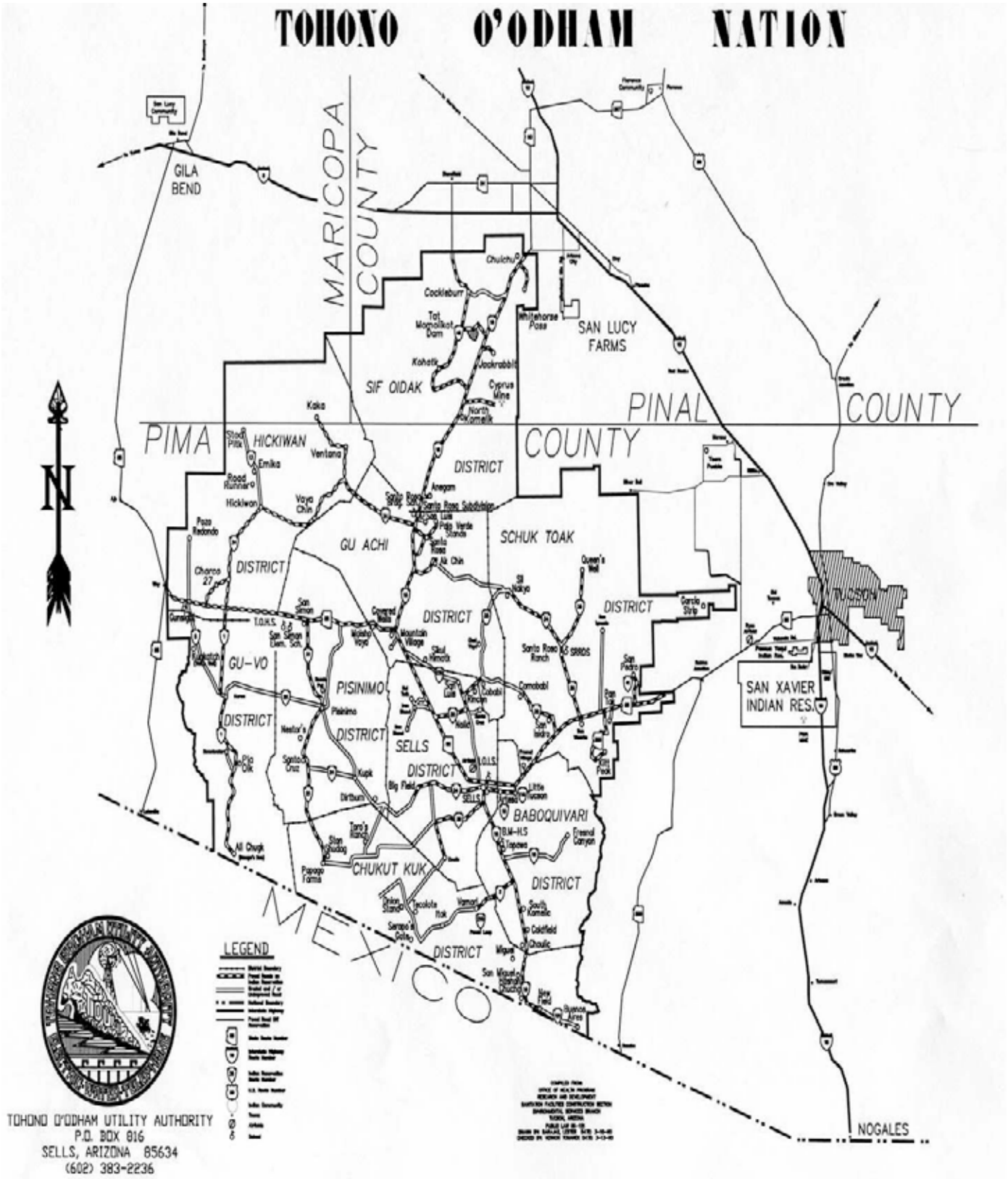
TOUA

TOHONO O'ODHAM UTILITY AUTHORITY

2007
ANNUAL WATER QUALITY REPORT

Photograph-San Xavier West Water Tank

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


TOHONO O'ODHAM NATION
GILA BEND
MARICOPA COUNTY
PINAL COUNTY
PIMA COUNTY
SAN LUCY FARMS
SIF OIDAK
HICKIWAN DISTRICT
GU ACHI DISTRICT
SCHUK TOAK DISTRICT
GU-VO DISTRICT
PISINIMO DISTRICT
SELLS DISTRICT
BABOQUIVARI DISTRICT
CHUKUT KUK DISTRICT
SAN XAVIER INDIAN RES.
TUCSON
MEXICO
NOGALES
N
LEGEND
TOHONO O'ODHAM UTILITY AUTHORITY
P.O. BOX 816
SELLS, ARIZONA 85634
(602) 383-2236

The Water We Drink

The TOUA Water Department professionals within the Tohono O'odham Nation are very proud to provide you with the 2007 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- 383-5834 or 520- 383-5897. We want our valued customers to be informed about their drinking water quality.

In 2007, TOUA served approximately 3000 water customers in the Tohono O'odham Nation. The water supply came from 66 ground water wells located in and around Tohono O'odham communities. Approximately 1.0 parts per million (ppm) of chlorine (12.5 % sodium hypo-chlorite 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 the year 2007, 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 Available

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.

