636	8.1	210	398	5	2.1	62.2	13.4	44.2	6.2	0.5	0.5	230	48
SC4	890522	1000		591	8.3	237	450	20	0.77	72.1	13.8	47.4	6.6	0.5	0.5	233	40
SC4(QC)	890522	1000		602	8.30	244	370	5	0.71	73.7	14.6	45.6	6.3	0.5	0.5	233	40
SC4	890724	1015	1.12	576	8.3	212	360	5	6.1	66.2	11.3	46.9	7.1	0.5	0.5	223	46.7
SC4(QC)	890724	1015	1.12	579	8.3	217	380	5	6	68	11.4	46	7.1	0.5	0.5	221	46.5
SC4	890925	0945	2.40	623	8.4	249	400	5	2.4	75.9	14.5	49.9	6.6	0.5	8	230	50

Site ID	Date (yymmdd)	Time (hrs)	Cl (mg/l)	Alk, T (mg/l)	Alk, P (mg/l)	F (mg/l)	TKN (mgN/l)	NO2+NO3 (mgN/l)	Ammonia (mgN/l)	Ammonia Un-ionized	TP (mgP/l)	Bacteria FC (cfu/100ml)	Bacteria FS (cfu/100ml)	Trace Metals Ag, T (ug/l)	Trace Metals Ag, D (ug/l)
SAN PEDRO RIVER BASIN															
	San Pedro River 0.8 mi. south of Hwy 80														
SP5	890228	1630	15.5	230	0.5	1.77	2.9	15.1	1.1	0.066	0.04			10 K	10 K
SP5	890426	0915	18	253	5	1.6	0.6	1.95	0.33	0.010	0.05 K	23	100	10 K	
SP5	890627	1330	19.3	201	0.5	1.8	0.6	1.56	0.69	0.006	0.05 K			10 K	10 K
SP5	890830	0910	14.8	222	5	1.32	0.5	0.81	0.05	0.008	0.05 K	230	160	10 K	
	San Pedro River near Hwy 80 Bridge														
SP2.5	890228	1735	17.1	248	4	1.71	4.3	14.6	1.1	0.056	0.05			10 K	10 K
SP2	890426	1030	18.8	249	0.5	1.6	1.5	14.3	0.88	0.060	0.05 K	130	90	10 K	
SP2(QC)	890426	1030	18.9	250	0.5	1.6	1.6	16.6	0.85	0.058	0.05 K	50	210	10 K	
SP2	890627	1415	20.4	200	0.5	1.8	1.4	22.7	1.6	0.027	0.05 K			10 K	10 K
SP2	890830	1000	16.5	235	0.5	1.51	1.3	11.3	0.06	0.009	0.05 K	500	300	10 K	
SANTA CRUZ RIVER BASIN															
	Santa Cruz River at International Boundary														
SC5	890124	1500	9.5	166	0.5	0.42	1.4	0.06 K			0.26			10 K	
SC5	890329	1355	9.5	172	0.5	0.36	0.3	0.06 K	0.03	0.000	0.21	2400		10 K	
SC5(QC)	890329	1355	9.39	171	0.5	0.44	0.5	0.06 K	0.03	0.000	0.17	34		10 K	
SC5	890522	1115	9	176	0.5	0.68	0.2	0.06 K	0.16	0.006	0.13			10 K	10 K
SC5	890724	1115													
SC5	890925	1030													
	Santa Cruz River at Rio Rico Bridge														
SC2	890124	1020	41.4	265	0.5	0.56	22.5	0.09			5.66			10 K	
SC2	890329	1045	46.8	277	0.5	0.58	27.6	0.15	12	1.050	2.03	2400		10 K	
SC2	890522	0850	49	236	0.5	0.75	17	0.54	12	0.606	6.6			10 K	10 K
SC2	890724	0845	56	290	0.5	0.57	8.4	0.22	15.1	0.460	8.6	8000	5200	10 K	
SC2	890925	0830	44	246	0.5	0.58	9.3	0.27	13.84	0.467	6.1			10 K	10 K
	Santa Cruz River at Cortaro Road Bridge														
SC1	890125	1400	89.4	234	0.5	0.4	25.1	1.74			5.34			10 K	
SC1(QC)	890125	1400	88.9	210	0.5	0.37	25.8	1.87			5.17			10 K	
SC1	890329	0815	93.2	191	0.5	0.49	20.1	3.39	11.5	0.318	2.07	300	40	10 K	
SC1	890523	1500	94	211	0.5	0.51	17.4	3.14	12.9	0.136	6.1			10 K	10 K
SC1	890725	1330	80	206	0.5	0.54	10.4	2.78	12.1	0.245	7.7	2200	600	10 K	
SC1	890924	1345	74	221	0.5	0.35	7.7	2.72	13.57	0.412	6.4			10 K	10 K
	East Nogales Wash at Morley Ave. Tunnel														
SC4	890124	1315	30.6	244	0.5	0.34	3.9	3			1.11			10 K	
SC4	890329	1300	31.4	230	0.5	0.37	0.7	3.42	0.33	0.013	0.44	2400		10 K	
SC4	890522	1000	31	233	0.5	0.39	0.4	3.31	0.53	0.040	0.44			10 K	10 K
SC4(QC)	890522	1000	30	233	0.5	0.38	0.2	3.34	0.08	0.006	0.44			10 K	10 K
SC4	890724	1015	25	223	0.5	0.35	0.5	1.62	0.17	0.035	0.54	90000	44000	10 K	
SC4(QC)	890724	1015	26	221	0.5	0.35	0.5	1.63	0.17	0.035	0.52			10 K	
SC4	890925	0945	34	238	0.5	0.32	0.3	2.5	0.08	0.016	0.4			10 K	10 K

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	As, T (ug/l)	As, D (ug/l)	Ba, T (ug/l)	Ba, D (ug/l)	B, T (ug/l)	B, D (ug/l)	Be, T (ug/l)	Be, D (ug/l)	Cd, T (ug/l)	Cd, D (ug/l)	Cr, T (ug/l)	Cr, D (ug/l)	Cu, T (ug/l)
SAN PEDRO RIVER BASIN															
	San Pedro River 0.8 mi. south of Hwy 80														
SP5	890228	1630	5 K	5 K	110	110	200 K	200 K	5 K	5 K	5	5	20 K	20 K	18
SP5	890426	0915	5 K		80		140		5 K		3 K		20 K		16
SP5	890627	1330	5 K	5 K	70	70	100 K	100 K	5 K	5 K	6	5 K	20 K	20 K	14
SP5	890830	0910	5 K		110		100 K		5 K		5 K		20 K		16
	San Pedro River near Hwy 80 Bridge														
SP2.5	890228	1735	5 K	5 K	120	100	200 K	200 K	5 K	5 K	3	3 K	20 K	20 K	18
SP2	890426	1030	5 K		90		170		5 K		3 K		20 K		13
SP2(QC)	890426	1030	5 K		90		140		5 K		5		20 K		25
SP2	890627	1415	5 K	5 K	70	70	150	130	5 K	5 K	8	5 K	20 K	20 K	18
SP2	890830	1000	5 K		100		140		5 K		5 K		20 K		18
SANTA CRUZ RIVER BASIN															
	Santa Cruz River at International Boundary														
SC5	890124	1500	5 K		60		200 K		5 K		3 K		20 K		14
SC5	890329	1355	5 K		50		100 K		5 K		3 K		20 K		10 K
SC5(QC)	890329	1355	5		50		100 K		5 K		3 K		20 K		10 K
SC5	890522	1115	5 K	5 K	40	40	100 K	100 K	5 K	5 K	3 K	3 K	20 K	20 K	10 K
SC5	890724	1115													
SC5	890925	1030													
	Santa Cruz River at Rio Rico Bridge														
SC2	890124	1020	5 K		50		200 K		5 K		4		20 K		22
SC2	890329	1045	5 K		80		140		5 K		3 K		20 K		18
SC2	890522	0850	5 K	5 K	50	30	100 K	100 K	5 K	5 K	3 K	5 K	20 K	20 K	15
SC2	890724	0845	5 K		50		190		5 K		6		20 K		30
SC2	890925	0830	5 K	5 K	40	30	120	100 K	5 K	5 K	5 K	5 K	20 K	20 K	10 K
	Santa Cruz River at Cortaro Road Bridge														
SC1	890125	1400	5 K		50		200 K		5 K		3 K		20 K		29
SC1(QC)	890125	1400	5 K		60		200 K		5 K		4		20 K		28
SC1	890329	0815	5 K		60		330		5 K		3 K		20 K		24
SC1	890523	1500	5 K	5 K	40	40	180	160	5 K	5 K	5 K	3 K	20 K	20 K	18
SC1	890725	1330	5 K		50		400		5 K		5 K		20 K		24
SC1	890924	1345	5 K	5 K	50	40	220	200	5 K	5 K	5 K	5 K	20 K	20 K	40
	East Nogales Wash at Morley Ave. Tunnel														
SC4	890124	1315	5 K		90		200 K		5 K		3 K		20 K		13
SC4	890329	1300	5 K		90		100 K		5 K		3 K		20 K		12
SC4	890522	1000	5 K	5 K	90	80	100 K	100 K	5 K	5 K	3 K	3 K	20 K	20 K	10 K
SC4(QC)	890522	1000	5 K	5 K	80	80	100 K	100 K	5 K	5 K	3 K	3 K	20 K	20 K	10 K
SC4	890724	1015	5 K		70		130		5 K		5 K		20 K		10 K
SC4(QC)	890724	1015	5 K		70		100 K		5 K		6		20 K		16
SC4	890925	0945	5 K	5 K	90	90	100 K	100 K	5 K	5 K	6	5 K	20 K	20 K	26

