

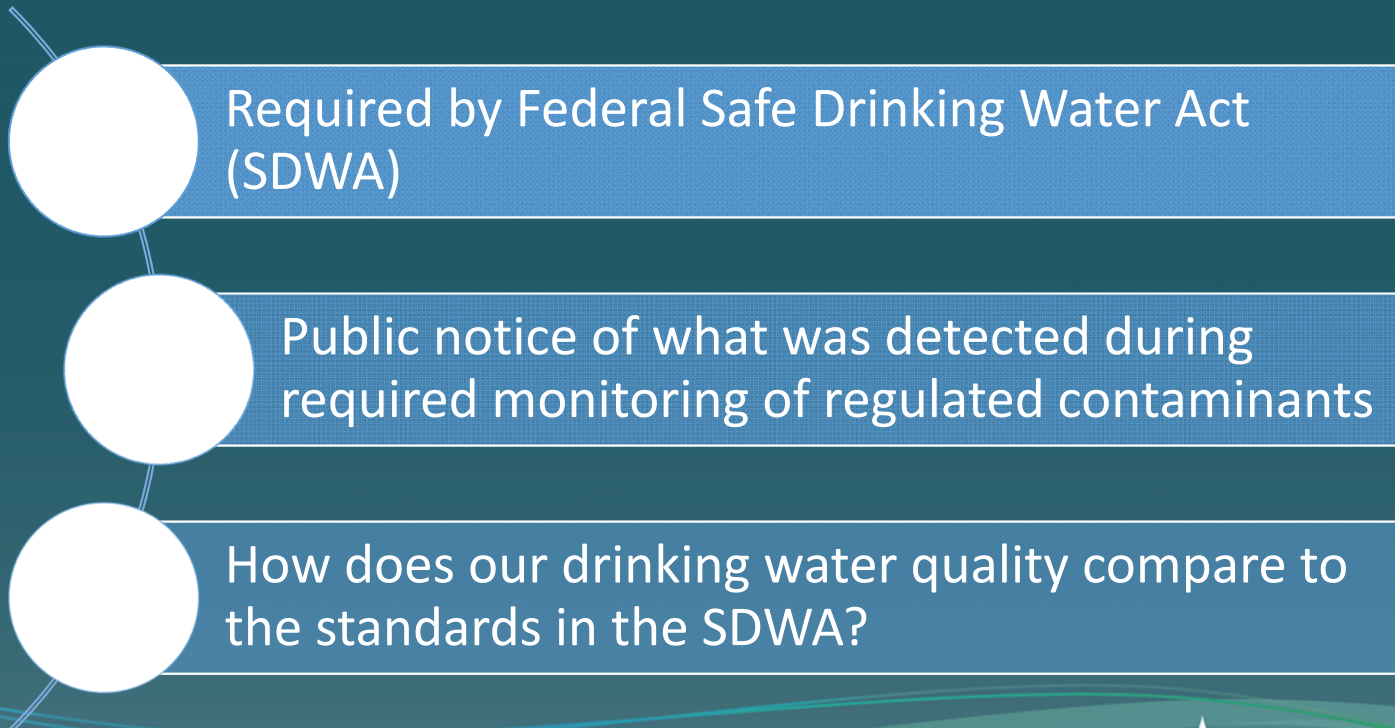
2017 Consumer Confidence Report (CCR)

Mark Kelly, PE
Compliance Division Manager



Albuquerque Bernalillo County
Water Utility Authority

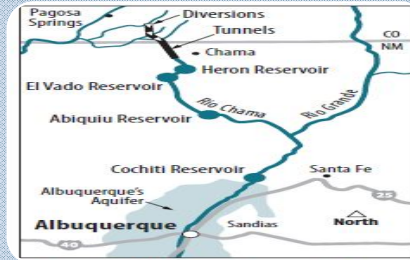
Why have a CCR?



