

APPENDIX D

SAMPLING RESULTS FROM ADEQ'S 2004 DRAFT 305B REPORT

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	
STREAM MONITORING DATA								
Alum Gulch headwaters - 31 28°20"/110 43°51" AZ15050301-561A A&We, PBC, AgL	ADEQ TMDL Program Below Trench Camp Mine SCALG005.90	1999 - 1 partial suite	pH SU	6.5 - 9.0 (A&We, PBC, AgL)	5.9	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&We)	2500	1 of 1		
	ADEQ TMDL Program Below January adit, Above Humboldt Canyon SCALG005.58	1999 - 1 partial suite 2000 - 1 partial suite	Cadmium (total) µg/L	84 (FC)	140 - 180	2 of 2		
				50 (AgL)		2 of 2		
			Copper (dissolved) µg/L	varies by hardness (A&We)	110 - 400	2 of 2		
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	4.5 - 5.3	2 of 2		
			Zinc (dissolved) µg/L	varies by hardness (A&We)	39,000 - 56,000	2 of 2		
			Zinc (total) µg/L	25,000 (AgL)	42,000 - 56,000	2 of 2		
	ADEQ TMDL Program Below Humboldt Canyon, Above Alum Falls SCALG005.30	1999 - 1 partial suite	Cadmium (total) µg/L	84 (FC)	180	1 of 1		
				50 (AgL)		1 of 1		
			Copper (dissolved) µg/L	varies by hardness (A&We)	1200	1 of 1		
			Copper (total) µg/L	500 (AgL)	1200	1 of 1		
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.6	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&We)	44,000	1 of 1		
Zinc (total) µg/L	25,000 (AgL)	41,000	1 of 1					

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	
Summary Row A&We Not attaining PBC Not attaining AgL Not attaining	1999 - 2000 4 samples 2 sampling events	Cadmium (total) µg/L	84 (FC)	10 - 180	3 of 4	Inconclusive (Not attaining)	ADEQ collected 4 samples at 3 sites in 1999-2000. TMDLs for cadmium, copper, zinc and pH were approved by EPA in 2003. Assessed as "not attaining" due to copper, cadmium and zinc exceedances, and low pH. Although current data for cadmium and pH are "inconclusive," this reach will remain "not attaining" until data indicate that all uses are attaining for parameters addressed in the TMDL. Placed on the Planning List for TMDL follow-up monitoring and missing core parameter: total lead.	
			50 (AgL)					3 of 4
		Copper (dissolved) µg/L	varies by hardness (A&We)	13 - 1200	3 of 4 samples 2 of 2 events (in 1999 - 2000)	Not attaining		
		Copper (total) µg/L	500 (AgL)	63 - 1200	1 of 4	Inconclusive (Not attaining)		
		pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.6 - 5.9	4 of 4	Inconclusive (Not attaining)		
		Zinc (dissolved) µg/L	varies by hardness (A&We)	2500 - 56,000	4 of 4 samples 2 of 2 events (in 1999 - 2000)	Not attaining		
		Zinc (total) µg/L	25,000 (AgL)	2900 - 56,000	3 of 4	Inconclusive (Not attaining)		
Alum Gulch 31 28°20'110 43°51" - 31 29°17'110 44°25" AZ15050301-561B A&Ww, FC, FBC, AgL	ADEQ TMDL Program Below Alum Falls, Above World's Fair Mine SCALG004.98	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	160	1 of 1			
			varies by hardness (A&Ww chronic)				1 of 1	
		Cadmium (total) µg/L	84 (FC)	160	1 of 1			
			50 (AgL)		1 of 1			
		Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	1500	1 of 1			
			varies by hardness (A&Ww chronic)		1 of 1			
		Copper (total) µg/L	1300 (FBC)	1400	1 of 1			
			500 (AgL)		1 of 1			

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STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	3.5	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	46,000	1 of 1		
				varies by hardness (A&Ww chronic)		1 of 1		
			Zinc (total) µg/L	25,000 (AgL)	49,000	1 of 1		
	ADEQ TMDL Program Below World's Fair Mine SCALG004.82	1998 - 3 partial suites	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	28 - 194	3 of 3		
				varies by hardness (A&Ww chronic)		3 of 3		
			Cadmium (total) µg/L	84 (FC)	27 - 174	1 of 3		
				50 (AgL)		1 of 3		
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	881 - 2110	3 of 3		
				varies by hardness (A&Ww chronic)		3 of 3		
			Copper (total) µg/L	1300 (FBC)	799 - 2140	1 of 3		
				500 (AgL)		3 of 3		
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	3.3 - 3.7	3 of 3		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	6110 - 56,200	3 of 3		
				varies by hardness (A&Ww chronic)		3 of 3		
Zinc (total) µg/L	25,000 (AgL)	5730 - 50,600	1 of 3					
ADEQ TMDL Program 200 meters below World's Fair Mine SCALG004.61	1999 - 1 partial suite 2000 - 1 partial suite	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	170 - 220	2 of 2			
			varies by hardness (A&Ww chronic)		2 of 2			

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS			
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT				
			Cadmium (total) µg/L	84 (FC)	170 - 290	2 of 2					
				50 (AgL)		2 of 2					
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	1600 - 2000	2 of 2					
				varies by hardness (A&Ww chronic)		2 of 2					
			Copper (total) µg/L	1300 (FBC)	1900 - 2100	2 of 2					
				500 (AgL)		2 of 2					
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	3.2	2 of 2					
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	49,000 - 53,000	2 of 2					
				varies by hardness (A&Ww chronic)		2 of 2					
			Zinc (total) µg/L	25,000 (AgL)	45,000 - 54,000	2 of 2					
			Summary Row A&Ww Not attaining FC Not attaining FBC Not attaining AgL Not attaining	1998 - 2000 6 samples 5 sampling events	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	28 - 220		5 of 5 events (in 1998 - 2000)	Not attaining	ADEQ collected 6 samples at 3 sites in 1998-2000. TMDLs for cadmium, copper, zinc and pH were approved by EPA in 2003. Assessed as "not attaining" due to cadmium, copper and zinc exceedances, and low pH. Although current data for cadmium and pH are "inconclusive," this reach will remain "not attaining" until data indicate that all uses are attaining for parameters addressed in the TMDL. Placed on the Planning List for TMDL follow-up monitoring and for missing core parameters: <i>Escherichia coli</i> , total metals (lead and mercury), and turbidity/SSC.
						varies by hardness (A&Ww chronic)			5 of 5 events	Not attaining	
					Cadmium (total) µg/L	84 (FC)	27 - 290		4 of 6	Inconclusive (Not attaining)	
50 (AgL)	4 of 6	Inconclusive (Not attaining)									
Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	881 - 2110			5 of 5 events (in 1998 - 2000)	Not attaining					
	varies by hardness (A&Ww chronic)				5 of 5 events	Not attaining					
Copper (total) µg/L	1300 (FBC)	799 - 2140			4 of 6	Inconclusive (Not attaining)					
	500 (AgL)		6 of 6	Inconclusive (Not attaining)							
pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	3.2 - 3.7	6 of 6	Inconclusive (Not attaining)							

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	6110 - 56,200	5 of 5 events (in 1998 - 2000)	Not attaining	
				varies by hardness (A&Ww chronic)		5 of 5 events	Not attaining	
			Zinc (total) µg/L	25,000 (AgL)	5730 - 54,000	4 of 6	Inconclusive (Not attaining)	
Chimenea Creek headwaters - Rincon Creek AZ15050302-140 A&Ww, FC, FBC (tributary rule)	USGS Ambient Monitoring At Saguaro National Park SCCHM004.75 101593	2002 - 1 partial suite	No exceedances					
	USGS Ambient Monitoring Near Madrona ranger station SCCHM002.25 101584	2002 - 1 partial suite	No exceedances					
	Summary Row A&Ww Inconclusive FC Inconclusive FBC Inconclusive	2002 2 sampling events	No exceedances					Insufficient monitoring data to assess.
Cienega Creek headwaters - Gardner Canyon AZ15050302-006A A&Ww, FC, FBC, AgL Unique Water	ADEQ Ambient Monitoring SCCIE014.39 101176	2000 - 1 full suite 2001 - 5 full suites 2002 - 1 full suite	<i>Escherichia coli</i> CFU/100 ml	235 (FBC)	<2 - too numerous to count	1 of 5		
	ADEQ SEM Program Below Stevenson Canyon SCCIE12.38 100601	1998 - 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring Below Narrows SCCIE011.80 100600	1998 - 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring SCCIE010.20 101177	2000 - 1 full suite 2001 - 4 full suites 2002 - 1 full suite	<i>Escherichia coli</i> CFU/100 ml	235 (FBC)	<2 - too numerous to count	2 of 6		
			Turbidity (former standard) NTU	50 (A&Ww)	1 - 54	1 of 6		
	Summary Row A&Ww Attaining FC Attaining FBC Impaired AgL Attaining	1998 - 2002 15 samples 8 sampling events	<i>Escherichia coli</i> CFU/100 ml	235 (FBC)	<2 - too numerous to count	3 of 11 samples 2 of 6 events (in 2001)	Impaired	ADEQ collected 15 samples at 4 sites in 1998-2002. Assessed as "impaired" due to <i>Escherichia coli</i> exceedances.
		Turbidity (former standard) NTU	50 (A&Ww)	1 - 54	1 of 14	Attaining		
Cienega Creek Gardner Canyon - USGS gage station (Pantano Wash) AZ15050302-006B	ADEQ Ambient Monitoring Below tilted beds SCCIE003.55 100599	1998 - 1 partial suite	No exceedances					