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	Cu, D (ug/l)	Fe, T (ug/l)	Fe, D (ug/l)	Hg, T (ug/l)	Hg, D (ug/l)	Mn, T (ug/l)	Mn, D (ug/l)	Ni, T (ug/l)	Ni, D (ug/l)	Pb, T (ug/l)	Pb, D (ug/l)	Sb, T (ug/l)	Sb, D (ug/l)
SAN PEDRO RIVER BASIN															
	San Pedro River 0.8 mi. south of Hwy 80														
SP5	890228	1630	35	348	41	0.2 K	0.2 K	18	10 K	30 K	30 K	2 K	2 K	10 K	10 K
SP5	890426	0915		110		0.2 K		22		30 K		2 K		10 K	
SP5	890627	1330	10 K	55	10 K	0.2 K	BLV	22	13	30 K	30 K	2 K	2 K	10 K	10 K
SP5	890830	0910		273		BLV		15		30 K		2		10 K	
	San Pedro River near Hwy 80 Bridge														
SP2.5	890228	1735	19	261	12	0.2 K	0.2 K	20	10 K	30 K	30 K	2 K	2 K	10 K	10 K
SP2	890426	1030		83		0.2 K		15		30 K		MI 4 K		10 K	
SP2(QC)	890426	1030		132		0.2 K		18		37		2 K		10 K	
SP2	890627	1415	10 K	65	14	BLV	0.2 K	14	10	30	30 K	2 K	2 K	10 K	10 K
SP2	890830	1000		403		BLV		13		30 K		2		10 K	
SANTA CRUZ RIVER BASIN															
	Santa Cruz River at International Boundary														
SC5	890124	1500		506		0.2 K		126		30 K		4		20 K	
SC5	890329	1355		26		0.2 K		110		32		4		10 K	
SC5(QC)	890329	1355		25		0.2 K		106		30 K		2 K		10 K	
SC5	890522	1115	10 K	10 K	10 K	0.2 K	0.2 K	219	110	30 K	30 K	2 K	2 K	10 K	10 K
SC5	890724	1115													
SC5	890925	1030													
	Santa Cruz River at Rio Rico Bridge														
SC2	890124	1020		315		0.2 K		666		39		2 K		20 K	
SC2	890329	1045		435		0.2 K		502		51		2 K		10 K	
SC2	890522	0850	13	202	30	0.2 K	BLV	375	176	30 K	30 K	2 K	2 K	10 K	10 K
SC2	890724	0845		274		BLV		287		30 K		3		10 K	
SC2	890925	0830	10 K	206	29	BLV	BLV	464	424	40	30 K	2 K2	2 K	10 K	10 K
	Santa Cruz River at Cortaro Road Bridge														
SC1	890125	1400		825		0.2 K		50		30 K		4		20 K	
SC1(QC)	890125	1400		753		0.2 K		47		33		4		20 K	
SC1	890329	0815		708		0.2 K		59		30 K		2 K		10 K	
SC1	890523	1500	18	106	44	0.2 K	BLV	18	13	30 K	30 K	2 K	2 K	10 K	10 K
SC1	890725	1330		197		BLV		35		30 K		4		10 K	
SC1	890924	1345	14	417	11	BLV	BLV	33	30	30 K	30 K	2 K	2 K	10 K	10 K
	East Nogales Wash at Morley Ave. Tunnel														
SC4	890124	1315		240		0.2		527		30 K		4		20 K	
SC4	890329	1300		145		0.2 K		193		49		3		10 K	
SC4	890522	1000	10 K	22	10 K	0.2 K	0.2 K	17	10	30 K	30 K	2 K	2 K	10 K	10 K
SC4(QC)	890522	1000	10 K	16	10 K	0.2 K	0.2 K	16	10	30 K	30 K	2 K	2 K	10 K	10 K
SC4	890724	1015		266		0.5 K		35		30 K		21		10 K	
SC4(QC)	890724	1015		167		BLV		34		30 K		5		10 K	
SC4	890925	0945	10 K	116	10 K	BLV	BLV	10 K	10 K	30 K	30 K	2 K	2 K	10 K	10 K

Site ID	Date (yymmdd)	Time (hrs)	Se, T (ug/l)	Se, D (ug/l)	Sr, T (ug/l)	Sr, D (ug/l)	Tl, T (ug/l)	Tl, D (ug/l)	Zn, T (ug/l)	Zn, D (ug/l)	Lab	Remarks
SAN PEDRO RIVER BASIN												
	San Pedro River 0.8 mi. south of Hwy 80											
SP5	890228	1630	5 K	5 K	1510	1440	5 K	5 K	10 K	17	ATI,TUR	
SP5	890426	0915	5 K		1490		5 K		10 K		ATI,TUR	
SP5	890627	1330	5 K	5 K	1530	1320	5 K	5 K	10 K	10 K	ATI,TUR	
SP5	890830	0910	5 K		1200		5 K		10 K		ATI,TUR	
	San Pedro River near Hwy 80 Bridge											
SP2.5	890228	1735	5 K	5 K	1550	1480	5 K	5 K	10 K	10 K	ATI,TUR	
SP2	890426	1030	5 K		1720		5 K		10 K		ATI,TUR	
SP2(QC)	890426	1030	5 K		1680		5 K		10 K		ATI,TUR	
SP2	890627	1415	5 K	5 K	1890	1860	5 K	5 K	10 K	10 K	ATI,TUR	Ion balancing problem
SP2	890830	1000	5 K		1440		5 K		10 K		ATI,TUR	
SANTA CRUZ RIVER BASIN												
	Santa Cruz River at International Boundary											
SC5	890124	1500	5 K		280		5 K		25		ATI,TUR	
SC5	890329	1355	5 K		260		5 K		18		ATI,TUR	
SC5(QC)	890329	1355	5 K		270		5 K		10 K		ATI,TUR	
SC5	890522	1115	5 K	5 K	280	280	5 K	5 K	10 K	10 K	ATI,TUR	Lab difficulty balancing ions
SC5	890724	1115										
SC5	890925	1030										
	Santa Cruz River at Rio Rico Bridge											
SC2	890124	1020	5 K		300		5 K		63		ATI,TUR	
SC2	890329	1045	5 K		290		5 K		37		ATI,TUR	
SC2	890522	0850	5 K	5 K	310	260	5 K	5 K	35	10 K	ATI,TUR	Lab difficulty balancing ions, X-CONT,Cd(d),Hg(d)
SC2	890724	0845	2 K		260		5 K		21		ATI,TUR	Field turbidity=54.1 NTU
SC2	890925	0830	5 K	5 K	25	23	5 K	5 K	11	13	ATI	X-CONT Hg(D), Zn(D)
	Santa Cruz River at Cortaro Road Bridge											
SC1	890125	1400	5 K		360		5 K		65		ATI,TUR	
SC1(QC)	890125	1400	5 K		360		5 K		58		ATI,TUR	
SC1	890329	0815	5 K		410		5 K		52		ATI,TUR	
SC1	890523	1500	5 K	5 K	400	390	5 K	5 K	32	25	ATI,TUR	Lab difficulty balancing ions, X-CONT Hg(d)
SC1	890725	1330	5 K		380		5 K		34		ATI,TUR	Field turbidity=13.23 NTU
SC1	890924	1345	5 K	5 K	310	350	5 K	5 K	30	25	ATI	X-CONT Hg(D), Sr(D)
	East Nogales Wash at Morley Ave. Tunnel											
SC4	890124	1315	5 K		400		5 K		37		ATI,TUR	
SC4	890329	1300	5 K		380		5 K		30		ATI,TUR	
SC4	890522	1000	5 K	5 K	400	380	5 K	5 K	10 K	10 K	ATI,TUR	Lab difficulty balancing ions
SC4(QC)	890522	1000	5 K	5 K	390	380	5 K	5 K	10 K	10 K	ATI,TUR	Lab difficulty balancing ions
SC4	890724	1015	2 K		340		5 K		17		ATI,TUR	Field turbidity=9.40 NTU
SC4(QC)	890724	1015	2 K		340		5 K		25		ATI,TUR	Field turbidity=9.40 NTU
SC4	890925	0945	5 K	5 K	370	420	5 K	5 K	12	10 K	ATI	X-CONT Hg(D), Sr(D)

Site ID	Date (yymmdd)	Time (hrs)	No.	STORET (#)	Basin	HUC (#)	Agency	Air (oC)	H2O (oC)	DO (mg/O2/l)	Sat. (%)	Fld EC (uS/cm)	Fld pH (SU)	Staff (ft)	Width (ft)	Depth avg/ft	Velocity avg/fps
								Field Parameters									
SANTA CRUZ RIVER BASIN																	
SC4(QC)	890925	0945	(QC)	801005000001030	SCR	15050301	ADEQ	30.0	25.0	5.33	75.2%	570	8.55		6.00	0.40	1.00
	Sonoita Creek below Patagonia WWTP																
SC6	890124	1630		801500000002786	SCR	15050301	ADEQ	13.5	16.0	7.25	86.0%	871	7.32		14.60	0.30	1.20
SC6	890330	1340		801500000002786	SCR	15050301	ADEQ	30.0	21.0	6.00	78.4%	853	7.46		6.50	0.30	1.90
SC6	890522	1235		801500000002786	SCR	15050301	ADEQ	34.0	21.1	7.30	95.6%	810	7.2		6.80	0.30	1.20
SC6	890724	1215		801500000002786	SCR	15050301	ADEQ	27.0	19.0	6.58	82.6%	791	7.46		7.20	0.19	1.06
SC6	890925	1145		801500000002786	SCR	15050301	ADEQ	25.0	19.5	6.02	76.4%	778	7.32		7.60	0.17	0.53
	Cienega Creek at Marsh Station Road Bridge																
SC7	890125	0920		SC-SC7	SCR	15050301	ADEQ	5.0	13.0	9.50	103.0%	884	8.13		11.60	0.20	0.60
SC7	890330	1130		SC-SC7	SCR	15050301	ADEQ	26.0	19.0	8.70	106.8%	1017	8.08		7.50	0.30	1.30
SC7	890523	1110		SC-SC7	SCR	15050301	ADEQ	36.0	23.0	8.28	109.9%	988	8.15		5.80	0.30	0.90
SC7	890725	0950		SC-SC7	SCR	15050301	ADEQ	31.5	25.0	5.32	73.4%	950	7.53		5.40	0.16	1.16
SC7	890924	0930		SC-SC7	SCR	15050301	ADEQ	26.0	21.0	9.53	121.7%	864	8.3		5.80	0.16	0.74
	Cienega Creek at Tilted Bed Site																
SC8	890330	0940		806001002000649	SCR	15050301	ADEQ	20.0	18.5	9.05	109.9%	1026	8.02		4.80	0.20	0.50
SC8	890523	0955		806001002000649	SCR	15050301	ADEQ	31.5	26.0	7.50	105.3%	980	8.15		5.80	0.20	0.30
SC8(QC)	890523	0955	(QC)	806001002000649	SCR	15050301	ADEQ	31.5	26.0	7.50	105.3%	980	8.15		5.80	0.20	0.30
SC8	890725	0850		806001002000649	SCR	15050301	ADEQ	27.5	25.0	7.00	96.5%	970	8.04		2.90	0.21	0.70
SC8	890924	0815		806001002000649	SCR	15050301	ADEQ	20.5	18.5	9.22	111.9%	918	8.24		2.60	0.11	0.77
SC8(QC)	890924	0815	(QC)	806001002000649	SCR	15050301	ADEQ	20.5	18.5	9.22	111.9%	918	8.24		2.60	0.11	0.77
	Cienega Creek near Agua Verde Wash																
SC9	890523	1210		806001002000314	SCR	15050301	ADEQ	34.0	23.0	8.47	112.4%	946	7.54		5.50	0.20	0.50
SC9	890725	1045		806001002000314	SCR	15050301	ADEQ	31.5	24.0	4.50	60.9%	1000	7.63		3.50	0.13	0.60
SC9	890924	1020		806001002000314	SCR	15050301	ADEQ	28.0	21.5	7.60	98.0%	947	8.05		5.60	0.09	0.15
	Sabino Creek near Tucson																
SC10	890801	1200		806002034000722	SCR	15050301	ADEQ	33.5	24.0	7.80	100.9%	63	7.8	1.42			
	Tanque Verde Creek at Sabino Canyon Rd.																
SC11	890801	1600		806002000000335	SCR	15050301	ADEQ		30.5	6.60	95.9%	110	8.4		22.00	0.31	0.94
WHITEWATER DRAW BASIN																	
	Whitewater Draw at International Boundary																
WD1A	890228	1025		510000000002280	WWD	15080301	ADEQ	17.0	15.0	5.69	65.7%	3106	7.59		3.60	0.20	0.80
WD1A	890425	1030		510000000002280	WWD	15080301	ADEQ	27.0	17.8	6.60	80.9%	3071	7.83		5.40	0.10	0.60
WD1A	890627	0930		510000000002280	WWD	15080301	ADEQ	35.0	20.0	4.42	56.7%	3175	8.08		5.70	0.20	0.20
WD1A(QC)	890627	0930	(QC)	510000000002280	WWD	15080301	ADEQ	35.0	20.0	4.42	56.7%	3175	8.08		5.70	0.20	0.20
WD1A	890829	1110		510000000002280	WWD	15080301	ADEQ	33.0	22.5	6.32	85.0%	3066	7.75		6.40	0.24	0.31
	Whitewater Draw at Hwy 80 Bridge near Douglas																
WD1	890228	1125		510000000000240	WWD	15080301	ADEQ	15.5									
WD1	890425	1130		510000000000240	WWD	15080301	ADEQ										
WD1	890627	0910		510000000000240	WWD	15080301	ADEQ										
WD1	890829	1230		510000000000240	WWD	15080301	ADEQ										

