

TOUA

TOHONO O'ODHAM UTILITY AUTHORITY

2011

ANNUAL WATER QUALITY REPORT



2011

"Serving the Tohono O'odham Nation with electricity, telephone, water/wastewater service."

The Water We Drink

The TOUA Water Department professionals within the Tohono O'odham Nation are very proud to provide you with the 2011 Annual Drinking Water Quality Report in order to keep you informed of the water quality and services we delivered to you over the past year. Our primary commitment is, and always will be, to provide you with a safe and dependable supply of drinking water. If you are a non-English speaking resident you may call TOUA at 383-5830 for a Tohono O'odham translation. The Utility Authority has regularly scheduled board meetings. If you have any questions about the meetings, this report, or questions concerning your water quality, please contact the water quality control laboratory at 520- 383-5832. We want our valued customers to be informed about their drinking water quality.

In 2011, TOUA served approximately 3000 water customers in the Tohono O'odham Nation. The water supply came from 65 ground water wells located in and around Tohono O'odham communities. Approximately 1.0 parts per million (ppm) of chlorine (12.5 % sodium hypochlorite solution) is added to the drinking water supply at well sites to provide assurance that water delivered to customers will remain free of microbiological contamination. This also ensures that the water meets microbiological drinking water standards from the time it is pumped from the ground until it reaches the customer's tap.

Why do I need to read this?

In 1996, Congress passed amendments that require drinking water systems to give consumers important information about their water, including where it comes from, what is in the water, and how your water quality compares to federal standards. This report is brought to you in accordance with EPA's 40 Code of Federal Regulations NPDWR Parts 141 and 142. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. It is recommended that you keep this report as a reference source, as it provides useful information, as well as contacts and phone numbers you may need from time to time.

What Are Drinking Water Standards?

Under the authority of the Safe Drinking Water Act (SDWA), EPA sets standards for approximately 90 contaminants in drinking water. For each of these contaminants, EPA sets a legal limit, called a maximum contaminant level, or requires a certain treatment. Water suppliers may not provide water that doesn't meet these standards. Water that meets EPA standards is safe to drink. Under SDWA, EPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. The SDWA covers all public water systems with piped water for human consumption with at least 15 service connections or a system that regularly serves at least 25 individuals. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791 or visit the USEPA website at www.epa.gov/safewater/contaminants/index.html.

Notice: Important Information

Some people may be more vulnerable to drinking water contaminants than the general population. Immune-compromised persons, such as people with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

During 2011, TOUA fully complied with all monitoring and reporting requirements as specified by the current Federal regulations. This information was reported to EPA Region IX in San Francisco.

DEFINITIONS OF TECHNICAL AND REGULATORY TERMS

ACTION LEVEL (AL)- The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MAXIMUM CONTAMINANT LEVEL (MCL)- The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available treatment technology. MCLs are based on the recommendations of the scientific and public health community.

MAXIMUM CONTAMINANT LEVEL GOAL (MCLG)-The level of a contaminant in drinking water below which there is no known or expected risk to health.

N/A - Not Applicable

ND - Not detected

NON-DETECT (ND)-laboratory analysis indicates that the constituent is not present.

PARTS PER MILLION (PPM)=Milligrams per Liter (mg/L)-one part per million corresponds to one minute in two years.

PARTS PER BILLION (PPB)=Micrograms per liter (mcg/L)-one part per billion corresponds to one minute in 2,000 years.

PICOCURIE PER LITER (pCi/L) The quantity of radioactive material in one liter which produces 2.22 nuclear disintegrations per minute.

SDWA- Safe Drinking Water Act

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agriculture livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also, come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.