CCR Required Information

General and billing information 842-WATR(9287)
Water quality information 289-3653
Report water waste 842-WATR(9287)
Report unusual activity at water facilities 842-WATR(9287)
Pollution prevention/Industrial pretreatment 289-3419
Water protection policy & action plan 289-3025
Cross-connections 289-3417
Water quality email waterquality@abcwsua.org

Information Websites
Albuquerque Bernalillo County Water Utility Authority www.abcwsua.org
City of Albuquerque www.ciabq.gov
Bernalillo County www.bemco.gov
Bernalillo County Water Conservation www.bemco.gov/water
NM Environment Department Drinking Water Bureau www.enr.nm.gov/dwb
American Water Works Association www.awwa.org
USEPA www.epa.gov



Some found in surface water throughout the U.S. We monitor for these parasites because they may produce symptoms of nausea, vomiting, and headaches. Current test methods do not allow us to know if they are capable of causing disease. Cryptosporidium and Giardia are the most common parasites found in our source water.

Found in source water, the USEPA requires water systems to demonstrate their efficiency. The San Juan-Chama Drinking Water System uses a multi-barrier approach (pre-sedimentation, clarification, and filtration) to meet the USEPA requirements.

Source measured at or above the detection limit.

The highest level of a contaminant that is allowed in drinking water. MCLGs are health-based and do not take into account the feasibility of treatment.

MCLG: The level of a contaminant in drinking water that poses no risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary to control microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The disinfectant level below which there is no known or expected risk to health from the disinfectant and the benefits of the use of disinfectants to control microbial contaminants are maximized.

Parts Per Billion (PPB): Parts per billion or micrograms per liter. Example: one drop of water in an Olympic-size swimming pool.

Parts Per Million (PPM): Parts per million or milligrams per liter. Example: four drops of water in a 55-gallon barrel.

picoCuries per liter (pCi/L): A measure of radioactivity.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Water System Information

- Contact Information

Sources of Water

Definitions



Albuquerque Bernalillo County
Water Utility Authority

CCR Required Information

Monitoring at the Distribution System

UCMR3 requires utilities that serve the amount of certain customers in drinking water. To comply, the utility must monitor the following: The table below shows the substances from monitoring done at the Distribution System (DPS) for monitoring with UCMR3.

Sample Location	Minimum Detected	Average Detected	Maximum Detected	Low Level Chronic Drinking Water Plant	Maximum Concentration Level (MCL)	Maximum Concentration Level (MCLG)	Detection Limit	Source
18-2017	2m PPS	2 PPS	2 PPS	2m PPS	10 PPS	2 PPS	1 PPS	Excess of natural radon & radon progeny
	2m PPS	2m PPS	2m PPS	2m PPS	2 PPS	2 PPS	0.1 PPS	Excess of natural radon
	2m PPS	1 PPS	2 PPS	2m PPS	100 PPS	100 PPS	1 PPS	Excess of natural radon
18-2017	0.1 PPS	0.00 PPS	0.00 PPS	0.1 PPS	0.00 PPS	0.00 PPS	0.1 PPS	Excess of natural radon
18-2017	2m PPS	0.10 PPS	2.00 PPS	0.10 PPS	10 PPS	10 PPS	0.10 PPS	Excess of natural radon
2017	2m PPS	0.0001 PPS	0.0001 PPS	2m PPS	10 PPS	10 PPS	0.0001 PPS	Excess of natural radon
18-2017	0.00 PPS	0.00 PPS	0.00 PPS	0.00 PPS	0.00 PPS	0.00 PPS	0.00 PPS	Excess of natural radon
18-2017	0.00 PPS	0.00 PPS	0.00 PPS	0.00 PPS	0.00 PPS	0.00 PPS	0.00 PPS	Excess of natural radon
2017	2m PPS	0.00 PPS	0.00 PPS	2m PPS	10 PPS	10 PPS	0.00 PPS	Excess of natural radon

regulated substances detected during UCMR3 in 2015: laboratory Minimum Reporting Level (MRL*)

Substance Name	MRL	Range of Results	Average of Results
4-dioxane	0.07 PPB	<0.07 to 0.19 PPB	<0.07 PPB
chlorate	20 PPB	<20 to 169 PPB	88 PPB
chromium, total	0.2 PPB	<0.2 to 9 PPB	0.96 PPB
chromium-6	0.03 PPB	<0.03 to 7.3 PPB	0.97 PPB
chromium-3	1 PPB	<1.1 to 7.5 PPB	3.1 PPB
copper	0.3 PPB	144 to 631 PPB	379 PPB
radium	0.2 PPB	<0.2 to 14 PPB	3.4 PPB

MRL is the lowest concentration that can be detected by laboratory equipment.