Site ID	Date (yymmdd)	Time (hrs)	Discharge (cfs)	Lab EC (uS/cm)	Lab pH (SU)	Hardness EDTA (mg/l)	TDS Evap (mg/l)	TSS (mg/l)	Turbidity (NTU)	Cations Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	Anions OH (mg/l)	CO3 (mg/l)	HCO3 (mg/l)	SO4 (mg/l)
SANTA CRUZ RIVER BASIN																	
SC4(QC)	890925	0945	2.40														
	Sonoita Creek below Patagonia WWTP																
SC6	890124	1630	4.59	900	7.9	469	620	5	0.42	140	28.9	16.9	2.2	0.5	0.5	227	261
SC6	890330	1340	3.78	888	7.9	436	680	5	0.66	134	24.6	18.4	2.6	0.5	0.5	217	248
SC6	890522	1235	1.89	871	8	508	630	5	0.29	156	28.7	21	2.8	0.5	0.5	222	233
SC6	890724	1215	1.08	857	7.6	475	640	5	0.44	145	27.5	18	1.8	0.5	0.5	228	250
SC6	890925	1145	0.83	808	7.7	484	610	5	23	147	28.6	17.2	1.8	0.5	0.5	228	250
	Cienega Creek at Marsh Station Road Bridge																
SC7	890125	0920	1.80	1032	8.3	416	720	5	0.44	115	31.4	56.2	3.6	0.5	0.5	229	296
SC7	890330	1130	2.04	1030	8.3	392	760	4	0.36	107	30.3	56.7	3.8	0.5	0.5	224	308
SC7	890523	1110	1.11	1020	8.3	466	750	5	0.4	129	35	64.6	4.4	0.5	0.5	232	327
SC7	890725	0950	0.72	1050	8.3	455	740	5	4.9	130	31.7	67.8	4.8	0.5	0.5	238	320
SC7	890924	0930	0.67	970	8.2	453	710	5	0.48	126	33.2	65.1	4.3	0.5	0.5	222	350
	Cienega Creek at Tilted Bed Site																
SC8	890330	0940	0.38	1025	8	449	760	5	0.8	130	30.3	52.6	3.3	0.5	0.5	223	307
SC8	890523	0955	0.28	1010	8.1	502	710	5	0.52	116	34.6	59.6	3.8	0.5	0.5	222	298
SC8(QC)	890523	0955	0.28	982	8.1	520	740	5	0.5	116	35.4	59.4	3.9	0.5	0.5	220	325
SC8	890725	0850	0.36	1000	8.2	473	760	5	4.2	141	29.3	61.7	5.7	0.5	0.5	236	330
SC8	890924	0815	0.26	952	8.1	458	670	5	1.5	128	33.5	57.8	4	0.5	0.5	226	350
SC8(QC)	890924	0815	0.26	945	8	458	700	5	1.1	128	33.5	58.9	3.9	0.5	0.5	225	220
	Cienega Creek near Agua Verde Wash																
SC9	890523	1210	0.45	1010	8.2	476	690	5	0.19	135	33.7	70.8	4.8	0.5	0.5	212	326
SC9	890725	1045	0.22	1080	8.3	462	780	5	4.4	133	31.5	75.7	5.1	0.5	0.5	240	350
SC9	890924	1020	0.09	996	8	450	710	5	0.33	125	33.6	69.9	4.8	5	0.5	228	350
	Sabino Creek near Tucson																
SC10	890801	1200	26.00	59.7	7.4	23.5	70	10	9.3	6.87	1.54	4	1.3	0.5	0.5	22	10
	Tanque Verde Creek at Sabino Canyon Rd.																
SC11	890801	1600	6.26	99.9	7.6	35.4	90	5	4.8	11.2	1.8	6.6	2.1	0.5	0.5	32	13
WHITEWATER DRAW BASIN																	
	Whitewater Draw at International Boundary																
WD1A	890228	1025	0.53	3480	8.2	1170	2634	42	30	264	125	397	19.6	0.5	0.5	281	1140
WD1A	890425	1030	0.26	3400	8.2	911	2660	30	24	204	97.6	453	16.5	0.5	0.5	296	1110
WD1A	890627	0930	0.20	3590	8	1030	2730	20	5.5	231	111	492	15.2	0.5	0.5	299	1150
WD1A(QC)	890627	0930	0.20	3570	8	1020	2680	10	5	226	110	491	14.8	0.5	0.5	295	1140
WD1A	890829	1110	0.40	3190	8.2	1130	2760	60	35	259	118	463	36.3	0.5	0.5	292	1300
	Whitewater Draw at Hwy 80 Bridge near Douglas																
WD1	890228	1125	DRY														
WD1	890425	1130	DRY														
WD1	890627	0910	DRY														

Site ID	Date (yymmdd)	Time (hrs)	Cl (mg/l)	Alk, T (mg/l)	Alk, P (mg/l)	F (mg/l)	TKN (mgN/l)	NO2+NO3 (mgN/l)	Ammonia (mgN/l)	Ammonia Un-ionized	TP (mgP/l)	Bacteria FC (cfu/100ml)	Bacteria FS (cfu/100ml)	Trace Metals Ag, T (ug/l)	Trace Metals Ag, D (ug/l)
SANTA CRUZ RIVER BASIN															
SC4(QC)	890925	0945													10 K
	Sonoita Creek below Patagonia WWTP														
SC6	890124	1630	8.92	227	0.5	0.25	1.4	0.65			0.2			10 K	
SC6	890330	1340	10.8	217	0.5	0.25	0.4	0.68	0.09	0.001	0.38			10 K	
SC6	890522	1235	12	222	0.5	0.28	0.1	0.7	0.12	0.001	0.43			10 K	10 K
SC6	890724	1215	8.1	228	0.5	0.24	0.1	0.68	0.15	0.002	0.05	300	690	10 K	
SC6	890925	1145	12	228	0.5	0.2	0.1	0.77	0.03 K	0.000	0.05 K			10 K	10 K
	Cienega Creek at Marsh Station Road Bridge														
SC7	890125	0920	18.5	229	0.5	0.56	1	0.06 K			0.05 K			10 K	
SC7	890330	1130	17.8	224	0.5	0.72	0.4	0.06 K	0.04	0.002	0.05 K			10 K	
SC7	890523	1110	17.8	232	0.5	0.82	0.1 K	0.06 K	0.05	0.004	0.05 K			10 K	10 K
SC7	890725	0950	18	238	0.5	0.77	0.1 K	0.15	0.4	0.009	0.05 K	3000	1110	10 K	
SC7	890924	0930	17.2	222	0.5	0.71	0.1	0.08	0.03 K	0.003	0.05 K			10 K	10 K
	Cienega Creek at Tilted Bed Site														
SC8	890330	0940	12.9	223	0.5	0.77	0.4	0.19	0.07	0.003	0.05 K			10 K	
SC8	890523	0955	12.5	222	0.5	0.84	0.1	0.06 K	0.07	0.007	0.05 K			10 K	
SC8(QC)	890523	0955	12.8	220	0.5	0.88	0.1	0.06 K	0.09	0.009	0.05 K			10 K	
SC8	890725	0850	12	236	0.5	0.83	0.1	0.12	0.11	0.008	0.05 K	700	900	10 K	
SC8	890924	0815	11.6	226	0.5	0.74	0.1	0.23	0.03 K	0.002	0.05 K			10 K	
SC8(QC)	890924	0815	11.5	225	0.5	0.73	0.3	0.24	0.11	0.008	0.05 K			10 K	
	Cienega Creek near Agua Verde Wash														
SC9	890523	1210	18.8	212	0.5	0.73	0.1 K	0.06 K	0.06	0.001	0.05 K			10 K	
SC9	890725	1045	21	240	0.5	0.69	0.1 K	0.06 K	0.07	0.002	0.06	700	600	10 K	
SC9	890924	1020	18.4	228	0.5	0.71	0.1	0.14	0.03 K	0.002	0.05 K			10 K	
	Sabino Creek near Tucson														
SC10	890801	1200	2	22	0.5	0.12	0.5	0.06 K	0.07	0.003	0.11			10 K	
	Tanque Verde Creek at Sabino Canyon Rd.														
SC11	890801	1600	3.7	32	0.5	0.12	0.5	0.06 K	0.25	0.053	0.12			10 K	
WHITEWATER DRAW BASIN															
	Whitewater Draw at International Boundary														
WD1A	890228	1025	384	281	0.5	1.18	1.4	2.4	0.03	0.000	0.12			10 K	10 K
WD1A	890425	1030	433	296	0.5	1	0.4	2.39	0.04	0.001	0.06	230	270	10 K	
WD1A	890627	0930	420	299	0.5	1.1	0.1	2.07	0.12	0.007	0.06			10 K	10 K
WD1A(QC)	890627	0930	420	295	0.5	1.2	0.2	2.06	0.1	0.006	0.05			10 K	10 K
WD1A	890829	1110	380	292	0.5	1.06	0.2	1.63	0.06	0.002	0.07	300	640	10 K	
	Whitewater Draw at Hwy 80 Bridge near Douglas														
WD1	890228	1125													
WD1	890425	1130													
WD1	890627	0910													
WD1	890829	1230													