TOUA CONSUMER CONFIDENCE REPORT 2011

2011		INORGANIC CONTAMINANTS				OTHER
For Samples taken earlier- date will be noted						
VILLAGE	PWSID#	ARSENIC	FLUORIDE	NITRATE	SODIUM	VARIOUS
Maximum Contaminant Level Goal (MCLG)		N/A	4 PPM	10 PPM	None	CONTAMINANTS
Maximum Contaminant Level (MCL)		10 PPB	4 PPM	10 PPM	No PPM	See Note #
Major Source of Contaminant		Erosion of natural deposits; runoff of orchards; glass & electronics production wastes	Erosion of natural deposits; dental water additive; discharge from factories	Runoff & leaching from fertilizer use and/or septic tanks, sewage; erosion of natural deposits	Erosion of natural deposits; salt water intrusion	
Topawa Intertie/ Choulic/South Komelic/ Coldfields	040-0001	9 Sample range 7 - 12	1 ²⁰⁰⁸	2	43 Range 39 - 47	None
Nolic Intertie/Cababi/San Luis	040-0002	16 Sample range 10 - 19	1 ²⁰⁰⁹	2	62 ²⁰⁰⁵ Range 60-63	²⁰⁰⁹ # 2 42 ppb # 3 2 ppb
Chui Chu	040-0003	8 Sample range 5 - 12	1 ²⁰⁰⁹	4	82 ²⁰⁰⁵ Range 80-84	#1 ²⁰⁰⁹ 0.092 ppm
Fresnal	040-0004	3 Sample range 2 - 4	<1	2	47 Range 46 - 48	None
Queen's Well	040-0005	3 Sample range 2.2 - 3.9	<1	2 Sample range 2 - 3	47 Range 41 - 53	#1 0.125 ppm
Covered Wells Regional Intertie/ Sikul Himatk	040-0006	5 Sample range 1 - 10	1 ²⁰¹⁰	2	86 ²⁰¹⁰	#1 ²⁰¹⁰ 0.071 ppm
Charco 27	040-0008	6	1 ²⁰¹⁰	8	210 ²⁰¹⁰	#4 ²⁰¹⁰ 4.4 ppb
Whitehorse Pass	040-0013	9 Sample range 8 - 11	1 ²⁰⁰⁹	4 Sample range 2 - 6	62 ²⁰⁰⁶ Range 61-63	None
Kohatk	040-0016	18 Sample range 15 - 24	1 ²⁰⁰⁹	7	114 ²⁰⁰⁵	#1 ²⁰⁰⁹ 0.0825 ppm
Santa Rosa Ranch Intertie/ Sil Nakya	040-0018	3 Sample range 3 - 4	<1	2 Sample range 1 - 2	37 Range 34 - 39	#1 0.067 ppm
New Fields	040-0019	11 Sample range 9 - 14	2	2	54 Range 52 - 55	²⁰⁰⁷ #6 .091 ppm
Vaya Chin Intertie/ Hickiwan / San Simon	040-0020	3	1 ²⁰¹⁰	6	82 ²⁰¹⁰	#4 ²⁰¹⁰ 2.7 ppb
Ak Chin	040-0022	25 Sample range 18 - 33	1 ²⁰⁰⁹	2	86 ²⁰⁰⁵	None
Menager's Dam	040-0023	30 Sample range 23 - 41	2 ²⁰¹⁰	7	160 ²⁰¹⁰	#4 ²⁰¹⁰ 3.8 ppb