A&Ww, FBC, FC, AgL

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED			
	ADEQ Ambient Monitoring SCCIE002.66 101178	2000 - 1 full suite 2001 - 4 full suites 2002 - 1 full suite	Dissolved oxygen mg/L	>6.0 (90% saturation)	5.5 - 9.6 (80 - 109%)	1 of 6		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.	
	ADEQ Ambient Monitoring SCCIE001.49 101179	2000 - 1 full suite 2001 - 4 full suites 2002 - 1 full suite	No exceedances						
	ADEQ Ambient Monitoring Above Davidson Canyon SCCIE001.20 100598	1998 - 1 partial suite	Dissolved oxygen mg/L	>6.0 (90% saturation)	5.4 (65%)	1 of 1		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.	
	ADEQ Ambient Monitoring At Marsh Station Rd. SCCIE001.07 100263	1998 - 1 partial suite	No exceedances						
	ADEQ Ambient Monitoring Above diversion dam SCCIE000.42 100595	1998 - 1 partial suite	Dissolved oxygen mg/L	>6.0 (90% saturation)	4.6 (57%)	1 of 1		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.	
	Summary Row A&Ww Attaining FC Attaining FBC Attaining AgL Attaining	1998 - 2002 16 samples 7 sampling events	No exceedances						ADEQ collected 16 samples at 6 sites in 1998-2002. Assessed as "attaining all uses."
Cox Gulch headwaters - Three R Canyon AZ15050301-560 A&Ww, FBC, FC (tributary rule)	ADEQ TMDL Program Above European Mine Canyon SCCIE001.04	1999 - 1 partial suite	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	25	1 of 1			
				varies by hardness (A&Ww chronic)		1 of 1			
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	6000	1 of 1			
				varies by hardness (A&Ww chronic)		1 of 1			
			Copper (total) µg/L	500 (AgL)	8700	1 of 1			
				1300 (FBC)		1 of 1			
	Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	5900	1 of 1					
		varies by hardness (A&Ww chronic)		1 of 1					
	ADEQ TMDL Program Below European Mine Canyon SCCIE000.85	1999 - 1 partial suite 2000 - 1 partial suite	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	15 - 60	2 of 2			
				varies by hardness (A&Ww chronic)		2 of 2			

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT					
			Cadmium (total) µg/L	50 (Agl)	72	1 of 2						
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	8200 - 18,000	2 of 2						
				varies by hardness (A&Ww chronic)		2 of 2						
			Copper (total) µg/L	500 (Agl)	8600 - 18,000	2 of 2						
				1300 (FBC)		2 of 2						
			pH SU	6.5 - 9.0 (A&Ww, FBC)	3.3	1 of 1						
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	3200 - 11,000	2 of 2						
				varies by hardness (A&Ww chronic)		2 of 2						
			Summary Row	1999 - 2000	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)		15 - 60	3 of 3 samples 2 of 2 events (in 1999 and 2000)	Not attaining	ADEQ collected 3 samples at 2 sites in 1999-2000. Cadmium, copper, pH, and zinc loadings on this reach were addressed in the TMDL for Three R Canyon approved by EPA in 2003. Assessed as "not attaining" due to cadmium, copper, pH, and zinc exceedances. Placed on the Planning List for TMDL follow up monitoring and missing core parameters: <i>Escherichia coli</i> , dissolved oxygen, total mercury, turbidity/SSC.	
			A&Ww Not attaining	3 samples		varies by hardness (A&Ww chronic)		15 - 60	3 of 3 samples	Not attaining		
			FC Inconclusive	2 sampling events		Copper (dissolved) µg/L		varies by hardness (A&Ww acute)	8000 - 18,000	3 of 3 samples 2 of 2 events (in 1999 - 2000)		Not attaining
			FBC Not attaining					varies by hardness (A&Ww chronic)	8000 - 18,000	3 of 3 samples 2 of 2 events		Not attaining
						Copper (total) µg/L		1300 (FBC)	8600 - 18,000	3 of 3		Inconclusive (Not attaining*)
						pH SU		6.5 - 9.0 (A&Ww, FBC)	3.3	1 of 1		Inconclusive (Not attaining*)

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	3200 - 11,000	3 of 3 samples 2 of 2 events (in 1999 - 2000)	Not attaining	
				varies by hardness (A&Ww chronic)	3200 - 11,000	3 of 3 samples 2 of 2 events	Not attaining	
Cox Gulch, <u>unnamed tributary of</u> headwaters-Cox Gulch AZ15050301-877 A&We, PBC (tributary rule)	ADEQ TMDL Program Above Cox Gulch SCUCX000.01	1999 - 1 partial suite	Copper (dissolved) µg/L	varies by hardness (A&We)	7600	1 of 1		
			Copper (total) µg/L	1300 (PBC)	7600	1 of 1		
			Zinc (dissolved) µg/L	varies by hardness (A&We)	2900	1 of 1		
	Summary Row	1999 1 sampling event	Copper (dissolved) µg/L	varies by hardness (A&We)	7600	1 of 1 event (in 1999)	Inconclusive (Not attaining*)	Insufficient monitoring data to assess. Copper and zinc loadings from this reach were addressed in the TMDL for Three R Canyon approved by EPA in 2003. *Although current data copper and zinc are "inconclusive," the uses are assessed as "not attaining" until data indicate that all uses are being attained for parameters addressed in the TMDL.
	Copper (total) µg/L		1300 (PBC)	7600	1 of 1	Inconclusive (Not attaining*)		
Zinc (dissolved) µg/L	varies by hardness (A&We)		2900	1 of 1 event (in 1999)	Inconclusive (Not attaining*)			
Harshaw Creek headwaters-Sonoita Creek AZ15050301-025 A&We, PBC, AgL	ADEQ TMDL Program Below unnamed trib (Endless Chain trib) SCHRC013.63	1999 - 1 partial suite	Copper (dissolved) µg/L	varies by hardness (A&We)	62	1 of 1		
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	4.6	1 of 1		
	ADEQ TMDL Program Below Trench Camp Mine SCHRC011.56	1998 - 3 partial suites	No exceedances					
	Summary Row	1998 - 1999 4 samples 4 sampling events	Copper (dissolved) µg/L	varies by hardness (A&We)	<15 - 62	1 of 4 samples 1 of 4 events (in 1999)	Inconclusive (Not attaining*)	ADEQ collected 4 samples at 2 sites in 1998-1999. TMDLs for copper, zinc, and low pH were approved by EPA in 2003. Assessed as "not attaining" due to copper exceedances and low pH. *Although current copper and pH data are inconclusive, this reach will remain "not attaining" until all uses are being attained for parameters addressed in the TMDLs. Placed on the Planning List for TMDL follow-up monitoring and missing core parameter: total lead.
	pH SU		6.5 - 9.0 (A&We, PBC, AgL)	4.6 - 7.5	1 of 4	Inconclusive (Not attaining*)		

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED			
Harshaw Creek, <u>unnamed tributary</u> of (Endless Chain Mine trib) headwaters-Harshaw Creek AZ15050301-888 A&We, PBC (tributary rule)	ADEQ TMDL Program Above mined area SCUHR00.56	1999 - 2 partial suites	pH SU	6.5 - 9.0 (A&We, PBC, AgL)	5.2 - 6.3	1 of 2			
	ADEQ TMDL Program Above Endless Chain Mine SCUHR000.38	1999 - 1 partial suite	pH SU	6.5 - 9.0 (A&We, PBC, AgL)	6.2	1 of 1			
	Summary Row A&We Not attaining PBC Not attaining	1999 3 samples 2 sampling events	pH SU	6.5 - 9.0 (A&We, PBC)	5.2 - 6.3	1 of 3	Inconclusive (Not attaining*)	Loadings (pH) from this reach were addressed in the TMDL for Harshaw Creek approved by EPA in 2003. Although current pH data are inconclusive, the assessment will remain "not attaining" until data indicate that all uses are being attained for parameters addressed in the TMDL.	
Humboldt Canyon headwaters - Alum Gulch AZ15050301-340 A&Ww, FBC, FC (tributary rule)	ADEQ TMDL Program Intersection with jeep road SCHMC002.41	1999 - 1 partial suite	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	2.8	1 of 1			
				varies by hardness (A&Ww chronic)		1 of 1			
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	540	1 of 1			
				varies by hardness (A&Ww chronic)		1 of 1			
			Copper (total) µg/L	500 (AgL)	550	1 of 1			
			pH SU	6.5 - 9.0 (A&Ww, PBC, AgL)	3.3	1 of 1			
	Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	210	1 of 1					
		varies by hardness (A&Ww chronic)		1 of 1					
	ADEQ TMDL Program Base of falls Above Humboldt well SCHMC001.27	1999 - 1 partial suite	Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	140	1 of 1			
				varies by hardness (A&Ww chronic)		1 of 1			
pH SU			6.5 - 9.0 (A&We, PBC, AgL)	3.6	1 of 1				
Zinc (dissolved) µg/L			varies by hardness (A&Ww acute)	85	1 of 1				
	varies by hardness (A&Ww chronic)	1 of 1							

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	
<p>Summary Row</p> <p>A&Ww Not attaining FC Inconclusive FBC Not attaining</p>	<p>1999</p> <p>2 samples 1 sampling event</p>	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	2.8	2 of 2 samples 1 of 1 event (in 1999)	Inconclusive (Not attaining*)	<p>Insufficient monitoring data to assess. Cadmium, copper, zinc and pH loadings from this tributary were addressed in the Alum Gulch TMDLs approved by EPA in 2003.</p> <p>*Although current data for cadmium, copper, pH and zinc are "inconclusive," assessments will remain "not attaining" until data indicate that all uses are being attained for parameters addressed in the TMDL.</p> <p>Placed on the Planning List for TMDL follow-up monitoring.</p>	
			varies by hardness (A&Ww chronic)			Inconclusive (Not attaining*)		
		Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	140 - 540	2 of 2 samples 1 of 1 event (in 1999)	Inconclusive (Not attaining*)		
			varies by hardness (A&Ww chronic)			Inconclusive (Not attaining*)		
		pH SU	6.5 - 9.0 (A&Ww, FBC)	3.3 - 3.6	2 of 2	Inconclusive (Not attaining*)		
		Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	85 - 210	2 of 2 samples 1 of 1 event (in 1999)	Inconclusive (Not attaining*)		
varies by hardness (A&Ww chronic)	Inconclusive (Not attaining*)							
<p>Loma Verde Wash headwaters - unnamed trib to Tanque Verde Wash AZ15050302-268 A&We, PBC (tributary rule)</p>	<p>USGS Ambient Monitoring At Saguario National Park SCLMV003.51 101585</p>	2002 - 1 partial suite	No exceedances				<p>Insufficient monitoring data to assess.</p>	
	<p>USGS Ambient Monitoring At Saguario National Park SCLMV003.50 101594</p>	2002 - 1 partial suite	No exceedances					
	<p>Summary Row A&We Inconclusive PBC Inconclusive</p>	<p>2002</p> <p>2 sampling events</p>	No exceedances					
<p>Madera Canyon Creek headwaters - tributary at 31 43'42"/110 52'50" AZ15050301-322A A&Wc, FC, FBC, AgL</p>	<p>ADEQ Ambient Monitoring 1 mile Below Sprung Spring SCMAD007.63 100588</p>	2001 - 1 partial suite	No exceedances				<p>ADEQ collected 1 sample in 2002. Assessed as "inconclusive" due to insufficient monitoring events.</p>	
	<p>Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive</p>	<p>2001</p> <p>1 sampling event</p>	No exceedances					
<p>Madronea Creek headwaters - Rincon Creek AZ15050302-138 A&Ww, FC, FBC (tributary rule)</p>	<p>USGS Ambient Monitoring Near Madronea Ranger Station SCMDN001.32 101628</p>	2002 - 1 partial suite	No exceedances				<p>USGS collected samples 1 sample in 2002. Assessed as "inconclusive" due to insufficient monitoring events.</p>	
	<p>Summary Row A&Ww Inconclusive FC Inconclusive FBC Inconclusive</p>	<p>2002</p> <p>1 sampling event</p>	No exceedances					