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	As, T (ug/l)	As, D (ug/l)	Ba, T (ug/l)	Ba, D (ug/l)	B, T (ug/l)	B, D (ug/l)	Be, T (ug/l)	Be, D (ug/l)	Cd, T (ug/l)	Cd, D (ug/l)	Cr, T (ug/l)	Cr, D (ug/l)	Cu, T (ug/l)
SANTA CRUZ RIVER BASIN															
SC4(QC)	890925	0945		5 K		90		100 K		5 K		5 K		20 K	
	Sonoita Creek below Patagonia WWTP														
SC6	890124	1630	5 K		60		200 K		5 K		5		20 K		12
SC6	890330	1340	5 K		80		100 K		5 K		3 K		20 K		10 K
SC6	890522	1235	5 K	5 K	60	60	100 K	100 K	5 K	5 K	5 K	5 K	20 K	20 K	10 K
SC6	890724	1215	5 K		50		100 K		5 K		5 K		20 K		10 K
SC6	890925	1145	5 K	5 K	40	40	100 K	100 K	5 K	5 K	5 K	5 K	20 K	20 K	22
	Cienega Creek at Marsh Station Road Bridge														
SC7	890125	0920	5 K		60		200 K		5 K		3 K		20 K		12
SC7	890330	1130	5 K		60		100 K		5 K		3 K		20 K		10 K
SC7	890523	1110	5 K	5 K	60	50	100 K	100 K	5 K	5 K	5 K	5 K	20 K	20 K	10 K
SC7	890725	0950	5 K		110		180		5 K		5 K		20 K		10 K
SC7	890924	0930	5 K	5 K	70	80	140	120	5 K	5 K	5 K	5 K	20 K	20 K	28
	Cienega Creek at Tilted Bed Site														
SC8	890330	0940	5 K		70		100 K		5 K		3 K		20 K		10 K
SC8	890523	0955	5 K		80		100 K		5 K		5 K		20 K		10 K
SC8(QC)	890523	0955	5 K		80		100 K		5 K		1 K		20 K		10 K
SC8	890725	0850	5 K		140		160		5 K		5 K		20 K		10
SC8	890924	0815	5 K		120		110		5 K		5 K		20 K		30
SC8(QC)	890924	0815	5 K		120		100 K		5 K		5 K		20 K		30
	Cienega Creek near Agua Verde Wash														
SC9	890523	1210	5 K		60		100 K		5 K		5 K		20 K		10 K
SC9	890725	1045	5 K		110		150		5 K		5 K		20 K		10 K
SC9	890924	1020	5 K		60		120		5 K		5 K		20 K		26
	Sabino Creek near Tucson														
SC10	890801	1200	5 K		20 K		100 K		5 K		6		20 K		10 K
	Tanque Verde Creek at Sabino Canyon Rd.														
SC11	890801	1600	5 K		20 K		100 K		5 K		5		20 K		10 K
WHITEWATER DRAW BASIN															
	Whitewater Draw at International Boundary														
WD1A	890228	1025	5 K	5 K	50	40	670	640	5 K	5 K	13	7	20 K	20 K	38
WD1A	890425	1030	5 K		40		760		5 K		7		20 K		29
WD1A	890627	0930	5 K	5 K	40	40	710	710	5 K	5 K	11	5 K	20 K	20 K	26
WD1A(QC)	890627	0930	5 K	5 K	40	30	730	680	5 K	5 K	11	5 K	20 K	20 K	32
WD1A	890829	1110	7 K		110		720		5 K		11		20 K		42
	Whitewater Draw at Hwy 80 Bridge near Douglas														
WD1	890228	1125													
WD1	890425	1130													
WD1	890627	0910													
WD1	890829	1230													

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	Cu, D (ug/l)	Fe, T (ug/l)	Fe, D (ug/l)	Hg, T (ug/l)	Hg, D (ug/l)	Mn, T (ug/l)	Mn, D (ug/l)	Ni, T (ug/l)	Ni, D (ug/l)	Pb, T (ug/l)	Pb, D (ug/l)	Sb, T (ug/l)	Sb, D (ug/l)
SANTA CRUZ RIVER BASIN															
SC4(QC)	890925	0945	10 K		10 K		BLV		10 K		30 K		2 K		10 K
	Sonoita Creek below Patagonia WWTP														
SC6	890124	1630		10 K		0.2 K		54		31		2 K		20 K	
SC6	890330	1340		31		0.2 K		62		30 K		2 K		10 K	
SC6	890522	1235	10 K	10 K	10 K	0.2 K	0.2 K	41	30	30 K	30 K	2 K	2 K	10 K	10 K
SC6	890724	1215		10 K		BLV		10 K		30 K		2 K		10 K	
SC6	890925	1145	10 K	13	10 K	BLV	BLV	10 K	12	30 K	30 K	2 K	2 K	10 K	10 K
	Cienega Creek at Marsh Station Road Bridge														
SC7	890125	0920		10 K		0.2 K		10 K		30 K		2 K		20 K	
SC7	890330	1130		10 K		0.2 K		10 K		30 K		2 K		10 K	
SC7	890523	1110	10 K	10 K	10 K	0.2 K	0.2 K	10 K	10 K	30 K	30 K	2 K	2 K	10 K	10 K
SC7	890725	0950		16		0.2 K		126		30 K		2		10 K	
SC7	890924	0930	10 K	433	10 K	BLV	BLV	16	14	30 K	30 K	2 K	2 K	10 K	10 K
	Cienega Creek at Tilted Bed Site														
SC8	890330	0940		34		0.2 K		22		30 K		2 K		10 K	
SC8	890523	0955		10 K		0.2 K		44		30 K		2 K		10 K	
SC8(QC)	890523	0955		10 K		0.2 K		41		30 K		2 K		10 K	
SC8	890725	0850		11		0.2 K		196		30 K		2 K		10 K	
SC8	890924	0815		37		BLV		57		30 K		2 K		10 K	
SC8(QC)	890924	0815		37		BLV		41		30 K		2 K		10 K	
	Cienega Creek near Agua Verde Wash														
SC9	890523	1210		10 K		BLV		10 K		30 K		2 K		10 K	
SC9	890725	1045		34		0.2 K		282		30 K		2 K		10 K	
SC9	890924	1020		27		BLV		32		30 K		2 K		10 K	
	Sabino Creek near Tucson														
SC10	890801	1200		539		0.2 K		18		30 K		2 K		10 K	
	Tanque Verde Creek at Sabino Canyon Rd.														
SC11	890801	1600		204		0.2 K		11		30 K		2 K		10 K	
WHITEWATER DRAW BASIN															
	Whitewater Draw at International Boundary														
WD1A	890228	1025	24	906	10	0.2 K	0.2 K	448	358	40	35	2 K	2 K	10 K	10 K
WD1A	890425	1030		778		0.2 K		277		40		2 K		10 K	
WD1A	890627	0930	14	1350	10 K	BLV	BLV	190	176	40	30 K	2 K	2 K	10 K	10 K
WD1A(QC)	890627	0930	13	240	10	0.2 K	BLV	174	175	30 K	30 K	2 K	2 K	10 K	10 K
WD1A	890829	1110		1100		BLV		480		50		8		10 K	
	Whitewater Draw at Hwy 80 Bridge near Douglas														
WD1	890228	1125													
WD1	890425	1130													
WD1	890627	0910													
WD1	890829	1230													