Fluoride- People who 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. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should seek advice from your health care provider. Possible sources include runoff from fertilizer use; leaching from septic tanks, sewage; and erosion of natural deposits. Symptoms include shortness of breath and blue-baby syndrome. As a precaution we always notify physicians and health care providers in this area if there is ever a higher than normal level of nitrates in the water supply.

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 then 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.

INORGANIC & ORGANIC CONTAMINANTS 2007

VILLAGE	PWSID #	ARSENIC	FLUORIDE	NITRATE	TTHM	HAA5	COLIFORM
Maximum Contaminant Level		10 PPB	4 PPM	10 PPM	80 PPB	60 PPB	
Topawa	040-0001	8	1	1	ND	ND	ND
Nolic Intertie/ Cababi/ San Luis	040-0002	13	1	2	6	1	ND
Chui Chu	040-0003	12	1	5	6	1	ND
Fresnal	040-0004	3	<1	2	ND	<1	ND
Queen's Well	040-0005	3	<1	2	32	2	ND
Covered Wells Regional	040-0006	27	1	2	9	<1	ND
Charco 27	040-0008	7	1	9	5	ND	ND
Whitehorse Pass	040-0013	13	1	3	ND	ND	ND
Kohatk	040-0016	19	1	9	ND	ND	ND
Santa Rosa Ranch/ Sil Nakya	040-0018	5	1	2	14	1	ND
New Fields	040-0019	8	2	1	5	1	ND
Vaya Chin/ Hickiwan	040-0020	3	1	6	ND	<1	ND
Pia Oik	040-0021	24	7	4	ND	ND	ND
Ak Chin	040-0022	30	2	2	ND	ND	ND
Menager's Dam	040-0023	34	2	7	ND	ND	ND
San Miguel	040-0026	14	2	1	4	<1	ND
Ventana	040-0027	2	1	5	ND	1	ND
North Komelic	040-0028	33	1	2	ND	ND	ND
Cowlic	040-0029	8	1	1	4	<1	ND
Pisinemo Intertie / Santa Cruz	040-0030	11	2	2	ND	ND	ND