TOUA CONSUMER CONFIDENCE REPORT 2011

DISINFECTION		MICROBIAL		LEAD & COPPER		RADIOLOGICAL		
BY-PRODUCTS		CONTAMINANTS				CONTAMINANTES		
TTHM'S	HAA5'S	Total Coliforms	Coliforms/E . Coli	Copper 90th %	Lead 90th %	Adjusted Alpha	Uranium	Total Radium 226/228
None	None	Zero	Zero	1.3 ppm	0 ppb	0 pCi/L	0 ppb	0 pCi/L
80 PPB	60 ppb	2 or more positive samples/month		Action Level 1.3 ppm	Action Level 15 ppb	15 pCi/L	30 ppb	5 pCi/L
By-product of drinking water chlorination	By-product of drinking water chlorination	Naturally present in the environment	Human and animal waste	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives; discharges from industrial manufacturers		Erosion of natural deposits	Erosion of natural deposits	Erosion of natural deposits
ND	ND	All Results Negative	All Results Negative	0.15	1.1	4 ²⁰⁰⁷ Range 1.1 - 5.7	6 ²⁰⁰⁷ Range 3.2 - 8.49	²⁰⁰⁷ <0.4
12	ND	All Results Negative	All Results Negative	0.12 ²⁰⁰⁵	<.002 ²⁰⁰⁵	3 ²⁰⁰⁷ Range ND - 3.6	4 ²⁰⁰⁷ Range 2.9 - 5.36	²⁰⁰⁷ <0.3
ND	ND	All Results Negative	All Results Negative	0.08 ²⁰⁰⁵	<.002 ²⁰⁰⁵	<1.0 ²⁰⁰⁷	13 ²⁰⁰⁷ Range 6 - 19.1	²⁰⁰⁷ 0.9
ND	ND	All Results Negative	All Results Negative	0.13 ²⁰⁰⁵	<.002 ²⁰⁰⁵	4 ²⁰⁰⁷ Range ND - 6.6	6 ²⁰⁰⁷ Range ND - 8.1	²⁰⁰⁷ <0.4
12	ND	All Results Negative	All Results Negative	<.01 ²⁰⁰⁵	.002 ²⁰⁰⁵	<1.0 ²⁰⁰⁷	4 ²⁰⁰⁷ Range 1.9 - 5.2	²⁰⁰⁷ 0.7
8	ND	All Results Negative	All Results Negative	0.14 ²⁰⁰⁵	<.002 ²⁰⁰⁵	<1.0 ²⁰⁰⁷	8 ²⁰⁰⁷ Range 6.2 - 8.9	²⁰⁰⁷ <0.4
9	ND	All Results Negative	All Results Negative	0.04 ²⁰⁰⁵	<.002 ²⁰⁰⁵	<1.0 ²⁰⁰⁷	18 ²⁰¹¹	²⁰⁰⁷ <0.4
16	2	All Results Negative	All Results Negative	<.01 ²⁰⁰⁵	<.002 ²⁰⁰⁵	2 ²⁰⁰⁷ Range 1.1 - 3.3	7 ²⁰⁰⁷ Range 7.0 - 7.6	²⁰⁰⁷ <0.4
1	3	All Results Negative	All Results Negative	.05 ²⁰⁰⁵	<.002 ²⁰⁰⁵	<1.0 ²⁰⁰⁷	9 ²⁰⁰⁷	²⁰⁰⁷ <0.5
13	ND	All Results Negative	All Results Negative	.14 ²⁰⁰⁵	.002 ²⁰⁰⁵	1 ²⁰⁰⁷ Range ND - 1	6 ²⁰⁰⁷ Range 4.4 - 7.5	²⁰⁰⁷ <0.4
1	ND	All Results Negative	All Results Negative	0.0828	0.85	1 ²⁰⁰⁷ Range ND - 1.2	15 ²⁰⁰⁷ Range 12.3 -17.3	²⁰⁰⁷ <0.4
4	ND	All Results Negative	All Results Negative	.06 ²⁰⁰⁵	<.002 ²⁰⁰⁵	<1.0 ²⁰⁰⁷	7 ²⁰⁰⁷	²⁰⁰⁷ <0.4
1	ND	All Results Negative	All Results Negative	.05 ²⁰⁰⁵	<.002 ²⁰⁰⁵	<1.0 ²⁰⁰⁷	8 ²⁰⁰⁷ Range 6.8 - 8.3	²⁰⁰⁷ <0.4
ND	ND	All Results Negative	All Results Negative	.07 ²⁰⁰⁵	<.002 ²⁰⁰⁵	6 ²⁰⁰⁷	11 ²⁰⁰⁷ Range 8.8 - 12.4	²⁰⁰⁷ <0.5