Site ID	Date (yymmdd)	Time (hrs)	Se, T (ug/l)	Se, D (ug/l)	Sr, T (ug/l)	Sr, D (ug/l)	Tl, T (ug/l)	Tl, D (ug/l)	Zn, T (ug/l)	Zn, D (ug/l)	Lab	Remarks
SANTA CRUZ RIVER BASIN												
SC4(QC)	890925	0945		5 K		430		5 K		10 K	ATI	
	Sonoita Creek below Patagonia WWTP											
SC6	890124	1630	5 K		1310		5 K		26		ATI,TUR	
SC6	890330	1340	5 K		1220		5 K		10		ATI,TUR	
SC6	890522	1235	5 K	5 K	1370	1330	5 K	5 K	10 K	10 K	ATI,TUR	Lab difficulty balancing ions
SC6	890724	1215	2 K		1240		5 K		10 K		ATI,TUR	Field turbidity = 0.08 NTU
SC6	890925	1145	5 K	5 K	1180	1140	5 K	5 K	14	10 K	ATI	X-CONT Mn(D)
	Cienega Creek at Marsh Station Road Bridge											
SC7	890125	0920	5 K		1710		5 K		22		ATI,TUR	
SC7	890330	1130	5 K		1670		5 K		10 K		ATI,TUR	
SC7	890523	1110	5 K	5 K	1880	1840	5 K	5 K	10 K	10 K	ATI,TUR	Lab difficulty balancing ions
SC7	890725	0950	5 K		1700		5 K		10 K		ATI,TUR	Field turbidity = 0.56 NTU
SC7	890924	0930	5 K	5 K	1153	1700	5 K	5 K	11	10	ATI	X-CONT Ba(D), Hg(D), Sr(D),
	Cienega Creek at Tilted Bed Site											
SC8	890330	0940	5 K		1990		5 K		31		ATI,TUR	
SC8	890523	0955	5 K		2120		5 K		10 K		ATI,TUR	Lab difficulty balancing ions
SC8(QC)	890523	0955	5 K		2180		5 K		10 K		ATI,TUR	Lab difficulty balancing ions
SC8	890725	0850	5 K		1940		5 K		10 K		ATI,TUR	Field turbidity = 0.60 NTU
SC8	890924	0815	5 K		1820		5 K		14		ATI	
SC8(QC)	890924	0815	5 K		1820		5 K		11		ATI	
	Cienega Creek near Agua Verde Wash											
SC9	890523	1210	5 K		1620		5 K		10 K		ATI,TUR	Lab difficulty balancing ions
SC9	890725	1045	5 K		1680		5 K		10 K		ATI,TUR	Field turbidity = 0.40 NTU
SC9	890924	1020	5 K		1440		5 K		11		ATI	
	Sabino Creek near Tucson											
SC10	890801	1200	5 K		50		5 K		10 K		ATI,TUR	Al(T) = 760 ug/l, co-op w/USGS
	Tanque Verde Creek at Sabino Canyon Rd.											
SC11	890801	1600	5 K		70		5 K		18		ATI,TUR	Al(T) = 250 ug/l, co-op w/USGS
WHITEWATER DRAW BASIN												
	Whitewater Draw at International Boundary											
WD1A	890228	1025	5 K	5 K	5280	4700	5 K	5 K	36	14	ATI,TUR	
WD1A	890425	1030	5 K		5440		5 K		10 K		ATI,TUR	
WD1A	890627	0930	7	5	5990	5550	5 K	5 K	10 K	10 K	ATI,TUR	X-CONT Hg, ion balance problem
WD1A(QC)	890627	0930	6	5 K	6240	5580	5 K	5 K	10 K	10 K	ATI,TUR	X-CONT Mn & Hg, ion bal. problem
WD1A	890829	1110	7		4800		5 K		22		ATI,TUR	
	Whitewater Draw at Hwy 80 Bridge near Douglas											
WD1	890228	1125									ADEQ	
WD1	890425	1130									ADEQ	
WD1	890627	0910									ADEQ	
WD1	890829	1230									ADEQ	Site not flowing,some small turbid ponds here

Site ID	Date (yymmdd)	Time (hrs)	No.	STORET (#)	Basin	HUC (#)	Agency	Air (oC)	H2O (oC)	DO (mg/O2/l)	Sat. (%)	Fld EC (uS/cm)	Fld pH (SU)	Staff (ft)	Width (ft)	Depth avg/ft	Velocity avg/fps
								Field Parameters									
WHITEWATER DRAW BASIN																	
	Mule Gulch at Elfrida Cutoff																
MG1	890228	1250		510400000000825	WWD	15080301	ADEQ	23.5									
MG1	890425	1200		510400000000825	WWD	15080301	ADEQ										
MG1	890627	0850		510400000000825	WWD	15080301	ADEQ										
MG1	890730	1400		510400000000825	WWD	15080301	ADEQ										
MG1	890829	1245		510400000000825	WWD	15080301	ADEQ										
	Mule Gulch at "Inn at Castle Rock", Bisbee																
MG2	890730	1328		510400000001900	WWD	15080301	ADEQ										
WILLCOX PLAYA BASIN																	
	Post Creek at Hwy 366 on Mt. Graham																
PCR1	890928	1315			WP	15050201	ADEQ	23.0	9.5	7.65	94.4%	41.2	6.61				
	Riggs Flat Lake on Mt. Graham																
RF1	890928	1515			WP	15050201	ADEQ	16.5	18.0	7.80	114.6%	71.3	9.36				
RIO SONOYTA BASIN																	
	Quitobaquito Spring near Lukeville																
QS1	890823	0910			RS	15080102	ADEQ	33.5	26.5	5.69	73.9%	1057	7.61				

Site ID	Date (yymmdd)	Time (hrs)	Discharge (cfs)	Lab EC (uS/cm)	Lab pH (SU)	Hardness EDTA (mg/l)	TDS Evap (mg/l)	TSS (mg/l)	Turbidity (NTU)	Cations Ca (mg/l)	Mg (mg/l)	Na (mg/l)	K (mg/l)	Anions OH (mg/l)	CO3 (mg/l)	HCO3 (mg/l)	SO4 (mg/l)
WHITEWATER DRAW BASIN																	
WD1	890829	1230	DRY														
	Mule Gulch at Elfrida Cutoff																
MG1	890228	1250	DRY														
MG1	890425	1200	DRY														
MG1	890627	0850	DRY														
MG1	890730	1400	LOW	2370	7.3	1440	2440	5	0.6	496	50	24.6	7.2	0.5	0.5	25	150
MG1	890829	1245	DRY														
	Mule Gulch at "Inn at Castle Rock", Bisbee																
MG2	890730	1328	LOW	505	8.4	204	330	5	0.52	60.6	12.7	31.4	6.9	0.5	6	157	78
WILLCOX PLAYA BASIN																	
	Post Creek at Hwy 366 on Mt. Graham																
PCR1	890928	1315	0.01	43.6	7.3	17.2	20	0.5	1	5.27	0.99	2.2	0.5	0.5	0.5	16	8.4
	Riggs Flat Lake on Mt. Graham																
RF1	890928	1515	0, LAKE	73.4	8.6	26.4	50	10	4	6.93	2.21	5.5	1.1	0.5	4	28	7.1
RIO SONOYTA BASIN																	
	Quitobaquito Spring near Lukeville																
QS1	890823	0910	0.05	1070	8.2	130	690	5	1.1	34.6	10.7	202	5.3	0.5	0.5	254	95

Site ID	Date (yymmdd)	Time (hrs)	Cl (mg/l)	Alk, T (mg/l)	Alk, P (mg/l)	F (mg/l)	TKN (mgN/l)	NO2+NO3 (mgN/l)	Ammonia (mgN/l)	Ammonia Un-ionized	TP (mgP/l)	Bacteria FC (cfu/100ml)	Bacteria FS (cfu/100ml)	Trace Metals Ag, T (ug/l)	Trace Metals Ag, D (ug/l)
WHITEWATER DRAW BASIN															
	Mule Gulch at Elfrida Cutoff														
MG1	890228	1250													
MG1	890425	1200													
MG1	890627	0850													
MG1	890730	1400	29	25	0.5	0.14	0.6	6.5	0.44	0.000	0.27			17	
MG1	890829	1245													
	Mule Gulch at "Inn at Castle Rock", Bisbee														
MG2	890730	1328	23	163	3	0.5	0.3	2.2	0.1	0.000	0.52			10 K	
WILLCOX PLAYA BASIN															
	Post Creek at Hwy 366 on Mt. Graham														
PCR1	890928	1315	0.25	16	0.5	0.13	0.1 K	0.07	0.03 K	0.000	0.06			10 K	10 K
	Riggs Flat Lake on Mt. Graham														
RF1	890928	1515	1.9	32	2	0.11	0.6	0.06 K	0.03 K	0.016	0.06			10 K	10 K
RIO SONOYTA BASIN															
	Quitobaquito Spring near Lukeville														
QS1	890823	0910	150	254	0.5	4.33	0.1 K	2.4	0.04	0.001	0.05 K			10 K	10 K

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	As, T (ug/l)	As, D (ug/l)	Ba, T (ug/l)	Ba, D (ug/l)	B, T (ug/l)	B, D (ug/l)	Be, T (ug/l)	Be, D (ug/l)	Cd, T (ug/l)	Cd, D (ug/l)	Cr, T (ug/l)	Cr, D (ug/l)	Cu, T (ug/l)
WHITEWATER DRAW BASIN															
	Mule Gulch at Elfrida Cutoff														
MG1	890228	1250													
MG1	890425	1200													
MG1	890627	0850													
MG1	890730	1400	5 K		40		100 K		5 K		33		20 K		192
MG1	890829	1245													
	Mule Gulch at "Inn at Castle Rock", Bisbee														
MG2	890730	1328	5 K		80		100 K		5 K		5 K		20 K		14
WILLCOX PLAYA BASIN															
	Post Creek at Hwy 366 on Mt. Graham														
PCR1	890928	1315	5 K	5 K	20 K	20 K	100 K	100 K	5 K	5 K	5 K	5 K	20 K	20 K	20
	Riggs Flat Lake on Mt. Graham														
RF1	890928	1515	5 K	5 K	20 K	20 K	10 K	10 K	5 K	5 K	5 K	5 K	20 K	20 K	22
RIO SONOYTA BASIN															
	Quitobaquito Spring near Lukeville														
QS1	890823	0910	10	14	20	20 K	660	660	5 K	5 K	5 K	5 K	20 K	20 K	10 K

Trace Metals

Site ID	Date (yymmdd)	Time (hrs)	Cu, D (ug/l)	Fe, T (ug/l)	Fe, D (ug/l)	Hg, T (ug/l)	Hg, D (ug/l)	Mn, T (ug/l)	Mn, D (ug/l)	Ni, T (ug/l)	Ni, D (ug/l)	Pb, T (ug/l)	Pb, D (ug/l)	Sb, T (ug/l)	Sb, D (ug/l)
WHITEWATER DRAW BASIN															
	Mule Gulch at Elfrida Cutoff														
MG1	890228	1250													
MG1	890425	1200													
MG1	890627	0850													
MG1	890730	1400		11		5 K		8640		60		2 K		10 K	
MG1	890829	1245													
	Mule Gulch at "Inn at Castle Rock", Bisbee														
MG2	890730	1328		10 K		5 K		10 K		30 K		2 K		10 K	
WILLCOX PLAYA BASIN															
	Post Creek at Hwy 366 on Mt. Graham														
PCR1	890928	1315	10	87	10	0.2 K	BLV	10 K	10 K	30 K	30 K	2 K	2 K	10 K	10 K
	Riggs Flat Lake on Mt. Graham														
RF1	890928	1515	10 K	584	122	0.2 K	BLV	49	10 K	30 K	30 K	2 K	2 K	10 K	10 K
RIO SONOYTA BASIN															
	Quitobaquito Spring near Lukeville														
QS1	890823	0910	10 K	82	22	0.5	BLV	10 K	10 K	30 K	30 K	2	3	10 K	10 K