INORGANIC & ORGANIC CONTAMINANTS 2007

VILLAGE	PWSID #	ARSENIC	FLUORIDE	NITRATE	TTHM	HAA5	COLIFORM
Maximum Contaminant Level		**10 PPB**	**4 PPM**	**10 PPM**	**80 PPB**	**60 PPB**	
Gunsight	040-0032	2	<1	7	6	1	ND
Cockleburr	040-0034	33	4	6	ND	ND	ND
San Xavier West	040-0035	6	1	3	3	<1	ND
San Pedro	040-0036	6	1	3	ND	ND	ND
Kaka	040-0037	3	1	4	ND	ND	ND
Vamori	040-0038	10	1	1	84	18	ND
Little Tucson	040-0040	8	<1	2	3	ND	ND
Kerwo	040-0041	2	1	2	ND	ND	ND
Sells Intertie/ Big Fields/ Pan Tak	040-0042	8	1	2	6	ND	ND
Sikul Himatk	040-2015	16	1	1	14	1	ND
Comobabi Intertie/ Crowhang	040-0220	4	<1	1	ND	<1	ND
Greater Santa Rosa Intertie/ Santa Rosa Brd. School/ Anegam/ Palo Verde Stand/ Santa Rosa Subdivision/ Santa Rosa Village	040-0226	20	1	7	14	2	ND
San Xavier Ord. (East)	040-0227	11	1	1	3	<1	ND
San Simon School/ San Simon Village	040-0229	10	1	10	ND	ND	ND
Jackrabbit	040-0231	15	2	4	ND	ND	ND
Ak Chin Nursing Home	040-0232	29	1	2	3	<1	ND

NUMBERS IN YELLOW HAVE EXCEED THE MAXIMUM CONTAMINATE LEVEL

Color coded villages signify water Intertie.

Barium – Any results found were below 0.3 PPM and the MCL is 2 PPM

RADIOCHEMICAL ACTIVITY AND COPPER / LEAD

VILLAGE	PWSID #	ADJUSTED GROSS ALPHA 2007	URANIUM ACTIVITY 2007	TOTAL RADIUM 226 & 228 2007	RANGE OF ALL COPPER SAMPLES 2005	AVG. OF ALL COPPER SAMPLES 2005	AVG. OF ALL LEAD SAMPLES 2005
Maximum Contaminant Level		**15 pCI/L**	**30 PPB**	**5 pCi/L**	**1.3 PPM**	**1.3 PPM**	**.015 PPM**
Topawa	040-0001	1	4	<.5	.17 - <0.01	.075	.0005
Nolic Intertie/ Cababi/ San Luis	040-0002	1	3	<.4	.12 – <0.01	.059	<0.002
Chui Chu	040-0003	<1.0	13	.5	.08 – <0.01	.036	<0.002
Fresnal	040-0004	1	6	<.4	.13 – <0.01	.063	<0.002
Queen's Well	040-0005	<1.0	4	.4	<0.01- <0.01	<0.01	.001
Covered Wells Regional	040-0006	<1.0	8	<.4	.14 – <0.01	.048	<0.002
Charco 27	040-0008	<1.0	18	<.4	.04 – <0.01	.018	<0.002
Whitehorse Pass	040-0013	2	7	<.4	<0.01- <0.01	<.0.01	<0.002
Kohatk	040-0016	<1.0	9	<.5	.05 – <0.01	.026	<0.002
Santa Rosa Ranch/ Sil Nakya	040-0018	<1.0	6	<.4	.14 – .01	.06	.0007
New Fields	040-0019	1	15	<.4	.55 – <0.01	.158	<0.002
Vaya Chin/ Hickiwan	040-0020	<1.0	7	<.4	.09 – <0.01	.028	<0.002
Pia Oik	040-0021	<1.0	2	<.6	.03 – <0.01	.013	<0.002
Ak Chin	040-0022	<1.0	8	<.4	.05 – <0.01	.023	<0.002
Menager's Dam	040-0023	<1.0	11	<.5	.08 – .04	.06	<0.002
San Miguel	040-0026	<1.0	12	<.3	.17 – .01	.093	<0.002
Ventana	040-0027	<1.0	7	.2	.11 – <0.01	.038	.0006
North Komelic	040-0028	<1.0	9	<.4	.14 – <0.01	.042	<0.002
Cowlic	040-0029	<1.0	15	<.3	<0.01- <0.01	<0.01	<0.002