TOUA CONSUMER CONFIDENCE REPORT 2011

2011		INORGANIC CONTAMINANTS				OTHER
For Samples taken earlier- date will be noted						
VILLAGE	PWSID#	ARSENIC	FLUORIDE	NITRATE	SODIUM	VARIOUS
Maximum Contaminant Level Goal (MCLG)		N/A	4 PPM	10 PPM	None	CONTAMINANTS
Maximum Contaminant Level (MCL)		10 PPB	4 PPM	10 PPM	No PPM	See Note #
Major Source of Contaminant		Erosion of natural deposits; runoff of orchards; glass & electronics production wastes	Erosion of natural deposits; dental water additive; discharge from factories	Runoff & leaching from fertilizer use and/or septic tanks, sewage; erosion of natural deposits	Erosion of natural deposits; salt water intrusion	
San Miguel	040-0026	12 Sample range 8 - 16	2 ²⁰¹⁰	1	45 ²⁰⁰⁵ Range 44-45	None
Ventana	040-0027	2	1 ²⁰¹⁰	5	97 ²⁰¹⁰ Range 93-100	None
North Komelic	040-0028	32 Sample range 24 - 41	1 ²⁰⁰⁹	2	100 ²⁰⁰⁶	²⁰⁰⁹ #1 .105 ppm #5 1.6 ppb
Cowlic	040-0029	7	2 ²⁰⁰⁸	2	73 ²⁰⁰⁸	²⁰⁰⁹ #6 .0032ppm
Pisinemo Intertie / Santa Cruz	040-0030	10 Sample range 7 - 10	2 ²⁰¹⁰	2	90 ²⁰¹⁰	None
Gunsight	040-0032	1	<1	7	42 ²⁰¹⁰	#1 ²⁰¹⁰ 0.24 ppm
Cockleburr	040-0034	28 Sample range 21 - 35	3 ²⁰⁰⁹	10 Sample range 8 - 10	234 ²⁰⁰⁵	None
San Xavier West	040-0035	4	<1	6 Sample range 5 - 7	90 Range 85 - 94	#1 .0885 ppm #4 10 ppb
San Pedro	040-0036	5	1	4	79 Range 74 - 84	#4 3.6 ppb
Kaka	040-0037	2	1 ²⁰¹⁰	4	58 ²⁰¹⁰ Range 57 - 58	#4 2.5 ppb
Vamori	040-0038	8	1 ²⁰⁰⁷	2	47 Range 46 - 48	None
Little Tucson	040-0040	6 Sample range 5 - 6	<1	2	57 Range 53 - 60	#1 .077 ppm
Kerwo Intertie/ Pia Oik	040-0041	2	1 ²⁰¹⁰	3	62 ²⁰¹⁰ Range 61-62	#7 ²⁰¹⁰ .69 ppb
Sells Intertie/ Big Fields/ Pan Tak	040-0042	9 Sample range 6 - 13	1 ²⁰⁰⁸	2 Sample range 2 - 3	60 Range 55 - 67	None