Site ID	Date (yymmdd)	Time (hrs)	Se, T (ug/l)	Se, D (ug/l)	Sr, T (ug/l)	Sr, D (ug/l)	Tl, T (ug/l)	Tl, D (ug/l)	Zn, T (ug/l)	Zn, D (ug/l)	Lab	Remarks
WHITEWATER DRAW BASIN												
	Mule Gulch at Elfrida Cutoff											
MG1	890228	1250									ADEQ	
MG1	890425	1200									ADEQ	
MG1	890627	0850									ADEQ	
MG1	890730	1400	5 K		630		5 K		1300		ATI,TURN	Lab ion balance problems, Al(T) = <250 ug/l
MG1	890829	1245										
	Mule Gulch at "Inn at Castle Rock", Bisbee											
MG2	890730	1328	5 K		240		5 K		10 K		ATI,TURN	Al(T) = <250 ug/l
WILLCOX PLAYA BASIN												
	Post Creek at Hwy 366 on Mt. Graham											
PCR1	890928	1315	5 K	5 K	20 K	20 K	5 K	5 K	10 K	10 K	ATI	X-CONT Hg
	Riggs Flat Lake on Mt. Graham											
RF1	890928	1515	5 K	5 K	40	40	5 K	5 K	19	10 K	ATI	X-CONT Hg
RIO SONOYTA BASIN												
	Quitobaquito Spring near Lukeville											
QS1	890823	0910	5 K	5 K	450	430	5 K	5 K	10 K	10 K	ATI	X-CONT Hg, Pb, As

APPENDIX B

ADEQ/USGS Cooperative

Fixed Station Network

for Water Year 1989

Pages B-1 thru B-7

BACKGROUND

Since 1977, the Arizona Department of Environmental Quality (ADEQ) and its predecessor agency, the Department of Health Services, have contracted with the U. S. Geological Survey (USGS) to operate the Cooperative Fixed Station Network (FSN). Until ADEQ initiated its supplemental FSN program in 1986, this constituted the entire FSN for surface water quality monitoring in Arizona. Data from this program has been routinely transferred to the U. S. Environmental Protection Agency (EPA) STORET data management system via the USGS WATSTOR system.

CURRENT PROGRAM

During Water Year 1989, ADEQ contracted with the USGS to conduct the ADEQ/USGS Cooperative FSN program. Tables I, II and III are excerpts from the contract listing the sites frequency, parameters and laboratory detection limits. Figures B1 and B2 are excerpts from the USGS Water-Data Report for Water Year 1989. This report was distributed in August 1990 and is available from the USGS. The data is in the process of being uploaded to the U. S. EPA STORET data management system.

Table I.--Sampling Stations, Parameter Groups, and Number of Samples to be Collected During the Period October 1, 1988 through September 30, 1989

USGS Station Number	Station Name	Parameter Group[1/]									
		1	2	3	4	5	6	7	8	9	10
*09380000	Colorado River at Lees Ferry	0	0	0	2	6	0	6	6	0	3
*09427520	Colorado River below Parker Dam	12	12	12	12	12	12	12	12	0	6
*09466500	Gila River at Calva	8	8	8	8	12	8	12	12	0	6
*09498500	Salt River near Roosevelt	6	6	6	8	12	6	12	12	0	6
*09502000	Salt River below Stewart Mountain Dam	6	6	6	6	6	6	6	6	0	0
*09508500	Verde River below Tangle Creek above Horseshoe Dam	6	6	6	8	12	6	12	12	0	6
*09510000	Verde River below Bartlett Dam	6	6	6	6	6	6	6	6	0	0
*09518000	Gila River above diversions, at Gillespie Dam	6	6	6	8	12	6	12	12	0	6
*09522000	Colorado River at Northerly International Boundary above Morelos Dam	6	6	6	8	12	6	12	12	0	6
09471000	San Pedro River at Charleston	0	0	0	1	4	0	4	4	4	3
09498400	Pinal Creek at Inspiration Dam, near Globe	6	6	6	6	6	6	6	6	0	3
09504000	Verde River near Clarkdale	12	12	12	12	12	12	12	12	0	6
09504440	Oak Creek at Red Rock Crossing, near Sedona	12	12	12	12	12	12	12	12	0	0
09520500	Gila River near Dome	12	12	12	0	0	0	12	12	0	0
09431500	Gila River near Redrock, NM	6	6	6	8	12	6	12	12	0	0
09448500	Gila River at head of Safford Valley, near Solomon	12	12	12	12	12	12	12	12	0	0
#09506000	Verde River near Camp Verde	-	-	-	-	-	-	-	-	-	-

1/ Figures given under the parameter group numbers represent the number of samples analyzed per period. See Table II for the parameters contained in each parameter group.

* State of Arizona Primary Fixed Station Network.

#USGS to rehabilitate and operate the stream gage for 12 months. ADEQ will collect the water-quality samples.

Table II

Parameter groups

Group 1—Field Data

pH (00400)
Specific conductance (00095)
Discharge (00061)
Alkalinity (00410)
Water temperature (00010)
Dissolved oxygen (00300)
Carbonate (99445)
Bicarbonate (99440)

Group 2—General Physical Chemistry

Turbidity (00076)
Hardness (00900, 00902)
Calcium, dissolved (00915)
Potassium, dissolved (00935)
Sulfate, dissolved (00945)
Total dissolved solids (70300)
Sodium, dissolved (00930)
Magnesium, dissolved (00925)
Chloride, dissolved (00940)
Fluoride, dissolved (00950)

Group 3—Nutrients

Nitrogen, ammonia plus organic, total (00625)
Nitrogen, total NH_4 as N (00610)
Phosphorous, total (00665)

Group 4—Dissolved Metals

Arsenic, dissolved (01000)
Barium, dissolved (01005)
Chromium, dissolved (01030)
Iron, dissolved (01046)
Lead, dissolved (01049)
Zinc, dissolved (01090)
Silver, dissolved (01075)
Cadmium, dissolved (01025)
Copper, dissolved (01040)
Manganese, dissolved (01056)
Selenium, dissolved (01145)

Group 5—Total Metals

Arsenic, total (01002)
Chromium, total (01034)
Iron, total (01045)
Manganese, total (01055)
Selenium, total (01147)
Cadmium, total (01027)
Copper, total (01042)
Mercury, total (71900)
Lead, total (01051)
Zinc, total (01092)

Group 6—Microbiological

Fecal coliform bacteria (31625)
Fecal streptococca bacteria (31673)

Group 7— General Physical Chemistry

Suspended solids (00530)
Chemical oxygen demand (00340)
Boron, dissolved (01020)

Group 8—Nutrients

Nitrogen, total, as N (00600)
Nitrogen, total, as NO_3 (71887)
Nitrogen, nitrite plus nitrate, total (00630)

Group 9—Total Metals

Strontium, total (01082)

Group 10—Total Metals

Antimony, total (01097)
Beryllium, total (01012)
Nickel, total (01067)
Thallium, total (01059)

Table III

Parameter Detection Levels

Parameter Name	Parameter Number	Detection Level
Alkalinity	00410	1 mg/L
Antimony, total	01097	1 ug/L
Arsenic, dissolved	01000	1 ug/L
Arsenic, total	01002	1 ug/L
Barium, dissolved	01005	100 ug/L
Beryllium, total	01012	10 ug/L
Bicarbonate	99440	Calculated
Boron, dissolved	01020	10 ug/L
Boron, total	01022	10 ug/L
Cadmium, dissolved	01025	1 ug/L
Cadmium, total	01027	1 ug/L
Calcium, dissolved	00915	0.1 mg/L
Carbonate	99445	Calculated
Chemical oxygen demand	00340	10 mg/L
Chloride, dissolved	00940	0.1 mg/L
Chromium, dissolved	01030	1 ug/L
Chromium hexavalent, dissolved	01032	1 ug/L
Chromium, total	01034	1 ug/L
Copper, dissolved	01040	1 ug/L
Copper, total	01042	1 ug/L
Discharge, instantaneous	00061	.01 cfs
Dissolved oxygen	00300	0.2 mg/L
Fecal coliform	31625	1 colony
Fecal streptococca	31673	1 colony
Fluoride, dissolved	00950	0.1 mg/L
Gross Alpha, dissolved (U-Nat)	01515	0.4 pCi/L
Gross Alpha, total (U-Nat)	80029	0.4 pCi/L
Gross Beta, dissolved (Cs 137)	03515	0.4 pCi/L
Gross Beta, total (Cs 137)	03519	0.4 pCi/L
Hardness, Carbonate	00900	Calculated
Hardness, Noncarbonate	00902	Calculated
Iron, dissolved	01046	10 ug/L
Iron, total	01045	10 ug/L
Lead, dissolved	01049	5 ug/L
Lead, total	01051	5 ug/L
Magnesium, dissolved	00925	0.1 mg/L
Manganese, dissolved	01056	10 ug/L
Manganese, total	01055	10 ug/L
Mercury, total	71900	0.1 ug/L
Nickel, total	01067	1 ug/L
Nitrogen, ammonia plus organic, total	00625	0.2 mg/L
Nitrogen, nitrite plus nitrate, total	00630	0.1 mg/L
Nitrogen, total as N	00600	Calculated
Nitrogen, total as NO_3	71887	Calculated
Nitrogen, total NH_4 as N	00610	0.01 mg/L
pH, field	00400	0.1 unit
Phenols, total	32730	1 ug/L
Phosphorous, orthophosphate, dissolved	00671	0.01 mg/L
Phosphorous, total	00665	0.01 mg/L

Table III (Continued)

Parameter Detection Levels

Parameter Name	Parameter Number	Detection Level
Potassium, dissolved	00935	0.1 mg/L
Radium 226, dissolved	09510	0.1 pCi/L
Selenium, dissolved	01145	1 ug/L
Selenium, total	01147	1 ug/L
Silica, dissolved	00955	0.1 mg/L
Silver, dissolved	01075	1 ug/L
Sodium, dissolved	00930	0.1 mg/L
Solids ROE 105°C, suspended	00530	1 mg/L
Solids ROE 180°C	70300	1 mg/L
Specific Conductance, field	00095	1 umho
Strontium, total	01082	10 ug/L
Sulfate, dissolved	00945	0.2 mg/L
Thallium, total	01059	4 ug/L
Total Organic Carbon	00680	0.1 mg/L
Turbidity	00076	0.1 NTU
Water Temperature	00010	0.5°C
Zinc, dissolved	01090	10 ug/L
Zinc, total	01092	10 ug/L