RADIOCHEMICAL ACTIVITY AND COPPER / LEAD

VILLAGE	PWSID #	ADJUSTED GROSS ALPHA 2007	URANIUM ACTIVITY 2007	TOTAL RADIUM 226 & 228 2007	RANGE OF ALL COPPER SAMPLES 2005	AVG. OF ALL COPPER SAMPLES 2005	AVG. OF ALL LEAD SAMPLES 2005
Maximum Contaminant Level		15 pCI/L	30 PPB	5 pCi/L	1.3 PPM	1.3 PPM	.015 PPM
Pisinemo Intertie/ Santa Cruz	040-0030	2	26	1	.07 – <0.01	.026	.0002
Gunsight	040-0032	<1.0	4	<.4	.29 – <0.01	.11	<0.002
Cockleburr	040-0034	1	8	<.6	.05 – <0.01	.012	<0.002
San Xavier West	040-0035	<1.0	13	<.4	.12 – <0.01	.077	<0.002
San Padro	040-0036	<1.0	5	<.4	.09 – <0.01	.053	<0.002
Kaka	040-0037	<1.0	3	1	.02 – <0.01	.014	<0.002
Vamori	040-0038	<1.0	10	<.4	.20 – <0.01	.084	<0.002
Little Tucson	040-0040	2	11	<.4	.09 – .04	.058	.0005
Kerwo	040-0041	<1.0	3	<.3	.05 – <0.01	.028	<0.002
Sells Intertie/ Big Fields/ Pan Tak	040-0042	<1.0	9	.1	.30 – <0.01	.064	.0025
Comobabi	040-0220	<1.0	5	<.3	.28 – <0.01	.109	.0017
Greater Santa Rosa Intertie/ Santa Rosa Brd. School/ Anegam/ Palo Verde Stand/ Santa Rosa Sub./ Santa Rosa Village	040-0226	<1.0	15	<.4	.53 – <0.01	.095	.0056
San Xavier Ord (East)	040-0227	<1.0	7	<.4	.04 – <0.01	.018	<0.002
San Simon School/ San Simon Village	040-0229	<1.0	9	<.5	.07 – .02	.046	.0003
Jackrabbit	040-0231	2	13	<.3	.09 – <0.01	.05	.0017
Ak Chin Nursing Home	040-0232	<1.0	7	<.4			
Sikul Himatk	040-2015	1	4	<.3	.02 – <0.01	.01	.0015

MICROBIAL CONTAMINANTS

There were no positive samples detected in 2007 for either total or fecal coliforms. 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.

Violations:

The community of Pia Oik exceeded the MCL for fluoride. Pia Oik will intertie to the Kerwo community by the end of the year 2008. The community of San Simon School and San Simon Village exceeded the MCL for nitrates. The San Simon Community will intertie with the Vaya Chin regional system by the end of the year 2008. Several communities exceed the new MCL for arsenic. TOUA has received from EPA delayed implementation waivers for these communities.

WHO CAN YOU CONTACT FOR MORE INFORMATION?

For more information on this TOUA Water report contact Myrt McIntyre with the Water Quality Control Laboratory. Call 520-383-5834 or e-mail your questions to Myrt.mcintyre@hq.toua.net.

Telephone Numbers:
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Trouble Line 611
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Cauy Washburn, Superintendent Water/Wastewater Department 520-383-5835
Water Quality Control Laboratory 520-383-5897
USEPA Water Hotline 1-800-426-4791

In 2007, TOUA collected additional annual monitoring data. The results are available at TOUA Water Laboratory. This report is also available on the TOUA web page, www.toua.net.

TOUA Water Department Professionals

David Saddler, Department Manager

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