For information about the Unregulated Contaminant Monitoring Program is available www.epa.gov/dwucmr.

PA Health Effects Language:

For people who drink water containing **barium** in excess of the MCL over many years could experience an increase in their blood pressure.

For people who drink water containing **bromate** in excess of the MCL over many years may experience an increased risk of getting cancer.

For people who drink water containing **chromium** in excess of the MCL over many years could experience allergic dermatitis.

For people who drink water containing **xylenes** in excess of the MCL over many years could experience damage to their nervous system.

Detected Contaminants

- Entry Points
- Distribution
- Surface Water Plant

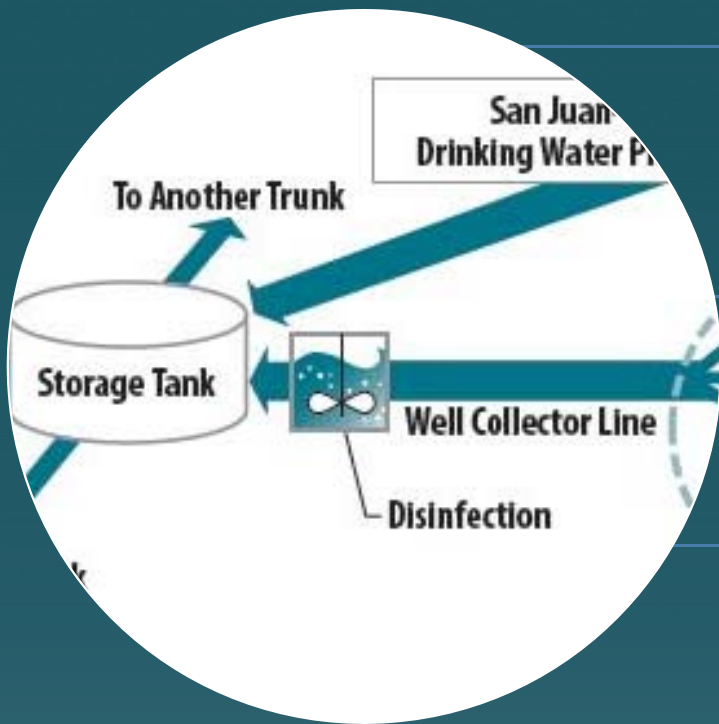
Compliance With Other Drinking Water Regulations

- UCMR3
- LT2

Educational Information



Albuquerque Bernalillo County
Water Utility Authority



Water System Information

Albuquerque Bernalillo County Water Utility Authority		
Andy S. Jones	City of Albuquerque	Councilman, District 1
Debbie O'Malley	County of Bernalillo	Councilwoman, District 2
Paul Davis	City of Albuquerque	Councilman, District 3
Thomas M. Kibbe	City of Albuquerque	Mayor
Marissa L. Peltz	City of Albuquerque	Councilwoman, District 4
Steven Michael Quaresima	County of Bernalillo	Councilman, District 5
Lauren Talbot	County of Bernalillo	Councilwoman, District 6
Patricia R. Reed	Village of Los Ranchos	Board President
Mark S. Sanchez		Board President

Board Members

Organization	Phone Number
Albuquerque Bernalillo County Water Utility Authority	www.abwua.org
City of Albuquerque	www.abq.gov
County of Bernalillo	www.bernco.gov
Bernalillo County Water Conservation	www.bernco.gov/water
NM Environment Department Drinking Water Bureau	www.env.nm.gov/dwb
Artesian Water Works Association	www.awwa.org
United States Environmental Protection Agency	www.epa.gov/safewater

Phone Numbers

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Websites



Albuquerque Bernalillo County
Water Utility Authority

Ground
Water



Surface
Water

Sources
of
Water



Albuquerque Bernalillo County
Water Utility Authority

Definitions

Definitions

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. We monitor the river for *Cryptosporidium*. If ingested, these parasites may produce symptoms of nausea, stomach cramps, diarrhea, and associated headaches. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. *Cryptosporidium* is reported in oocysts, which are spores of the organism. During the 24-month sampling period, only one (1) *Cryptosporidium* oocyst was measured in our source water.