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	
Nogales and East Nogales Wash Mexico border - Potrero Creek AZ15050301-011 A&Ww, PBC	ADEQ Fixed Station Network At Morley Street tunnel SCNGW004.23 100251	1998 - 3 full + 1 partial suite 1999 - 2 full + 2 partial suites 2000 - 3 full + 1 partial suite 2001 - 4 full suites 2002 - 1 full + 3 partial suites	Ammonia mg/L	varies by hardness (A&Ww chronic)	<0.02 - 9	4 of 18		
			Chlorine (total residual) µg/L	11 (A&Ww acute)	70 - 2830	12 of 12		
				5 (A&Ww chronic)		12 of 12		
			Chromium (total) µg/L	100 (PBC)	<10 - 250	1 of 18		
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 24	1 of 18		
				varies by hardness (A&Ww chronic)		2 of 18		
			Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	4.4 - 9.6 (63 - 108%)	3 of 18		
			<i>Escherichia coli</i> CFU/100 ml	576 (PBC)	<2 - too numerous to count	9 of 14		
			Lead (total) µg/L	15 (PBC)	<5 - 190	2 of 18		
			Turbidity (former standard) NTU	50 (A&Ww)	2 - 2730	5 of 18		
ADEQ Ambient Monitoring South of Rte. 82 overpass to E. Calle Sonora Rd. bridge (5 sites) SCNGW003.8 - SCNGW001.7	1998 - 1 chlorine	Chlorine (total residual) µg/L	11 (A&Ww acute)	50 - 380	5 of 5			
		5 (A&Ww chronic)	5 of 5					
Summary Row	1998 - 2002	Ammonia mg/L	varies by hardness (A&Ww chronic)	<0.02 - 9	4 of 18 samples 4 of 18 events	Impaired	ADEQ collected 21 samples at 2 sites in 1998 - 2002. Assessed as "impaired" due to ammonia, chlorine, copper, and <i>Escherichia coli</i> exceedances. Placed on the Planning List due to turbidity exceedances. Monitoring will be scheduled to determine whether suspended sediment or bottom deposit violations are occurring.	
A&Ww Impaired PBC Impaired	21 samples 21 sampling events	Chlorine (total residual) µg/L	11 (A&Ww acute)	70 - 2830	17 of 17 samples 12 of 12 events (1998-2001)	Impaired		
			5 (A&Ww chronic)		17 of 17 samples 12 of 12 events	Impaired		
		Chromium (total) µg/L	100 (PBC)	<10 - 250	1 of 18	Attaining		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	<10 - 24	1 of 18 samples 1 of 18 events (last 3 years with no acute exceedances)	Attaining	
				varies by hardness (A&Ww chronic)				
			Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	4.4 - 9.6 (63 - 108%)	3 of 18	Attaining	
			<i>Escherichia coli</i> CFU/100 ml	576 (PBC)	<2 - too numerous to count	9 of 14 samples 9 of 14 events (exceedances every year)	Impaired	
			Lead (total) µg/L	15 (PBC)	<5 - 190	2 of 18	Attaining	
			Turbidity (former standard) NTU	50 (A&Ww)	2 - 2730	5 of 18	Inconclusive	
Potrero Creek Interstate 19 - Santa Cruz River AZ15050301-500B A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring 0.3 miles north of Nogales Fire Station B SCPOT003.5 100705	1998 - 1 chlorine	Chlorine (total residual) µg/l	11 (A&Ww acute)	30	1 of 1		
				5 (A&Ww chronic)		1 of 1		
	ADEQ Ambient Monitoring Half mile north of Nogales suburban Fire Station B SCPOT003.38 100207	1998 - 1 partial suite	No exceedances					
	ADEQ Ambient Monitoring Bridge on Old Tucson Road SCPOT001.9 100703	1998 - 1 chlorine	Chlorine (total residual) µg/L	11 (A&Ww acute)	80	1 of 1		
				5 (A&Ww chronic)		1 of 1		
	Friends of the Santa Cruz At Ruby Road SCPOT001.53 100571	1998 - 12 partial suites 1999 - 7 partial suites 2000 - 11 partial suites 2001 - 7 partial suites	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	0.5 - 14	3 of 31		
			Turbidity (former standard) NTU	50 (A&Ww)	2 - 200	1 of 15		
	ADEQ Ambient Monitoring Above Wastewater Treatment Plant SCPOT000.72 100208	1998 - 1 partial suite	Chlorine (total residual) µg/L	11 (A&Ww acute)	80	1 of 1		
				5 (A&Ww chronic)		1 of 1		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	
			Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	17	1 of 1		
	ADEQ Ambient Monitoring At Santa Cruz River SCPOT000.1 100702	1998 - 1 chlorine	Chlorine (total residual) µg/L	11 (A&Ww acute)	800	1 of 1		
				5 (A&Ww chronic)		1 of 1		
	Summary Row	1998 - 2001	Chlorine (total residual) µg/L	11 (A&Ww acute)	30 - 800	4 of 4 samples 1 of 1 event (in 1998)	Inconclusive	ADEQ and Friends of the Santa Cruz River (a volunteer monitoring group) collected 47 samples at 6 sites in 1998-2001. Assessed as "inconclusive" and placed on the Planning List due to: 1. Chlorine exceedance, 2. Copper exceedance, 3. Missing core parameters: dissolved metals (cadmium, copper, and zinc) and total metals (mercury, lead, and copper).
	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive	47 samples 43 sampling events		5 (A&Ww chronic)	30 - 800	4 of 4 samples 1 of 1 event	Inconclusive	
			Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	17	1 of 1 sample 1 of 2 events	Inconclusive	
			Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	0.5 - 14	3 of 33	Attaining	
			Turbidity (former standard) NTU	50 (A&Ww)	2 - 200	1 of 17	Attaining	
Redrock Canyon Creek headwaters - Harshaw Creek AZ15050301-576 A&Ww, FBC, FC	ADEQ Ambient Monitoring Near Patagonia SCRED002.17 101080	2000 - 1 full suite 2001 - 4 full suites	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	5.2 - 10.0 (71 - 110%)	1 of 4		Low dissolved oxygen due to natural drying of the stream and not anthropogenic causes. Not considered in final assessment.
	Summary Row	2000 - 2001	No exceedances					ADEQ collected 5 samples in 2000- 2001. Assessed as "attaining all uses."
	A&Ww Attaining FBC Attaining FC Attaining	5 samples 5 sampling events						
Sabino Canyon Creek tributary at 32° 23'28"/110° 47'00" - Tanque Verde Wash AZ15050302-014B A&Ww, FC, FBC, DWS, AgL	ADEQ Ambient Monitoring Above East Fork Sabino Cyn SCSAB007.56 100635	2001 - 1 partial suite	No exceedances					Low dissolved oxygen due to low flow conditions and not anthropogenic causes. Not considered in final assessment.
	ADEQ Ambient Monitoring Near Tucson SCSAB004.39 101152	2000 - 1 full suite 2001 - 3 full suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	5.7 - 10.5 (72 - 97%)	1 of 4		Lab detection limits for cadmium, copper, and zinc were too high to use results for assessment.
	Summary Row	2000 - 2001	No exceedances					ADEQ collected 5 samples at 2 sites in 2000-2001. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: dissolved metals (cadmium, copper, zinc).
	A&Ww Inconclusive FC Attaining FBC Attaining DWS Attaining AgL Attaining	5 samples 4 sampling events						
Santa Cruz River headwaters - Mexico border AZ15050301-268 A&Ww, FC, FBC, AgL, AgL	Friends of the Santa Cruz River Near Lochiel SCSCR099.03 100242	2000 - 1 full suite 2001 - 3 full suites	No exceedances					