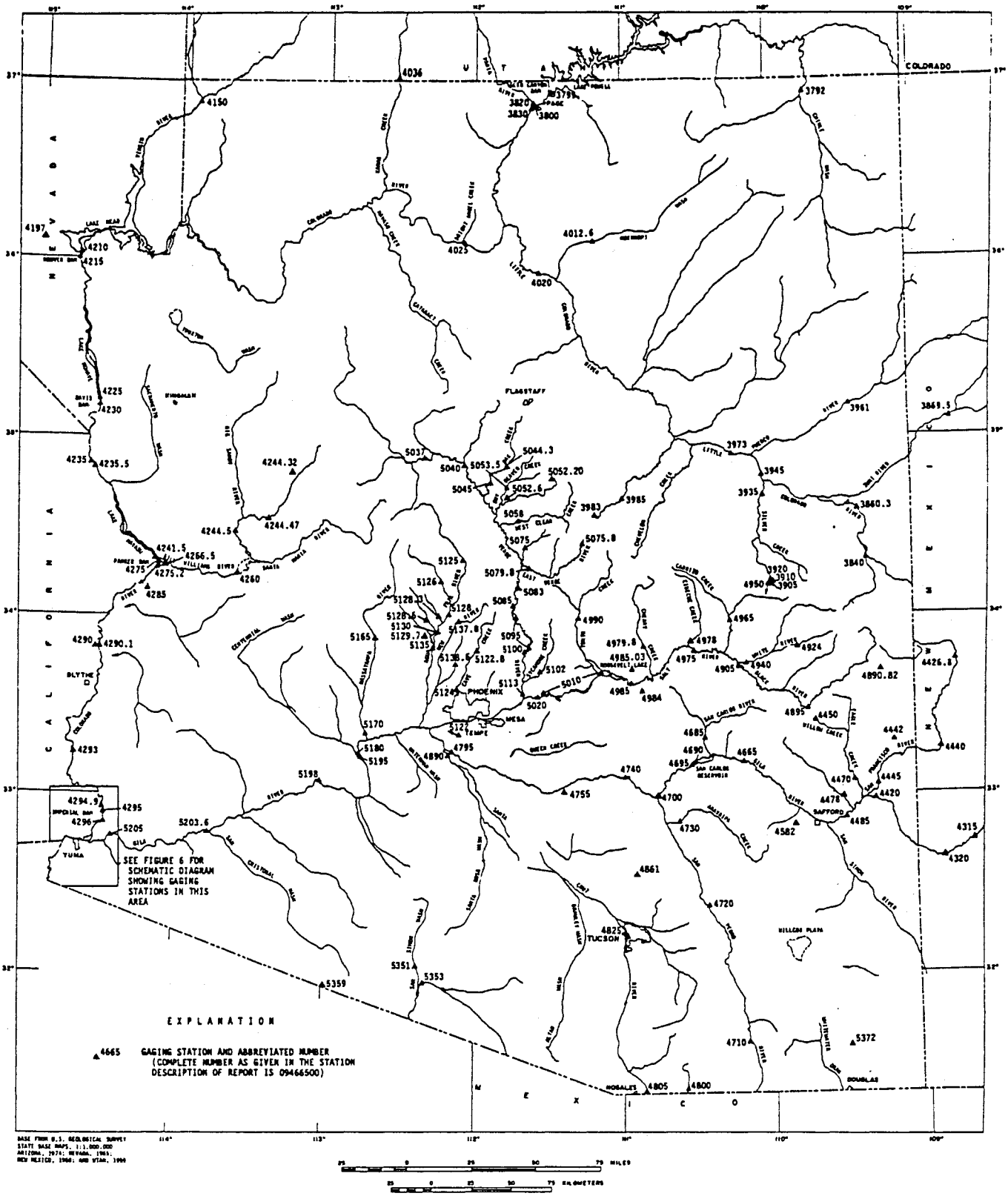


Figure 1.--Map of Arizona showing location of gaging stations.

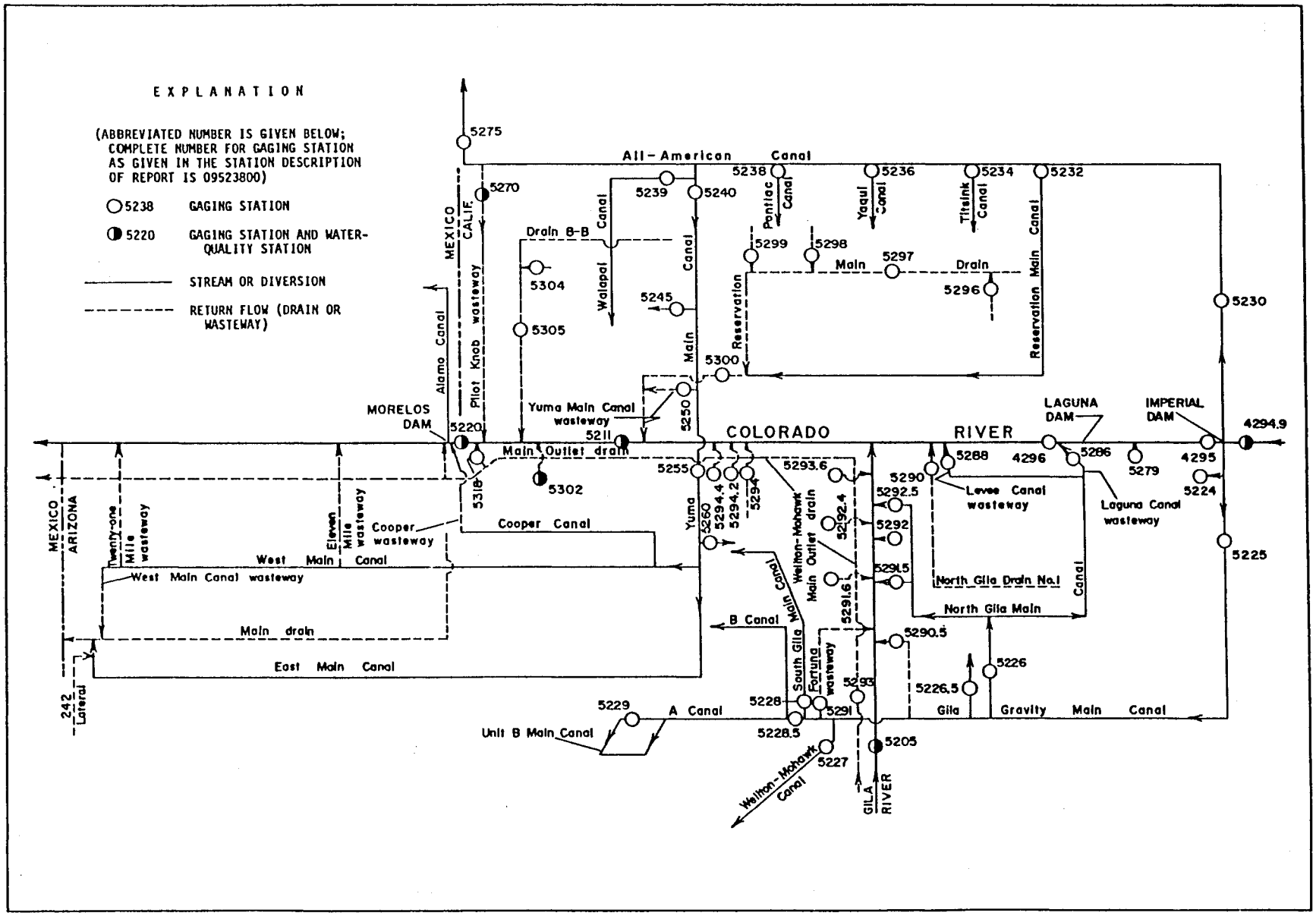


Figure 2.--Schematic diagram showing gaging stations and water-quality stations on streams, diversions, and return flows between Imperial Dam and the southerly international boundary.

APPENDIX C

SPECIAL TOPIC:

ADEQ COOPERATIVE FIXED STATION

NETWORK MONITORING

ON THE CIENEGA CREEK

NATURAL PRESERVE - PIMA COUNTY;

A NOMINATION FOR UNIQUE WATERS DESIGNATION

Pages C-1 thru C-6

Introduction

Cienega Creek near Vail, Arizona is one of two remaining perennial streams in the Tucson area - the other being Sabino Creek. Cienega Creek Natural Preserve (Preserve) is located 25 miles southeast of Tucson (Figure C1). Portions of the Preserve were first purchased by Pima County in 1986 to provide downstream flood and erosion control. Land acquisitions have also preserved riparian habitat, groundwater recharge, open space, recreation access and cultural resources. The U. S. Bureau of Land Management owns large tracts of land that encompass Cienega Creek's headwaters near Sonoita, Arizona.

In order to protect this water resource, the County decided the Preserve should be protected under the state's Unique Waters Program. Unique Waters status offers water quality protection to the stream reach by allowing the setting of more stringent site-specific water quality standards and designation of anti-degradation regulations.

To support this designation, interagency water quality management studies were undertaken by the Pima County Department of Transportation (PCDOT), Pima Association of Governments (PAG) and the Arizona Department of Environmental Quality (ADEQ). PCDOT was in charge of coordination, report writing and final report editing. PAG was responsible for groundwater sampling and report writing. ADEQ's role included surface water sampling and report writing. All three agencies participated in reviewing the report prior to final edit.

Unique Waters Program

The Unique Waters Program (A.R.S. R-18-108) is administered by ADEQ in order to give special water quality protection for selected surface waters. The designation stipulates that the high-quality waters will undergo no additional degradation. In order to receive the designation, the stream segment must meet at least one of the following criteria:

1) Outstanding public resource due to the surface water's geology, flora, fauna, size, archaeology, aesthetic value or wilderness characteristics (R18-11-108D.1);

2) Essential habitat for species of national or state significance (R18-11-108D.2); or

3) Existing water quality is consistently better than state surface water quality criteria or the economic and technical capability exists for the surface water to exceed prescribed surface water criteria (R18-11-108D.3).