Based on the levels of *Cryptosporidium* found in source water, the USEPA requires water systems to use specific treatment techniques and to demonstrate their efficiency. The San Juan-Chama Drinking Water Plant was designed to provide a multi-barrier approach (pre-sedimentation, clarification, and filtration) to removing *Cryptosporidium* in order to meet the USEPA requirements.

Detected: The concentration of a substance measured at or above the detection limit.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Parts Per Billion (PPB): Parts per billion or micrograms per liter ($\mu\text{g/L}$). 1 PPB = 0.001 PPM.
Example: one drop of water in an Olympic-size swimming pool.

Parts Per Million (PPM): Parts per million or milligrams per liter (mg/L). 1 PPM = 1,000 PPB.
Example: four drops of water in a 55-gallon barrel.

picoCuries per liter (pCi/L): A measure of radioactivity.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.



Albuquerque Bernalillo County
Water Utility Authority

Detected Contaminants

2017 Results of Compliance Monitoring at Entry Points to the Distribution System

USEPA sets regulations that limit the amount of certain substances in drinking water. USEPA defines where and how often samples for each substance must be collected. The table below shows the substances found in the most recent water quality testing done at the Entry Points to the Distribution System (EPTDS) to comply with USEPA.

Substance	Sample Collection Years	Minimum Detected	Average Detected	Maximum Detected	San Juan-Chama Drinking Water Plant	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	Detection Limit	Source	Health Effects Language
Metals										
Arsenic		Zero PPB	2 PPB	9 PPB	Zero PPB	10 PPB	Zero PPB	1 PPB	Erosion of natural volcanic deposits.	See bottom of page 3.
Barium	2014-2017	Zero PPM	Zero PPM	0.2 PPM	Zero PPM	2 PPM	2 PPM	0.1 PPM	Erosion of natural deposits.	
Chromium		Zero PPB	1 PPB	8 PPB	Zero PPB	100 PPB	100 PPB	1 PPB	Erosion of natural deposits.	
Minerals										
Fluoride	2014-2017	0.25 PPM	0.48 PPM	1.24 PPM	0.39 PPM	4 PPM	4 PPM	0.10 PPM	Erosion of natural deposits.	Not Applicable
Nutrients										
Nitrate	2016-2017	Zero PPM	0.38 PPM	2.99 PPM	0.26 PPM	10 PPM	10 PPM	0.10 PPM	Erosion of natural deposits.	Not Applicable
Organics										
Total Xylenes	2017	Zero PPM	0.0001 PPM	0.0031 PPM	Zero PPM	10 PPM	10 PPM	0.0005 PPM	Discharge from petroleum or chemical factories.	See bottom page 3.
Radionuclides										
Gross Alpha Particle Activity		Zero pCi/L	0.8 pCi/L	2.5 pCi/L	Zero pCi/L	15 pCi/L	Zero pCi/L	0.7-1.1 pCi/L	Erosion of natural deposits.	Not Applicable
Radium 226 + 228	2010-2017	0.00 pCi/L	0.16 pCi/L	0.41 pCi/L	0.05 pCi/L	5 pCi/L	Zero pCi/L	0.01-0.18 pCi/L	Erosion of natural deposits.	Not Applicable
Uranium		0 PPB	2 PPB	9 PPB	Zero PPB	30 PPB	Zero PPB	1.0 PPB	Erosion of natural deposits.	Not Applicable
Disinfectants										
Chlorine	2017	Zero PPM	Not Applicable	Not Applicable	Not Applicable	TT = Maintain required chlorine level or restore within 4 hours.	Not Applicable	Not Applicable	Disinfectant (sodium hypochlorite).	Not Applicable
					TT met at 100% of sites.					