TOUA CONSUMER CONFIDENCE REPORT 2011

DISINFECTION		MICROBIAL		LEAD & COPPER		RADIOLOGICAL		
BY-PRODUCTS		CONTAMINANTS				CONTAMINANTES		
TTHM'S	HAA5'S	Total Coliforms	Coliforms/E. Coli	Copper 90th %	Lead 90th %	Adjusted Alpha	Uranium	Total Radium 226/228
None	None	Zero	Zero	1.3 ppm	0 ppb	0 pCi/L	0 ppb	0 pCi/L
80 PPB	60 ppb	2 or more positive samples/month		Action Level 1.3 ppm	Action Level 15 ppb	15 pCi/L	30 ppb	5 pCi/L
By-product of drinking water chlorination	By-product of drinking water chlorination	Naturally present in the environment	Human and animal waste	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives; discharges from industrial manufacturers		Erosion of natural deposits	Erosion of natural deposits	Erosion of natural deposits
2	ND	All Results Negative	All Results Negative	0.17	0.93	<1.0 ²⁰⁰⁷	12 ²⁰⁰⁷	²⁰⁰⁷ <0.3
2	ND	All Results Negative	All Results Negative	.08 ²⁰⁰⁵	.003 ²⁰⁰⁵	<1.0 ²⁰⁰⁷	7 ²⁰⁰⁷ Range 6 - 7	²⁰⁰⁷ 0.4
ND	ND	All Results Negative	All Results Negative	.10 ²⁰⁰⁵	<.002 ²⁰⁰⁵	7 ²⁰⁰⁷ Range ND - 7.3	10 ²⁰⁰⁷ Range 6.8- 10.88	²⁰⁰⁷ <0.4
1	ND	All Results Negative	All Results Negative	0.075	0.68	2 ²⁰⁰⁸	9 ²⁰⁰⁸	²⁰⁰⁸ <0.4
3	ND	All Results Negative	All Results Negative	.05 ²⁰⁰⁵	<.002 ²⁰⁰⁵	2 ²⁰⁰⁷ Range ND - 2.9	24 Range 22.2 -25.1	²⁰⁰⁷ 2
ND	ND	All Results Negative	All Results Negative	.19 ²⁰⁰⁵	<.002 ²⁰⁰⁵	<1.0 ²⁰⁰⁷	4 ²⁰⁰⁷	²⁰⁰⁷ <0.4
1	ND	All Results Negative	All Results Negative	.03 ²⁰⁰⁵	<.002 ²⁰⁰⁵	1 ²⁰⁰⁷ Range ND - 1	8 ²⁰⁰⁷	²⁰⁰⁷ <0.6
10	ND	All Results Negative	All Results Negative	.12 ²⁰⁰⁵	<.002 ²⁰⁰⁵	<1.0 ²⁰⁰⁷	13 ²⁰⁰⁷ Range 12.3 -13.6	²⁰⁰⁷ <0.4
3	ND	All Results Negative	All Results Negative	.09 ²⁰⁰⁵	<.002 ²⁰⁰⁵	4 ²⁰⁰⁷ Range ND - 4.3	6 ²⁰⁰⁷ Range ND -6.4	²⁰⁰⁷ <0.4
1	ND	All Results Negative	All Results Negative	.02 ²⁰⁰⁵	<.002 ²⁰⁰⁵	<1.0 ²⁰⁰⁸	3 ²⁰⁰⁸	²⁰⁰⁸ <0.4
ND	ND	All Results Negative	All Results Negative	0.069	0.66	<1.0 ²⁰⁰⁷	10 ²⁰⁰⁷ Range 8.4 -11	²⁰⁰⁷ <0.4
2	ND	All Results Negative	All Results Negative	.08 ²⁰⁰⁵	.002 ²⁰⁰⁵	4.0 ²⁰⁰⁷	11 ²⁰⁰⁷	²⁰⁰⁷ <0.4
4	ND	All Results Negative	All Results Negative	.05 ²⁰⁰⁵	<.002 ²⁰⁰⁵	<1.0 ²⁰⁰⁷	3 ²⁰⁰⁷ Range 1.8 - 3.6	²⁰⁰⁷ <0.3
2	ND	All Results Negative	All Results Negative	0.12	0.93	<1.0 ²⁰⁰⁷	9 ²⁰⁰⁷ Range 7.3 - 11.7	²⁰⁰⁷ 0.3