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS		
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT			
	Summary Row A&Ww Attaining FC Attaining FBC Attaining AgI Attaining AgL Attaining	2000 - 2001 4 sampling events	No exceedances					Friends of the Santa Cruz River (a volunteer monitoring group) collected 4 samples in 2000-2001. Assessed as "attaining all uses."		
Santa Cruz River Mexican border - Nogales WWTP AZ15050301-010 A&Ww, FC, FBC, DWS, AgI, AgL	ADEQ Ambient Monitoring At International Boundary SCSCR097.28 100239	1998 - 1 partial suite 1999 - 2 full suites 2000 - 4 full suites 2001 - 4 full suites	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	4.3 - 10.0 (64 - 113%)	2 of 11				
			<i>Escherichia coli</i> CFU/100 ml	235 (FBC)	<2 - 10,000	2 of 11				
			Lead (total) µg/L	15 (DWS, FBC)	<5 - 62	1 of 11				
			Manganese (total) µg/L	980 (DWS)	<50 - 1500	1 of 11				
			Mercury (total) µg/L	0.6 (FC)	<0.5 - 0.8	1 of 11				
			Turbidity (former standard) NTU	50 (A&Ww)	0.96 - 1854	1 of 9				
	Friends of the Santa Cruz River At Guevavi Ranch SCSCR091.90 100246	1998 - 2 partial suites 1999 - 4 partial suites 2000 - 6 partial suites 2001 - 4 partial suites	Turbidity (former standard) NTU	50 (A&Ww)	2 - 200	1 of 9				
			Summary Row A&Ww Attaining FC Attaining FBC Impaired DWS Attaining AgI Attaining AgL Attaining	1998 - 2001 27 samples 16 sampling events	Dissolved oxygen mg/L	> 6.0 (90% saturation) (A&Ww)	4.3 - 10.0 (64 - 113%)		2 of 20	Attaining
				<i>Escherichia coli</i> CFU/100 ml	235 (FBC)	<2 - 10,000	2 of 23 samples 2 of 20 events (occurred in 1999 and 2000)		Impaired	ADEQ and Friends of the Santa Cruz River (a volunteer monitoring group) collected 27 samples at 2 sites in 1998-2001. Assessed as "impaired" due to <i>Escherichia coli</i> exceedances.
				Lead (total) µg/L	15 (DWS, FBC)	<5 - 62	1 of 15		Attaining	
				Manganese (total) µg/L	980 (DWS)	<50 - 1500	1 of 15		Attaining	
				Mercury (total) µg/L	0.6 (FC)	<0.5 - 0.8	1 of 15		Attaining	
			Turbidity (former standard) NTU	50 (A&Ww)	0.25 - 200	2 of 22	Attaining			

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	
Santa Cruz River Nogales WWTP - Josephine Cyn. AZ15050301-009 A&Wedw, PBC, AgL	Friends of the Santa Cruz River At Rio Rico SCSCR087.08 100238	1998 - 12 partial suites 1999 - 5 partial suites 2000 - 9 partial suites 2001 - 7 partial suites	Turbidity (former standard) NTU	50 (A&Wedw)	3 - 200	1 of 15		
	Summary Row A&Wedw Inconclusive PBC Attaining AgL Inconclusive	1998 - 2001 33 sampling events	Turbidity (former standard) NTU	50 (A&Wedw)	3 - 200	1 of 15	Attaining	Friends of the Santa Cruz River (a volunteer monitoring group) collected 33 samples in 1998-2001. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: dissolved metals (cadmium, copper, and zinc) and total metals (copper and lead).
Santa Cruz River Josephine Canyon - Tubac bridge AZ15050301-008A A&Wedw, PBC, AgL	Friends of the Santa Cruz River At Santa Gertrudis Lane SCSCR080.50 100247	1998 - 12 partial suites 1999 - 12 partial suites 2000 - 11 partial suites 2001 - 9 partial suites	Turbidity (former standard)	50 (A&Wedw)	14 - 200	8 of 20		
	ADEQ Ambient Monitoring Near Tubac SCSCR080.45 101002	2000 - 1 full suite 2001 - 1 full suite	Chlorine (total residual) µg/L	11 (A&Wedw acute) 5 (A&Wedw chronic)	90	1 of 1 1 of 1		
	Summary Row A&Wedw Inconclusive PBC Attaining AgL Inconclusive	1998 - 2001 46 samples 45 sampling events	Chlorine (total residual) µg/L	11 (A&Wedw acute) 5 (A&Wedw chronic)	90	1 of 1 event (in 2001)	Inconclusive	ADEQ and Friends of the Santa Cruz River (a volunteer monitoring group) collected 46 samples at 2 sites in 1998-2001. Assessed as "attaining some uses" and placed on the Planning List due to: 1. Chlorine exceedance and 2. Missing core parameters: dissolved metals (cadmium, copper, and zinc) and total metals (copper and lead). 3. Former turbidity standard exceedances. Monitoring will be scheduled to determine whether bottom deposit violations are occurring.
			Turbidity (former standard) NTU	50 (A&Wedw)	14 - 200	8 of 20	Inconclusive (see comment*)	
Santa Cruz River Tubac bridge - Sopori Wash AZ15050301-008B A&We, PBC, AgL	Friends of the Santa Cruz R. North of Chavez Siding Rd. SCSCR081.34 100244	1998 - 10 partial suites 1999 - 12 partial suites 2000 - 11 partial suites 2001 - 9 partial suites	pH SU	6.5 - 9.0 (A&We, PBC, AgL)	2.6 - 8.0	1 of 34		
	Summary Row A&We Inconclusive PBC Attaining AgL Inconclusive	1998 - 2001 42 samples 42 sampling events	pH SU	6.5 - 9.0 (A&We, PBC, AgL)	2.6 - 8.0	1 of 34	Attaining	Friends of the Santa Cruz River (a volunteer monitoring group) collected 42 samples in 1998 - 2001. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: dissolved metals (cadmium, copper, and zinc) and total metals (copper and lead).

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	
Santa Cruz River Roger Rd. WWTP outfall - Rillito Creek AZ15050301-003B A&We, PBC	Pima County Wastewater Management Department SC-01 SCSCR033.90	2001 - 3 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-02 SCSCR032.49	2001 - 2 dissolved oxygen	No exceedances					
	Summary Row A&Wedw Inconclusive PBC Inconclusive	2001 5 samples 3 sampling events	No exceedances					
Santa Cruz River Canada del Oro - HUC boundary 15050303 AZ15050301-001 A&Wedw, PBC	Pima County Wastewater Management Department SC-03 SCSCR030.15	2001 - 3 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-04 SCSCR028.64	2001 - 1 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-05 SCSCR027.69	2001 - 3 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-06 SCSCR026.80	2001 - 1 dissolved oxygen	No exceedances					
	ADEQ Ambient Monitoring Near Marana SCSCR025.40 101081	2001 - 4 full suites	Chlorine (total residual) µg/L	11 (A&Wedw acute)	0 - 480	1 of 2		
				5 (A&Wedw chronic)		1 of 2		
	Pima County Wastewater Management Department SC-07 SCSCR025.17	2001 - 2 dissolved oxygen	No exceedances					
Summary Row A&Wedw Inconclusive PBC Attaining	2001 14 samples 9 sampling events	Chlorine (total residual) µg/L	11 (A&Wedw acute) 5 (A&Wedw chronic)	0 - 480 0 - 480	1 of 2 samples 1 of 2 events (in 2001) 1 of 2 samples 1 of 2 events	Inconclusive Inconclusive		ADEQ and Pima County collected a total of 14 samples at 6 sites in 2001. Assessed as "attaining some uses" and placed on the Planning List due to chlorine exceedance.

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	
Santa Cruz River HUC boundary 15050303 - Baumgartner Rd. AZ15050303-005A A&Wedw, PBC	Pima County Wastewater Management Department SC-08 SCSCR024.30	2001 - 3 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-09 SCSCR022.19	2001 - 3 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-10 SCSCR021.50	2001 - 3 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-11 SCSCR019.39	2001 - 3 dissolved oxygen	No exceedances					
	Pima County Wastewater Management Department SC-12 SCSCR017.96	2001 - 3 dissolved oxygen	No exceedances					
	Summary Row A&Wedw Inconclusive PBC Inconclusive	2001 15 samples 6 sampling events	No exceedances					Pima County collected 15 samples at 5 sites in 2001. Assessed as "inconclusive" and placed on the Planning List due to missing core parameters: <i>Escherichia coli</i>, pH, and dissolved metals (cadmium, copper, and zinc).
Sonoita Creek 750 feet below WWTP - Santa Cruz AZ15050301-013C A&Ww, FC, FBC, Agl, AgL	ADEQ Ambient Monitoring At Circle Z Ranch SCSON007.09 101154	2000 - 1 full suite 2001 - 3 full suites	Copper (dissolved) µg/L	varies by hardness (A&Ww chronic)	<10 - 34	1 of 4		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	67 - 860	2 of 4		
				varies by hardness (A&Ww chronic)		2 of 4		
	ADEQ TMDL Program Above Temporal Gulch, Below spring at Nature Cons. SCSON015.6	1998 - 3 partial suites	Dissolved oxygen mg/l	>6.0 (90% saturation) (A&Ww)	5.2 - 7.3 (64 - 81%)	1 of 3		Low dissolved oxygen due to naturally occurring ground water upwelling, and not anthropogenic causes. Not included in final assessment.
Summary Row A&Ww Impaired FC Attaining FBC Attaining Agl Attaining Agl Attaining	1998 - 2001 7 sampling events	Copper (dissolved) µg/L	varies by hardness (A&Wedw chronic)	<10 - 34	1 of 4 events	Inconclusive	ADEQ collected 7 samples in 1998-2001. Assessed as "impaired" due to zinc exceedances.	
		Zinc (dissolved) µg/L	varies by hardness (A&Wedw acute)	67 - 860	2 of 4 events (in 2000-2001)	Impaired	Placed on the Planning List due to copper exceedance.	
			varies by hardness (A&Wedw chronic)	67 - 860	2 of 4 events	Impaired		
Sycamore Canyon Creek headwaters - Mexico border AZ15080200-002 A&Ww, FC, FBC, AgL	ADEQ Ambient Monitoring Above Penasco Canyon RMSYC002.33 100660	2001 - 1 partial suite	No exceedances					