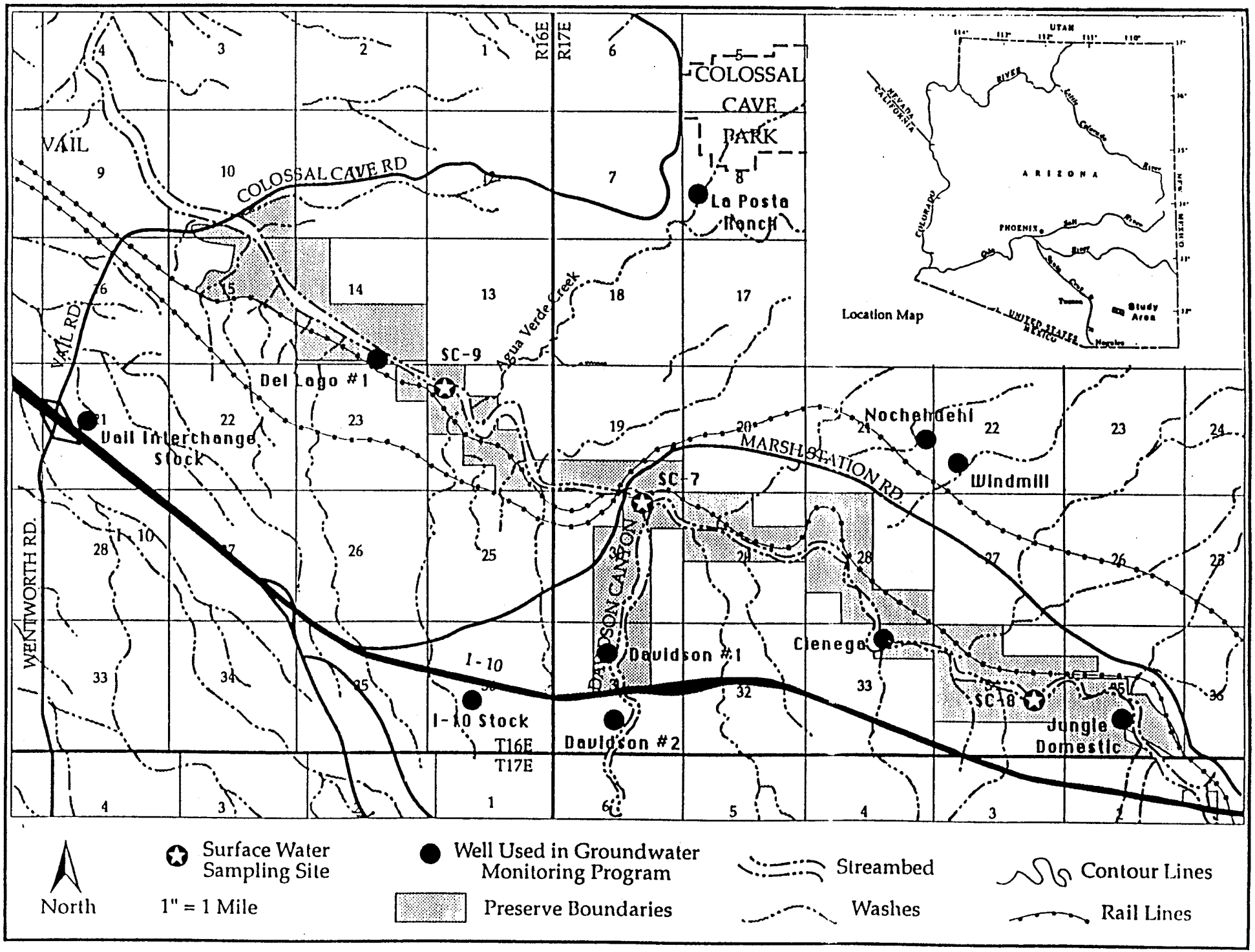


Figure C1 MONITORING SITES

The ADEQ Director must classify Unique Waters by rule (R18-11-108A). The Director can also adopt, by rule, site-specific water quality criteria for surface waters classified as Unique Waters to ensure their protection (R18-11-108B). A stream must be nominated for Unique Waters classification by filing a petition for rule adoption (R18-11-108C).

The petition must include the following items:

1) A map and a description of the surface water;

2) A written statement in support of the nomination, including specific reference to the applicable criteria for Unique Waters classification;

3) Supporting evidence demonstrating that one of the applicable Unique Waters criteria has been met;

4) Available supporting data documenting present and characteristic water quality; and

5) Identification of potential threats to maintaining or enhancing water quality.

Monitoring Plan

Following ADEQ's receipt of the nomination request, an intensive monitoring plan was jointly developed and implemented by PCDOT, PAG and ADEQ for one year beginning on May 23, 1989 to gather baseline data on surface waters, groundwater and sediment quality. After completing the monitoring work a draft nomination report was written and reviewed by the participating agencies. The report was then released for local technical review and approval through PAG's public participation process. Upon completion of PAG's process, the final report was sent to ADEQ for final review and approval of the nomination for rulemaking.

The purpose of the monitoring plan was to guide the collection of data and to determine whether baseline water quality conditions for low flows were consistently better than state surface water quality criteria and to assess pollution source contributions to water quality. The monitoring plan also detailed the sampling rationale behind the surface water, groundwater and sediment sampling efforts. In addition, type of constituents, frequency and location of sampling sites were discussed.

Under such a plan, elevated or anomalous constituent values were evaluated by quality assurance/quality control checks for errors in field sampling and laboratory analyses. From the analytical results, a measure of the magnitude of constituents was estimated

to help assess water quality standard exceedances and create new limits for existing or proposed protected uses.

ADEQ began monitoring the water quality on Cienega Creek at the Marsh Station Road bridge (SC-7) on October 15, 1987. Additional sampling sites SC-8 on the upstream portion of the reach and SC-9 on the downstream portion of the reach (Figure C1) were chosen to assess variations of water quality along the nominated stream segment. The sampling period was extended into summer 1990 for storm flows due to the lack of sustained storm flows in 1989. Samples were collected and analyzed for the analytical parameters listed in Table 13 of this report. In addition to these parameters, samples were also analyzed for nitrates, volatile halocarbons, phenolics, sulfide, herbicides and semi-volatile halocarbons. Samples were collected at each site according to the procedures described in Section 10 of ADEQ's Quality Assurance Project Plan and the U.S.G.S. Field Guidelines for Collection, Treatment and Analysis of Water Samples, Arizona District.

Results

Water quality results were summarized in the nomination report for the period from May 23, 1989 to March 27, 1990 and were supplemented, where possible, with historic data. Most data are contained in Appendix A of this report under site IDs SC-7, SC-8 and SC-9 located in the Santa Cruz River Basin.

The following parameter groups were summarized:

Physical - dissolved oxygen, air temperature, water temperature, pH, conductance, turbidity, and total suspended solids.

Dissolved oxygen values below the state standard of 6.0 mgO/l were observed immediately after algae had been removed from the stream channel by summer storm flows on July 25, 1989 at SC-7 and SC-9. Turbidity was elevated at SC-7 during the receding limb of a storm flow on July 20, 1988 but did not exceed state standards.

Nutrients - nitrogen, phosphorous, ammonia and nitrate.

Nutrient levels in surface water base flows were well below state standards. Generally, groundwater showed low nutrient levels as well.

Inorganics - major cations and anions, fluoride, total dissolved solids and trace metals.

Surface water at all three surface water sites has a calcium-sulfate composition. The high sulfate levels is thought to be from dissolution of naturally occurring gypsum deposits in the local bedrock.

Metals were uniformly low during normal base flow conditions. Total arsenic, barium, chromium, copper, iron, manganese and lead levels were elevated during the July 20, 1988 storm event but did not exceed state standards.

Total dissolved solids at both wells are higher than the federal secondary maximum contaminant levels (MCLs) of 500 mg/l. Sulfate levels exceed the recommended limit of 250 mg/l at both wells. Lead levels exceeded drinking water standards at Del Lago #1. Exceedances of secondary MCLs at Del Lago #1 for iron and manganese were also observed. These metals are common well casing materials which may support the theory of naturally-occurring casing mineralization within the well.

Sediment analyses show that levels of cadmium, chromium, copper, lead, mercury, nickel, selenium and zinc increased downstream of the Interstate 10 bridge over Cienega Creek relative to a site upstream of the bridge. The results show no values above hazardous concentration levels.

Biological - fecal coliform and fecal streptococcus.

Samples collected on July 25, 1989 showed high bacterial levels, particularly at SC-7. These values approached but did not exceed existing state standards. These levels were too high, however, to support more the designation of more stringent standards for full body contact. Extremely high levels of fecal streptococcus were found at SC-7 in 1988. Cattle grazing of the creek bottom may have been a contributing factor.

Organics - volatile halocarbons, phenolics, cyanide, sulfide, herbicides and semi-volatile halocarbons.

An unfiltered sample taken at SC-8 on September 24, 1989 showed no contamination by volatile halocarbons except for methylene chloride. Laboratory analysis reagent was the likely source of this contamination as indicated by a reagent blank. All other constituents were undetected in both surface and groundwater samples.

Water Quality Management Plan

A water quality management plan was developed to reduce and assess the potential for pollution and to address the discretionary management criterion of the Unique Waters Program. No institutional barriers have been identified which would prevent management of the Preserve under the Unique Waters Program to maintain its currently high water quality characteristics. The management plan is composed of four elements:

Local Administration

- Add water quality policies to land use plans
- Use local committee to review upstream monitoring plan
- Develop revegetation standards
- Update water quality management plan when necessary
- Amendments must go through local public participation process
- Complete annual Preserve status report

State Administration

- Incorporate existing surface water uses into new rules
- Develop site-specific water quality standards

Monitoring

- Continue surface water and groundwater quality
- Continue surface water flows and groundwater levels
- Conduct biological inventories and assessments

Remediation

- Remove oil from contaminated well
- Develop maintenance and emergency response plan for railroad
- Develop spill prevention program at I-10 bridge crossing

Conclusions

Base-flow water quality conditions appear to be below state standards for designated uses, thus fulfilling Unique Waters Criterion R18-11-108D.3. If full body contact (FBC) were added as a designated use, the potential would exist for periodic base flow exceedances of FBC standards for fecal coliform. Surface water quality sampling results indicate state standards for aquatic & wildlife (A&W) may be exceeded during or immediately after storm flow events for dissolved oxygen pH, turbidity and metals.

Other studies summarized in the report indicate that the nominated reach is a rare ecological, educational and recreational resource. The stream reach supports 570 acres of mesquite and cottonwood-willow woodland and a population of native fish. The stream segment is one of only two public recreation areas near Tucson which offer lush riparian woodlands and year-round running water. The stream is also used for geological, ornithological and botanical research and education.

The interagency water quality management study provided much needed data for the nomination report at a minimal cost to all three agencies. Manpower was provided by all three agencies to be utilized by any agency on an as-needed basis. A wide diversity of expertise was available for data collection, reduction and interpretation. The effort produced a high quality nomination report for Unique Waters consideration.