TOUA CONSUMER CONFIDENCE REPORT 2011

2011		INORGANIC CONTAMINANTS				OTHER
For Samples taken earlier- date will be noted						
VILLAGE	PWSID#	ARSENIC	FLUORIDE	NITRATE	SODIUM	VARIOUS
Maximum Contaminant Level Goal (MCLG)		N/A	4 PPM	10 PPM	None	CONTAMINANTS
Maximum Contaminant Level (MCL)		10 PPB	4 PPM	10 PPM	No PPM	See Note #
Major Source of Contaminant		Erosion of natural deposits; runoff of orchards; glass & electronics production wastes	Erosion of natural deposits; dental water additive; discharge from factories	Runoff & leaching from fertilizer use and/or septic tanks, sewage; erosion of natural deposits	Erosion of natural deposits; salt water intrusion	
Comobabi Intertie/ Crowhang	040-0220	3	<1	2 Sample range 1 - 2	40 Range 39 - 40	#4 2.9 ppb
Greater Santa Rosa Regional Intertie/ Santa Rosa Brd. School/ Anegam/ Palo Verde Stand/ Santa Rosa Subdivision/ Santa Rosa Village	040-0226	19 Sample range 12 - 27	1 ²⁰⁰⁹	6 Sample range 5 - 6	122 ²⁰⁰⁵ Range 105-139	#1 ²⁰⁰⁹ .0595 ppm
San Xavier East	040-0227	12 Sample range 4 - 22	1	4 Sample range 3 - 6	49 Range 43 - 59	#1 0.069 ppm
Jackrabbit	040-0231	16 Sample range 11 - 20	2 ²⁰⁰⁹	4	190 ²⁰⁰⁵	None
Ak Chin Nursing Home	040-0232	29 Sample range 22 - 36	1 ²⁰⁰⁹	2	86 ²⁰⁰⁵ Range 85-86	#1 ²⁰⁰⁹ .155 ppm
NOTE: RESULTS IN YELLOW EXCEED THE MAXIMUM CONTAMINANTE LEVEL						
Color coded villages signify that the distribution system of more than one village has been intertied.						
VARIOUS OTHER CONTAMINANANTS:						
#1 BARIUM	MCL - 2 ppm	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits				
#2 CHROMIUM	MCL - 100 ppb	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits				
#3 THALLIUM	MCL - 2 ppb	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories				
#4 SELENIUM	MCL - 50 ppb	Discharge from petroleum, glass and metal refineries, mines & chemical manufactures; erosion of natural deposits; runoff				
#5 MERCURY	MCL - 2 ppb	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and/or cropland				
#6 TOLUENE - VOC	MCL - 1 ppm	Discharge from petroleum and chemical factories; underground gas tank leaks				
#7 ANTIMONY	MCL - 6 ppb	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder				

TOUA CONSUMER CONFIDENCE REPORT 2011

DISINFECTION BY-PRODUCTS		MICROBIAL CONTAMINANTS		LEAD & COPPER		RADIOLOGICAL CONTAMINANTES		
TTHM'S	HAA5'S	Total Coliforms	Coliforms/E . Coli	Copper 90th %	Lead 90th %	Adjusted Alpha	Uranium	Total Radium 226/228
None	None	Zero	Zero	1.3 ppm	0 ppb	0 pCi/L	0 ppb	0 pCi/L
80 PPB	60 ppb	2 or more positive samples/month		Action Level 1.3 ppm	Action Level 15 ppb	15 pCi/L	30 ppb	5 pCi/L
By-product of drinking water chlorination	By-product of drinking water chlorination	Naturally present in the environment	Human and animal waste	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives; discharges from industrial manufacturers		Erosion of natural deposits	Erosion of natural deposits	Erosion of natural deposits
3	ND	All Results Negative	All Results Negative	.26 ²⁰⁰⁵	.005 ²⁰⁰⁵	<1.0 ²⁰⁰⁷	5 ²⁰⁰⁷ Range 4.2 - 5.5	²⁰⁰⁷ <0.4
4	ND	All Results Negative	All Results Negative	.16 ²⁰⁰⁵	.003 ²⁰⁰⁵	<1.0 ²⁰⁰⁷	15 ²⁰⁰⁷ Range 12.1-17.7	²⁰⁰⁷ <0.4
8	ND	All Results Negative	All Results Negative	.03 ²⁰⁰⁵	<.002 ²⁰⁰⁵	<1.0 ²⁰⁰⁷	7 ²⁰⁰⁷ Range 7.1 - 7.4	²⁰⁰⁷ <0.4
2	ND	July Confirmed Positive	July Confirmed Positive	.08 ²⁰⁰⁵	<.003 ²⁰⁰⁵	2 ²⁰⁰⁷	13 ²⁰⁰⁷	²⁰⁰⁷ 0.3
4	ND	All Results Negative	All Results Negative	.06 ²⁰⁰⁹	ND ²⁰⁰⁹	7 ²⁰⁰⁷	8 ²⁰⁰⁷ Range 4.2-10.13	²⁰⁰⁷ <0.4