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	
	Summary Row A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive	2001 1 sampling event	No exceedances					Insufficient monitoring data to assess.
Three R Canyon headwaters - 31 28°35'110 46°19' AZ15050301-558A A&We, PBC, AgL	ADEQ TMDL Program Above 3R Mine, south branch SCTHC004.50	1999 - 1 partial suite	Copper (dissolved) µg/L	varies by hardness (A&We)	380	1 of 1		
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.7	1 of 1		
	ADEQ TMDL Program Above most upstream springs, below 3R mine SCTHC004.07	1999 - 1 partial suite	Copper (dissolved) µg/L	varies by hardness (A&We)	7200	1 of 1		
			Copper (total) µg/L	500 (AgL)	7700	1 of 1		
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.5	1 of 1		
	Summary Row A&We Not attaining PBC Not attaining AgL Not attaining	1999 2 samples 1 sampling event	Copper (dissolved) µg/L	varies by hardness (A&We)	380 - 7200	2 of 2 samples 1 of 1 event (in 1999)	Inconclusive (Not attaining)	Insufficient monitoring data to assess. TMDLs for cadmium, copper, zinc, and pH were approved by EPA in 2003. *Although current pH and copper data are inconclusive, designated uses will remain "not attaining" until data indicate that all uses are being attained for all parameters addressed in the TMDL. Placed on the Planning List for TMDL follow-up monitoring.
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.7	2 of 2	Inconclusive (Not attaining*)	
Three R Canyon 31 28°35'110 46°19"- 31 28°27'110 47°12" AZ15050301-558B A&Ww, FC, FBC, AgL	ADEQ TMDL Program Below most upstream springs SCTHC004.01	1998 - 3 partial suites 1999 - 1 partial suite 2000 - 1 partial suite	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	35 - 59	5 of 5		
				varies by hardness (A&Ww chronic)		5 of 5		
		Cadmium (total) µg/L	50 (AgL)	40 - 54	2 of 5			
		Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	44,000 - 71,900	5 of 5			
			varies by hardness (A&Ww chronic)		5 of 5			
		Copper (total) µg/L	1300 (FBC)	45,200 - 66,100	5 of 5			
			500 (AgL)		5 of 5			
		pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	2.9 - 3.1	4 of 4			
Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	850 - 1750	5 of 5					

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			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	COMMENTS	
				varies by hardness (A&Ww chronic)			5 of 5		
	Summary Row A&Ww Not attaining FC Inconclusive FBC Not attaining AgL Not attaining	1998 - 2000 5 samples 5 sampling events	Cadmium (dissolved) µg/L	varies by hardness (A&Ww acute)	35 - 59	5 of 5 events (1998-2000)	Not attaining	<p>ADEQ collected 5 samples in 1998-2000. TMDLs for cadmium, copper, zinc, and pH were approved by EPA in 2003. Assessed as "not attaining" due to cadmium, copper and zinc exceedances, and low pH.</p> <p>*Although current data for some designated uses are inconclusive, the reach will remain "not attaining" until data indicate that all uses are being attained for parameters addressed in the TMDL.</p> <p>Placed on the Planning List for TMDL follow-up monitoring and missing core parameters: <i>Escherichia coli</i>, total lead, total mercury, and turbidity/SSC.</p>	
				varies by hardness (A&Ww chronic)	35 - 59	5 of 5 events	Not attaining		
			Cadmium (total) µg/L	50 (AgL)	40 - 54	2 of 5	Inconclusive (Not attaining*)		
			Copper (dissolved) µg/L	varies by hardness (A&Ww acute)	44,000 - 71,900	5 of 5 events (in 1998-2000)	Not attaining		
				varies by hardness (A&Ww chronic)	44,000 - 71,900	5 of 5 events	Not attaining		
			Copper (total) µg/L	1300 (FBC)	45,200 - 66,100	5 of 5	Inconclusive (Not attaining*)		
				500 (AgL)	45,200 - 66,100	5 of 5	Inconclusive (Not attaining*)		
			pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	2.9 - 3.1	4 of 5	Inconclusive (Not attaining*)		
			Zinc (dissolved) µg/L	varies by hardness (A&Ww acute)	850 - 1750	5 of 5 events (in 1998-2000)	Not attaining		
				varies by hardness (A&Ww chronic)	850 - 1750	5 of 5 events	Not attaining		
Three R Canyon 31 28'27"110 47'12" - Sonoita Creek AZ15050301-558C A&We, PBC, AgL	ADEQ TMDL Program Below Cox Gulch SCTHC003.03	1998 - 2 partial suites	Copper (dissolved) µg/L	varies by hardness (A&We)	12,500 - 36,200	2 of 2			
			Copper (total) µg/L	1300 (PBC)	14,800 - 34,500	2 of 2			
				500 (AgL)		2 of 2			
			pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.4 - 3.9	2 of 2			
			Zinc (dissolved) µg/L	varies by hardness (A&We)	920 - 5010	1 of 2			

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	
Summary Row A&We Not attaining PBC Not attaining AgL Not attaining	1998 2 samples 2 sampling events	Copper (dissolved) µg/L	varies by hardness (A&We)	12,500 - 36,200	2 of 2 events (in 1998)	Not attaining	Insufficient monitoring data to assess. TMDLs for cadmium, copper, zinc, and pH were approved by EPA in 2003. *Although current data for pH and zinc are "inconclusive," assessments will remain "not attaining" until data indicate that all uses are being attained for parameters addressed in the TMDL. Placed on the Planning List for TMDL follow-up monitoring.	
		Copper (total) µg/L	1300 (PBC)	14,800 - 34,500	2 of 2	Inconclusive (Not attaining*)		
			500 (AgL)		2 of 2	Inconclusive (Not attaining*)		
		pH SU	6.5 - 9.0 (A&We, PBC, AgL)	3.4 - 3.9	2 of 2	Inconclusive (Not attaining*)		
		Zinc (dissolved) µg/L	varies by hardness (A&We)	920 - 5010	1 of 2 (in 1998)	Inconclusive (Not attaining*)		
Three R Canyon - unnamed tributary of headwaters - Three R Canyon AZ15050301-889 A&We, PBC (tributary rule)	ADEQ TMDL Program Upstream from 3R Mine, north tributary SCUTH00.30	1999 - 1 partial suite	Copper (dissolved) µg/L	varies by hardness (A&We)	1400	1 of 1		
			pH SU	6.5 - 9.0 (A&We, PBC)	3.8	1 of 1		
	Summary Row A&We Not attaining PBC Not attaining	1999 1 sampling event	Copper (dissolved) µg/L	varies by hardness (A&We)	1400	1 of 1 (in 1999)		Inconclusive (Not attaining*)
			pH SU	6.5 - 9.0 (A&We, PBC)	3.8	1 of 1		Inconclusive (Not attaining*)

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	
LAKE MONITORING DATA								
Arivaca Lake AZL15050304-0080 A&Ww, FC, FBC, Agl, AgL	ADEQ Lakes Program Routine Monitoring SCARI-A 100000	1998 - 3 partial suites 2000 - 1 partial suite 2001 - 3 full suites	Dissolved oxygen mg/L	>6.0 (A&Ww)	1.8 - 12.9 (25 - 150%)	1 of 7		
			pH SU	6.5 - 9.0 (A&Ww, FBC, Agl, AgL)	6.3 - 9.5	1 of 7		
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<2 - 7	1 of 7		
	Summary Row	1998 - 2001	Dissolved oxygen mg/L	>6.0 (A&Ww)	1.8 - 12.91 (25 - 150%)	1 of 7	Inconclusive	<p>ADEQ collected 7 samples in 1998-2001. Assessed as "not attaining" due to mercury in fish tissue.</p> <p>*A TMDL for mercury in fish tissue was approved by EPA in 1999. The lake will remain "not attaining" until sufficient data are collected to indicate that mercury in fish tissue is no longer a concern.</p> <p>Placed on the Planning List due to a fish kill in 1999. Fish kill may be evidence of a narrative standard violation.</p> <p>Also placed on the Planning List for TMDL follow-up monitoring, low dissolved oxygen, high pH, selenium exceedances, and missing core parameters: <i>Escherichia coli</i> and dissolved metals (cadmium, copper, and zinc).</p>
	A&Ww Inconclusive FC Not attaining* FBC Inconclusive Agl Inconclusive AgL Inconclusive	7 samples 7 sampling events	pH SU	6.5 - 9.0 (A&Ww, FBC, Agl, AgL)	6.3 - 9.5	1 of 7	Inconclusive	
			Selenium (total) µg/L	2.0 (A&Ww chronic)	<2 - 7	1 of 7 events	Inconclusive	
Kennedy Lake AZL15050301-0720 A&Ww, FC, PBC	AGFD Urban Lakes Study SCKEN-A 100028	1998 - 11 field	No exceedances					
	AGFD Urban Lakes Study SCKEN-B 101052	1998 - 11 field	pH	6.5 - 9.0 (A&Ww, PBC)	8.5 - 9.3	1 of 11		
	AGFD Urban Lakes Study SCKEN-AB	1998 - 4 partial suites	No exceedances					
	Summary Row	1998	pH SU	6.5 - 9.0 (A&Ww, PBC)	8.5 - 9.3	1 of 11	Attaining	<p>AGFD collected 26 samples at 3 sites in 1998. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: <i>Escherichia coli</i> and dissolved metals (cadmium, copper, and zinc).</p>
Lakeside Lake AZL15050302-0760 A&Ww, FC, PBC	AGFD Urban Lakes Study SCLAK-A 100034	1998 - 12 partial suites	Dissolved oxygen mg/L	>6.0 (90% saturation) (A&Ww)	2.4 - 17.1 (32 - 176%)	2 of 12		
			pH SU	6.5 - 9.0 (A&Ww, PBC)	7.3 - 9.9	2 of 12		
	Univ. of Arizona Lake Study Site A	1998 - 11 partial suites	Ammonia mg/L	varies by pH and temperature (A&Ww)	0.05 - 1.4	1 of 10		
			Dissolved oxygen mg/L	>6.0 (A&Ww)	1.6 - 19.5	3 of 10		
			pH SU	6.5 - 9.0 (A&Ww, PBC)	6.8 - 9.5	1 of 10		