TOUA Water Department Professionals



Fluoride- People that drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth. Possible sources are erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories. We add Hydrofluosilicic Acid (23% - 25%) to the following wells that have low fluoride levels: Sells, and Little Tucson. With support and funding from the Indian Health Service and Center for Disease Control, we maintain an optimal level of 0.9 – 1.5 ppm of fluoride.

Nitrate- Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. Possible sources include runoff from fertilizer use; leaching from septic tanks, sewage; and erosion of natural deposits. If you are caring for an infant you should ask for advice from your health care provider.

Arsenic- EPA recently finalized a reduction in the arsenic drinking water standard from 50 ppb down to 10 ppb. All water utilities must meet this future standard beginning January 2006. While your drinking water meets EPA standard for arsenic, it may contain low levels of arsenic. The new standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. EPA continues to research the health effect of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations, and is linked to other health effects such as skin damages and circulatory problems. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

Lead and Copper- These are naturally occurring metals, which are generally found at very low levels in source waters. However, these levels can increase when water contacts plumbing materials that contain lead, copper, or brass. Infants and young children are more vulnerable to lead in drinking water than the general population. While TOUA's water is within standards, concerned customers can take extra precaution to protect children from lead leaching by running the water for a few seconds. This is especially important if the water has been sitting in the pipes for a few hours or more. These same precautions may also help to give you the best tasting water.

Disinfection By-Products- Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5) are chemicals that are formed along with other disinfection by products when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water.

Adjusted Gross Alpha – is a measure of radioactivity due to naturally occurring minerals in groundwater. This excludes the radioactivity contributed by either radon or uranium.

Radium 226 and 228 – are two of the most common radium isotopes. Radium is a naturally occurring radionuclide, formed by the decay of uranium or thorium in the environment. It occurs at low concentrations in virtually all rock, soil, water, plants, and animals.

Uranium – is a metallic element, which is highly toxic and radioactive.

MICROBIAL CONTAMINANTS

There was one positive sample detected in 2011 for total and fecal coliforms. This sample was in the community of **Jackrabbit** in July of 2011. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public.

Fecal coliforms and E.coli are bacteria whose presence indicates that the water maybe contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

TOUA has received from EPA delayed implementation waivers for all communities that exceed the new arsenic level of 10 PPB. TOUA is currently designing projects, conducting feasibility studies, researching treatment strategies, and in some cases preparing to build and or make improvements to remedy the arsenic situation. New test wells have been drilled in the **Chui Chu** and **Greater Santa Rosa Regional** area. **Menagers Dam** water distribution system will be intertied to the **Kerwo** water system.

WHO CAN YOU CONTACT FOR MORE INFORMATION?

For more information on this TOUA Water report contact Myrt McIntyre with the Water Quality Control Laboratory at 520-383-5832 or e-mail your questions to Myrt.mcintyre@hq.toua.net.

Telephone Numbers:

TOUA Main Line 520-383-2236

TOUA Water Department 520-383-5831

Trouble Line 611

David Saddler, Manager Water/Wastewater Department 520-383-5830

Cauy Washburn, Superintendent Water/Wastewater Department 520-383-5835

Water Quality Control Laboratory 520-383-5832

USEPA Water Hotline 1-800-426-4791



In 2011, TOUA collected additional monitoring data for contaminants that were not detected. The results are available at TOUA Water Laboratory. This report is also available on the TOUA web page, www.toua.net/water.

Tohono O'odham Utility Authority
P.O Box 816
Sells, AZ 85634