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					DESIGNATED USE SUPPORT	COMMENTS
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED			
			Turbidity (former standard) NTU	25 (A&Ww)	6 - 300	7 of 10			
	AGFD Urban Lakes Study and Routine Monitoring SCLAK-B 100035	1998 - 11 partial suites 2002 - 2 partial suites	Dissolved oxygen mg/L	>6.0 (A&Ww)	1.5 - 14.4 (18 - 149%)	2 of 11			
			pH SU	6.5 - 9.0 (A&Ww, PBC)	7.5 - 9.8	1 of 11			
	AGFD Urban Lakes Study SCLAK-AB 101059	1998 - 4 partial suites	No exceedances						
	Univ. of Arizona Lake Study Site H	1998 - 11 partial suites	Ammonia mg/L	varies by pH and temperature (A&Ww)	0.2 - 1.5	2 of 11			
			Dissolved oxygen mg/L	>6.0 (A&Ww)	1.0 - 17.1	5 of 11			
			Turbidity (former standard) NTU	25 (A&Ww)	0.2 - 380	7 of 11			
	Univ. of Arizona Lake Study Site I	1998 - 11 partial suites	Ammonia mg/L	varies by pH and temperature (A&Ww)	0.3 - 2.4	1 of 11			
			Dissolved oxygen mg/L	>6.0 (A&Ww)	1.0 - 19.2	4 of 11			
			pH SU	6.5 - 9.0 (A&Ww, PBC)	7.3 - 9.4	1 of 11			
			Turbidity (former standard) NTU	25 (A&Ww)	0.2 - 500	7 of 11			
	Summary Row A&Ww Impaired FC Attaining PBC Inconclusive	1998 - 2002 55 samples 25 sampling events	Ammonia mg/L	varies by pH and temperature (A&Ww chronic)	0.05 - 2.4	4 of 33 samples 2 of 11 events	Impaired	AGFD and Univ. of Arizona collected 55 samples in 1998-2002. Assessed as "impaired" due to ammonia exceedances and low dissolved oxygen. Also placed on the Planning List due to: 1. Missing core parameters: <i>Escherichia coli</i> and dissolved metals (cadmium, copper, and zinc). 2. Former turbidity standard exceedances. Causes and sources of turbidity will be investigated during the next monitoring cycle for this watershed.	
			Dissolved oxygen mg/L	>6.0 (A&Ww)	1.0 - 19.5	16 of 55	Impaired		
			pH SU	6.5 - 9.0 (A&Ww, PBC)	6.8 - 9.9	5 of 55	Attaining		
			Turbidity (former standard) NTU	25 (A&Ww)	0.2 - 500	21 of 34	Inconclusive (see comment*)		
Parker Canyon Lake AZL15050301-1040 A&Wc, FC, FBC, Agl, AgL	ADEQ Lakes Program SCPAK-A 100057	2000 - 1 partial suite 2001 - 3 full suites	No exceedances						
	ADEQ Lakes Program SCPAK-D 100058	1998 - 2 partial suites	No exceedances						

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	
	Summary Row A&Wc Inconclusive FC Inconclusive FBC Inconclusive Agl Attaining AgL Attaining	1998 - 2001 6 samples 6 sampling events	No exceedances					ADEQ collected 6 samples at 2 sites in 1998-2001. Assessed as "attaining some uses." Placed on the Planning List due to: 1. A fish consumption advisory (issued in 2002) for mercury in fish tissue, and 2. Missing core parameters: <i>Escherichia coli</i> and dissolved metals (cadmium, copper, and zinc).
Patagonia Lake AZL15050301-1050 A&Wc, FC, FBC, DWS, Agl, AgL	ADEQ Lakes Program SCPAT-A 100060	1998 - 2 partial suites 2000 - 1 partial suite 2001 - 3 partial suites	No exceedances					
	Summary Row A&Wc Inconclusive FC Attaining FBC Inconclusive DWS Attaining Agl Attaining AgL Attaining	1998 - 2001 6 samples 6 sampling events	No exceedances					ADEQ collected 6 samples in 1998-2001. Assessed as "attaining some uses" and placed on the Planning List due to missing core parameters: <i>Escherichia coli</i> and turbidity.
Pena Blanca Lake AZL15050301-1070 A&Wc, FC, FBC, Agl, AgL	ADEQ Lakes Program SCPEN-A 100064	1998 - 2 partial suites 2000 - 1 partial suite 2001 - 3 partial suites	pH SU	6.5 - 9.0 (A&Ww, FBC, AgL)	6.1 - 8.6	1 of 6		
			Selenium (total) µg/L	2.0 (A&Wc chronic)	<2 - 4	1 of 6		
			Turbidity (former standard) NTU	10	2 - 13	1 of 3		
	Summary Row A&Wc Inconclusive FC Not attaining** FBC Inconclusive Agl Attaining AgL Inconclusive	1998 - 2001 6 samples 6 sampling events	pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	6.1 - 8.6	1 of 6	Inconclusive	ADEQ collected 6 samples in 1998-2001. **A TMDL for mercury in fish tissue was approved by EPA in 1999. Assessed as "not attaining" until sufficient data are collected to indicate that mercury in fish tissue is no longer a concern.
			Selenium (total) µg/L	2.0 (A&Wc chronic)	<2 - 4	1 of 6 samples 1 of 6 events	Inconclusive	Placed on the Planning List for: 1. TMDL follow-up monitoring, 2. pH exceedances, 3. Selenium exceedances, and 4. Missing core parameters: <i>Escherichia coli</i> and dissolved metals (cadmium, copper, and zinc). 5. Former turbidity standard exceedances. Causes and sources of turbidity will be investigated during the next monitoring cycle for this watershed.
			Turbidity (former standard) NTU	10 (A&Wc)	2 - 13	1 of 3	Inconclusive (see comment*)	

TABLE 19. SANTA CRUZ - RIO MAGDALENA - RIO SONOYTA WATERSHED -- 2004 ASSESSMENT MONITORING DATA

STREAM NAME SEGMENT WATERBODY ID DESIGNATED USES	AGENCY AND PROGRAM SITE DESCRIPTION SITE CODE ADEQ DATABASE ID	YEAR SAMPLED NUMBER AND TYPE OF SAMPLES	EXCEEDANCE OF STANDARDS BY SITE					COMMENTS
			PARAMETER UNITS	STANDARD DESIGNATED USE	RANGE OF RESULTS	FREQUENCY EXCEEDED	DESIGNATED USE SUPPORT	
Rose Canyon Lake AZL15050302-1260 A&Wc, FC, FBC, AgL	ADEQ Lakes Program SCROS-A 100183	1998 - 1 partial suite 2000 - 1 partial suite 2001 - 3 partial suites	pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	6.2 - 9.8	1 of 3 high 2 of 3 low		
			Turbidity (former standard) NTU	10 (A&Wc)	4 - 30	1 of 4		
		Summary Row A&Wc Inconclusive FC Attaining FBC Inconclusive AgL Inconclusive	1998 - 2001 5 samples 5 sampling events	pH SU	6.5 - 9.0 (A&Wc, FBC, AgL)	6.2 - 9.8	3 of 3 (1 of 3 high, 2 of 3 low)	Inconclusive
Turbidity (former standard) NTU	10 (A&Ww)	4 - 30	1 of 4	Inconclusive (see comment*)				

TABLE 20. SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- STREAM ASSESSMENTS				
Alum Gulch headwaters - 31 28'20"/110 43'51" 1 mile AZ15050301-561A	A&We Not attaining PBC Not attaining AgL Not attaining Category 4A -- Not attaining	On the Planning List due to: 1. <u>Missing core parameters</u> : total lead. 2. TMDL follow-up monitoring for <u>cadmium, copper, pH, and zinc</u> . (Total cadmium exceedances in 3 of 4 samples, dissolved copper exceedances in 2 of 2 sampling events, total copper exceedances in 1 of 4 samples, low pH in 4 of 4 samples, dissolved zinc exceedances in 2 of 2 sampling events, and total zinc exceedances in 3 of 4 samples.)	Delist <u>cadmium, copper, pH, and zinc</u> . TMDLs for these parameters were approved by EPA in 2003. Place on the Planning List for TMDL follow-up monitoring.	
Alum Gulch 31 28'20"/110 43'51" - 31 29'17"/110 44'25" 1 mile AZ15050301-561B	A&Ww Not attaining FC Not attaining FBC Not attaining AgL Not attaining Category 4A -- Not attaining	On the Planning List due to: 1. <u>Missing core parameters</u> : <i>Escherichia coli</i> , total metals (lead and mercury), and turbidity/SSC. 2. TMDL follow-up monitoring for <u>cadmium, copper, pH, and zinc</u> . (Total cadmium exceedances in 4 of 6 samples, acute and chronic cadmium exceedances in 5 of 5 sampling events, acute and chronic copper exceedances in 5 of 5 sampling events, total copper exceedances in 6 of 6 samples, low pH in 6 of 6 samples, acute and chronic zinc exceedances in 5 of 5 sampling events, and total zinc exceedances in 4 of 6 samples.)	Delist <u>cadmium, copper, pH, and zinc</u> . TMDLs for these parameters were approved by EPA in 2003. Place on the Planning List for TMDL follow-up monitoring.	
Chimenea Creek headwaters - Rincon Creek 8 miles AZ15050302-140	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive	On the Planning List due to insufficient monitoring data to assess (2 samples).		
Cienega Creek headwaters - Gardner Canyon 16 miles AZ15050302-006A Unique Water	A&Ww Attaining FC Attaining FBC Impaired AgL Attaining Category 5 -- Impaired		Add <i>Escherichia coli</i> to the 303(d) List due to exceedances in 2 of 6 sampling events (occurred in 2001).	
Cienega Creek Gardner Canyon - USGS gage station (Pantano Wash) 11 miles AZ15050302-006B	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining Category 1 -- Attaining All Uses			
Cox Gulch headwaters - 3R Canyon 2 miles AZ15050301-560	A&Ww Not attaining FC Inconclusive FBC Not attaining Category 4A -- Not attaining	On the Planning List due to: 1. <u>Missing core parameters</u> : <i>Escherichia coli</i> , dissolved oxygen, total mercury, and turbidity/SSC. 2. TMDL follow-up monitoring for <u>cadmium, copper, pH, and zinc</u> . (Acute and chronic cadmium exceedances in 2 of 2 sampling events, acute and chronic copper exceedances in 2 of 2 sampling events, total copper exceedances in 3 of 3 samples, low pH in 1 of 1 sample, and acute and chronic zinc exceedances in 2 of 2 sampling events.)		<u>Cadmium, copper, zinc and pH</u> TMDLs for Three R Canyon included loadings for Cox Gulch (a tributary). These TMDLs were approved by EPA in 2003. Add to the Planning List for TMDL follow-up monitoring.
Cox Gulch, <u>unnamed tributary of headwaters - Cox Gulch</u> 1 mile AZ15050301-877	A&We Not attaining PBC Not attaining Category 4A -- Not attaining	On the Planning List due to: 1. Insufficient monitoring data to assess (1 sample). 2. TMDL follow-up monitoring for <u>cadmium, copper, pH, and zinc</u> . (Total and acute copper and acute zinc exceedances in 1 of 1 sampling event.)		Samples were collected on this reach in support of the Three R Canyon TMDLs. <u>Cadmium, copper, zinc, and pH</u> loadings from this reach were addressed in the Three R Canyon TMDLs approved by EPA in 2003. Therefore, assessed as "not attaining" and add to the Planning List for TMDL follow-up monitoring.

TABLE 20. SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Harshaw Creek headwaters - Sonoita Creek 14 miles AZ15050301-025	A&We Not attaining PBC Not attaining AgL Not attaining Category 4A -- Not attaining	On the Planning List due to: 1. <u>Missing core parameter</u> : total lead. 2. TMDL follow-up monitoring for <u>copper and pH</u> . (Acute and chronic copper exceedance and low pH in 1 of 4 sampling events.)	<u>Delist zinc</u> . Designated uses were changed from A&Ww to A&We, resulting in a change in applicable standards. No exceedances of the new standard.	<u>Copper and pH</u> TMDLs were approved by EPA in 2003. Although copper and pH were delisted in 2002 due to requirements in the Impaired Water Identification Rule, a draft TMDL had already been completed. Place copper and pH on the Planning List for TMDL follow-up monitoring.
Harshaw Creek, <u>unnamed tributary of</u> (Endless Chain Mine tributary) headwaters - Harshaw Creek 2 miles AZ15050301-888	A&We Not attaining PBC Not attaining Category 4A -- Not attaining	On the Planning List for TMDL follow-up monitoring for <u>copper and pH</u> . (Low pH in 1 of 3 samples.)		Samples were collected on this reach in support of the Harshaw Creek TMDLs. <u>Copper and pH</u> loadings from this tributary were addressed in the Harshaw Creek TMDLs approved by EPA in 2003. Therefore, assessed as "not attaining" and add to the Planning List for TMDL follow-up monitoring.
Humbolt Canyon headwaters - Alum Gulch 2 miles AZ15050301-340	A&Ww Not attaining FC Inconclusive FBC Not attaining Category 4A -- Not attaining	On the Planning List due to: 1. <u>Missing core parameters</u> : <i>Escherichia coli</i> , total mercury, and turbidity/SSC. 2. TMDL follow-up monitoring for <u>cadmium, copper, zinc and pH</u> . (Acute and chronic cadmium, acute and chronic copper, acute and chronic zinc exceedances, and low pH in 1 of 1 sampling event.)		Samples were collected on this reach in support of the Alum Gulch TMDLs. <u>Cadmium, copper, zinc and pH</u> loadings from this tributary were addressed in the Alum Gulch TMDLs approved by EPA in 2003. Therefore, assessed as "not attaining" and add to the Planning List for TMDL follow-up monitoring.
Loma Verde Wash headwaters - unnamed trib to Tanque Verde Wash 4 miles AZ15050302-268	A&We Inconclusive PBC Inconclusive Category 3 -- Inconclusive	On the Planning List due to insufficient monitoring data to assess (2 samples).		
Madera Canyon Creek headwaters - tributary at 31 43'42"/110 52'50" 2 miles AZ15050301-322A	A&Wc Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to insufficient monitoring data to assess (1 sample).		
Madrona Creek headwaters - Rincon Creek 7 miles AZ15050302-138	A&Ww Inconclusive FC Inconclusive FBC Inconclusive Category 3 -- Inconclusive	On the Planning List due to insufficient monitoring data to assess (1 sample).		
Nogales & East Nogales Washes Mexico border - Potrero Creek 6 miles AZ15050301-011	A&Ww Impaired PBC Impaired Category 5 -- Impaired	On the Planning List due to former <u>turbidity</u> standard exceedances (5 of 18 samples). Monitoring will be scheduled to determine whether suspended sediment or bottom deposit violations are occurring.	On the 303(d) List (since 1996) due to <u>chlorine</u> exceedances (12 of 12 sampling events). Add ammonia to the 303(d) List for chronic ammonia exceedances (4 of 18 sampling events). Add copper to the 303(d) List due to chronic copper exceedances (2 of 18 sampling events). Add <i>Escherichia coli</i> to the 303(d) List exceedances (9 of 14 sampling events). Delist <u>fecal coliform</u> . Standard repealed in 2002 and replaced with the <i>Escherichia coli</i> standard. Delist <u>turbidity</u> . The turbidity standard was repealed in 2002. Add to the Planning List due to exceedances of the former standard.	Bacterial contamination is due to insufficient wastewater infrastructure in Mexico. The chlorine tablets put in the stream to mitigate high bacterial contamination are toxic to aquatic life. EPA may use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.

TABLE 20. SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Pena Blanca Canyon Creek Mexico border - Pena Blanca Lake 5 miles AZ15050301-808	A&Ww Inconclusive FBC Inconclusive FC Inconclusive Category 3 – Inconclusive	On Planning List (no current monitoring data). Added in 2002 due to insufficient monitoring data.		
Potrero Creek Interstate 19 - Santa Cruz River 5 miles AZ15050301-500B	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 -- Inconclusive	On the Planning List due to: 1. <u>Acute and chronic chlorine</u> exceedance (1 of 1 sampling event). 2. <u>Chronic copper</u> exceedance (1 of 2 sampling events). 3. <u>Missing core parameters</u> : dissolved metals (cadmium, copper, and zinc) and total metals (mercury, lead, and copper).	Delist fecal coliform. Arizona replaced its fecal coliform standards with <i>Escherichia coli</i> standards. Reach is meeting the <i>Escherichia coli</i> standards.	
Redrock Canyon Creek headwaters - Harshaw Creek 13 miles AZ15050301-576	A&Ww Attaining FC Attaining FBC Attaining Category 1 – Attaining All Uses			
Sabino Canyon Creek tributary at 32 23'28"/110 47'00" - Tanque Verde Wash 20 miles AZ15050302-014B (Reach was split into coldwater and warmwater segments since last assessment. No current data in 014A.)	A&Wc Inconclusive FC Attaining FBC Attaining DWS Attaining AgL Attaining Category 2 – Attaining Some Uses	On the Planning List due to <u>missing core parameters</u> : dissolved metals (cadmium, copper, and zinc).		
Santa Cruz River headwaters - Mexico border 14 miles AZ15050301-268	A&Ww Attaining FC Attaining FBC Attaining AgL Attaining Category 1 – Attaining All Uses			
Santa Cruz River Mexico border - Nogales WWTP 17 miles AZ15050301-010	A&Ww Attaining FC Attaining FBC Impaired DWS Attaining AgL Attaining AgL Attaining Category 5 -- Impaired	<u>Remove turbidity</u> from the Planning List. Turbidity is supporting uses (2 of 22 samples exceed).	On the 303(d) List since 2002 due to <u>Escherichia coli</u> exceedances (2 of 20 sampling events). Delist fecal coliform as the standard has been replaced by <i>Escherichia coli</i> standards.	
Santa Cruz River Nogales WWTP - Josephine Canyon 9 miles AZ15050301-009	A&Wedw Inconclusive PBC Attaining AgL Inconclusive Category 2 – Attaining Some Uses	On the Planning List due to <u>missing core parameters</u> : dissolved metals (cadmium, copper, and zinc) and total metals (copper and lead).	Delist fecal coliform as the standard has been replaced by <i>Escherichia coli</i> standards. No <i>Escherichia coli</i> exceedances occurred in 15 samples taken in 2000 - 2001.	
Santa Cruz River Josephine Canyon - Tubac Bridge 5 miles AZ15050301-008A	A&Wedw Inconclusive PBC Attaining AgL Inconclusive Category 2 - Attaining Some Uses	On the Planning List due to: 1. <u>Chlorine</u> exceedance (1 of 1 sampling event). 2. <u>Former turbidity</u> standard exceedances (8 of 20 samples). Monitoring will be scheduled to determine whether bottom deposit violations are occurring. 3. <u>Missing core parameters</u> : dissolved metals (cadmium, copper, and zinc) and total metals (copper and lead).	Delist fecal coliform as the standard has been replaced by <i>Escherichia coli</i> standards. No <i>Escherichia coli</i> exceedances occurred in 16 samples taken in 2000 - 2001. Delist turbidity. The turbidity standard was repealed in 2002. Add to the Planning List due to exceedances of the former standard.	EPA may use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.
Santa Cruz River Tubac Bridge - Sopori Wash 9 miles AZ15050301-008B	A&We Inconclusive PBC Attaining AgL Inconclusive Category 2 – Attaining Some Uses	On the Planning List due to <u>missing core parameters</u> : dissolved metals (cadmium, copper, and zinc) and total metals (copper and lead).	Delist fecal coliform as the standard has been replaced by <i>Escherichia coli</i> standards. No <i>Escherichia coli</i> exceedances occurred in 17 samples taken in 2000 - 2001.	

TABLE 20. SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Santa Cruz River Roger Rd. WWTP outfall - Rillito Creek 3 miles AZ15050301-003B	A&Wedw Inconclusive PBC Inconclusive Category 3 – Inconclusive	On the Planning List due to <u>missing core parameters</u> : <i>Escherichia coli</i> , pH, and dissolved metals (cadmium, copper, and zinc).		
Santa Cruz River Canada del Oro - HUC boundary 15050303 9 miles AZ15050301-001	A&Wedw Inconclusive PBC Attaining Category 2 — Attaining Some Uses	On the Planning List due to <u>acute and chronic chlorine exceedance</u> (1 of 2 sampling events).		
Santa Cruz River HUC boundary 15050303 - Baumgartner Rd. 25 miles AZ15050303-005A	A&Wedw Inconclusive PBC Inconclusive Category 3 – Inconclusive	On the Planning List due to <u>missing core parameters</u> : <i>Escherichia coli</i> , pH, and dissolved metals (cadmium, copper, and zinc).		
Sonoita Creek headwaters - Patagonia WWTP 14 miles AZ15050301-013A	A&We Inconclusive PBC Inconclusive AgL Inconclusive Category 3 – Inconclusive	On Planning List (no current monitoring data). Added in 2002 due to missing core parameters.		
Sonoita Creek 750 feet below WWTP - Santa Cruz River 19 miles AZ15050301-013C	A&Ww Impaired FC Attaining FBC Attaining AgL Attaining AgL Attaining Category 5 – Impaired	On the Planning List due to <u>chronic copper exceedance</u> (1 of 4 sampling events).	Add zinc to the 303(d) List due to zinc exceedances in 2 of 4 sampling events.	
Sycamore Canyon Creek headwaters - Mexico border 10 miles AZ15080200-002	A&Ww Inconclusive FC Inconclusive FBC Inconclusive AgL Inconclusive Category 3 – Inconclusive	On the Planning List due to insufficient monitoring data to assess (only 1 sample).		
Three R Canyon headwaters - 31 28°35'110 46°19" 1 mile AZ15050301-558A (This stream has been resegmented since the last assessment)	A&We Not attaining PBC Not attaining AgL Not attaining Category 4A – Not attaining	On the Planning List due to: 1. Insufficient monitoring events to assess (only 2 sampling events). 2. TMDL follow-up monitoring for <u>cadmium, copper, zinc, and pH</u> . (Acute and chronic copper exceedance in 1 of 1 sampling event and low pH in 1 of 1 sample).	Delist <u>cadmium, copper, zinc, and pH</u> . TMDLs for these parameters were approved by EPA in 2003. Placed on the Planning List for TMDL follow-up monitoring.	
Three R Canyon 31 28°35'110 46°19"- 31 28°27'110 47°12" 1 mile AZ15050301-558B (This stream has been resegmented since the last assessment)	A&Ww Not attaining FC Inconclusive FBC Not attaining AgL Not attaining Category 4A – Not attaining	On the Planning List due to: 1. <u>Missing core parameters</u> : <i>Escherichia coli</i> , total metals (lead and mercury), and turbidity/SSC. 2. TMDL follow-up monitoring for <u>cadmium, copper, zinc, and pH</u> . (Cadmium, copper, and zinc exceedances in 5 of 5 sampling events each and low pH in 5 of 5 samples.)	Delist <u>cadmium, copper, zinc, and pH</u> . TMDLs for these parameters were approved by EPA in 2003. Placed on the Planning List for TMDL follow-up monitoring.	
Three R Canyon 31 28°27'110 47°12" - Sonoita Creek 3 miles AZ15050301-558C (This stream has been resegmented since the last assessment)	A&We Not attaining PBC Not attaining AgL Not attaining Category 4A – Not attaining	On the Planning List due to: 1. <u>Missing core parameter</u> : <i>Escherichia coli</i> , total lead, total mercury, and turbidity/SSC. 2. TMDL follow-up monitoring for <u>cadmium, copper, zinc, and pH</u> . (Copper exceedances in 2 of 2 sampling events, zinc exceedances in 1 of 2 sampling events and low pH in 2 of 2 samples.)	Delist <u>cadmium, copper, zinc, and pH</u> . TMDLs for these parameters were approved by EPA in 2003. Placed on the Planning List for TMDL follow up monitoring.	

TABLE 20. SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Three R Canyon, <u>unnamed tributary of headwaters - Three R Canyon</u> 2 miles AZL15050301-889	A&We Not attaining PBC Not attaining Category 4A – Not attaining	On the Planning List due to: 1. TMDL follow-up monitoring for <u>cadmium, copper, zinc, and pH</u> . (Copper exceedance in 1 of 1 sampling event and low pH in 1 of 1 sample.) 2. Insufficient monitoring data.		Samples were collected on this reach in support of the Three R Canyon TMDLs. <u>Cadmium, copper, zinc, and pH</u> loadings from this tributary were addressed in the Three R Canyon TMDLs approved by EPA in 2003. Therefore, assessed as “not attaining” and add to the Planning List for TMDL follow-up monitoring.
SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- LAKE ASSESSMENTS				
Arivaca Lake 118 acres AZL15050304-0080	A&Ww Inconclusive FC Not attaining FBC Inconclusive Agl Inconclusive AgL Inconclusive Category 4A -- Not Attaining Trophic status -- Hypereutrophic	On the Planning List due to: 1. <u>Dissolved oxygen</u> exceedance (1 of 7 samples). 2. <u>pH</u> exceedance (1 of 7 samples). 3. <u>Selenium</u> exceedance (1 of 7 sampling events). 4. <u>Fish kill</u> in 1999 related to algal blooms, which may be evidence of a narrative standard violation. 5. <u>Missing core parameters: Escherichia coli</u> and dissolved metals (cadmium, copper, and zinc). 6. TMDL follow-up monitoring for <u>mercury concentration in fish tissue</u> .		TMDL for mercury in fish tissue was approved by EPA in 1999. Added to the Planning List in 2002 for TMDL follow-up monitoring.
Kennedy Lake 10 acres AZL15050301-0720	A&Ww Inconclusive FC Attaining PBC Inconclusive Category 2 -- Attaining Some Uses Trophic status -- Eutrophic	On the Planning List due to <u>missing core parameters: Escherichia coli</u> and dissolved metals (cadmium, copper, and zinc).		
Lakeside Lake 15 acres AZL15050302-0760	A&Ww Impaired FC Attaining PBC Inconclusive Category 5 – Impaired Trophic status -- Hypereutrophic	On the Planning List due to: 1. Former <u>turbidity</u> standard exceedances (21 of 34 samples). Investigation into the causes and sources of turbidity will be scheduled during the next monitoring cycle for this watershed. 2. <u>Missing core parameters: Escherichia coli</u> and dissolved metals (cadmium, copper, and zinc).	Add ammonia to the 303(d) List due to chronic ammonia exceedances (2 of 11 sampling events). Add <u>dissolved oxygen</u> to the 303(d) List (low dissolved oxygen in 16 of 55 samples).	City installed an aeration system in the lake in June 2002, but exceedances are still occurring. A draft nutrient TMDL, providing for dissolved oxygen and pH, was completed in 2002, but has <u>not</u> been approved by EPA. EPA may use exceedances of the former turbidity standard as an indicator of narrative standards violations and place this reach on the 2004 303(d) List due to turbidity.
Parker Canyon Lake 129 acres AZL15050301-1040	A&Wc Inconclusive FC Inconclusive FBC Inconclusive Agl Attaining AgL Attaining Category 2 -- Attaining Some Uses Trophic status -- Mesotrophic	On the Planning List due to 1. <u>Missing core parameters: Escherichia coli</u> and dissolved metals (cadmium, copper, and zinc). 2. <u>Fish consumption advisory for mercury</u> issued in 2002 may be evidence of a narrative toxic standards violation.		For the 2002 303(d) List, EPA placed waters with a <u>fish consumption advisory</u> on the 303(d) List, as the advisory was considered adequate evidence of a narrative toxic standards violation. The advisory for Parker Lake was issued after the last 303(d) List. ADEQ anticipates that EPA will take the same action and place this water on the 2004 303(d) List.
Patagonia Lake 230 acres AZL15050301-1050	A&Wc Inconclusive FC Attaining FBC Inconclusive DWS Attaining Agl Attaining AgL Attaining Category 2 -- Attaining Some Uses Trophic status -- Eutrophic	On the planning List due to <u>missing core parameters: Escherichia coli</u> and turbidity. <u>Remove dissolved oxygen</u> from the Planning List. No exceedances in 6 samples indicates support of designated uses.		

TABLE 20. SANTA CRUZ-RIO MAGDALENA-RIO SONOYTA WATERSHED -- ASSESSMENT, PLANNING LIST, AND 303(d) STATUS TABLE

SURFACE WATER DESCRIPTION	2004 ASSESSMENT 5-CATEGORIES LAKE TROPHIC STATUS	2004 PLANNING LIST	STATUS OF 2002 303(d) LIST RECOMMENDATIONS FOR 2004 LIST	OTHER INFORMATION
Pena Blanca Lake 51 acres AZL15050301-1070	A&Wc Inconclusive FC Not attaining FBC Inconclusive Agl Attaining AgL Inconclusive Category 4A — Not attaining Trophic status -- Eutrophic	On the Planning List due to: 1. <u>Low pH</u> (1 of 6 samples). 2. <u>Chronic selenium</u> exceedance (1 of 6 sampling events). 3. Former <u>turbidity</u> standard exceedance (1 of 3 samples). Causes and sources of turbidity will be investigated during the next monitoring cycle for this watershed. 4. <u>Missing core parameters: Escherichia coli</u> and dissolved metals (cadmium, copper, and zinc). 5. TMDL follow-up monitoring for <u>mercury concentration in fish tissue</u> .		TMDL for mercury in fish tissue was approved by EPA in 1999. Added to the Planning List in 2002 for TMDL follow-up monitoring.
Rose Canyon Lake 7 acres AZL15050302-1260	A&Wc Inconclusive FC Attaining FBC Inconclusive AgL Inconclusive Category 2 – Attaining Some Uses Trophic status – Eutrophic	On the Planning List due to: 1. <u>Low pH</u> (2 of 3 samples) and <u>high pH</u> (1 of 3 samples). 2. Former <u>turbidity</u> standard exceedance (1 of 4 samples). Causes and sources of turbidity will be investigated during the next monitoring cycle for this watershed. 3. <u>Missing core parameters: Escherichia coli</u> and dissolved metals (cadmium, copper, zinc).		ADEQ anticipates that EPA will use the same criteria and place this lake on the 2004 303(d) List for pH (3 of 3 samples did not meet standards). For the 2002 303(d) List, EPA determined that 3 or more exceedances with less than 10 samples were sufficient to list a water as "impaired," although Arizona's Impaired Waters Identification Rule would require a minimum of 5 exceedances in 20 samples.