Albuquerque Bernalillo County
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Detected Contaminants

2017 Results of Compliance Monitoring at the San Juan-Chama Drinking Water Plant

USEPA sets regulations that limit the amount of certain substances in drinking water. USEPA defines where and how often samples for each substance must be collected and how they must be analyzed. The table below shows only the substances found in compliance monitoring for the finished water at the Surface Water Treatment Plant. For surface water, USEPA also requires that specific treatment techniques are used and shown to be effective.

Substance	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	Minimum Detected	Average Detected	Maximum Detected	Detection Limit	Source
Microbiological <i>Cryptosporidium</i> (untreated water) ¹	TT	Zero Oocysts/L	Zero Oocysts/L	0.004 Oocysts/L	0.093 Oocyst/L	1 Oocyst	Human and animal fecal waste.
Turbidity <i>A measure of cloudiness of the water. It is a good indicator of the effectiveness of filtration.</i>	1 NTU ² in all finished water samples, 95% of the finished water samples must be less than 0.3 NTU.	Zero NTU	0.02 NTU Lowest monthly percentage: 160 of 161 samples or 99.4% of samples taken in the one month were less than 0.3 NTU.	Not Applicable	0.37 NTU		Soil runoff.
Total Organic Carbon (TOC)	TT	Not Applicable	Zero PPM	0.8 PPM	1.5 PPM	1.0 PPM	Naturally present in the environment.
Minerals							
Fluoride	4 PPM	4 PPM	0.39 PPM	0.39 PPM	0.39 PPM	0.10 PPM	Erosion of natural deposits.
Nutrients							
Nitrate	10 PPM	10 PPM	0.26 PPM	0.26 PPM	0.26 PPM	0.10 PPM	Erosion of natural deposits.
Disinfection By-Products							
Bromate (for health effects - bottom left, page 3).	10 PPB	Zero PPB	1.1 PPB	2.0 PPB	4.2 PPB	1.0 PPB	By-product of drinking water disinfection.
Substance	Maximum Residual Disinfectant Level (MRDL)	Maximum Residual Disinfectant Level Goal (MRDLG)	Minimum Detected	Average Detected	Maximum Detected	Source	
Disinfectants							
Chlorine	4 PPM	4 PPM	0.7 PPM	1.4 PPM	1.7 PPM	Disinfectant (sodium hypochlorite).	

¹Summary of results from samples collected over 24 months, between April 2015 and May 2017. ²NTU = Nephelometric Turbidity Unit.



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Detected Contaminants

2017 Compliance Results of

Distribution System Monitoring

USEPA sets regulations that limit the amount of certain substances in drinking water. USEPA defines where and how often samples for each substance must be collected. The table below shows the substances found in the most recent water quality testing done in the Distribution System to comply with USEPA.

Substance Detected	Safe Level ¹	DETAILED INFORMATION								
Microbiological		Source	Year of Samples	Minimum Detected	Average Detected	Maximum Detected	Maximum Contaminant Level (or equivalent)	Maximum Contaminant Level Goal (or equivalent)	Detection Limit	
Total Coliform (240 samples each month)	Yes	Coliforms are bacteria that are normally present in the environment.	2017	Not Applicable	Not Applicable	2 of 248 samples or 0.81% of samples taken in a month had detectable total coliform bacteria. No total coliform bacteria was detected in any repeat sample at any location.	Presence of coliform bacteria in 5.0% or more of samples in any month.	0% of samples with detectable coliform bacteria.	Not Applicable	
Disinfectants										
Chlorine	Yes	Disinfectant (sodium hypochlorite).	2017	0.2 PPM	0.8 PPM	1.9 PPM	4 PPM (MRDL)	4 PPM (MRDLG)	Not Applicable	
Disinfection By-Products		Source	Year of Samples	Range of Results		Maximum Detected	Maximum Contaminant Level (or equivalent)	Maximum Contaminant Level Goal (or equivalent)	Detection Limit	
Total Trihalomethanes (TTHMs) ²	Yes	By-product of chlorination.	2017	1–56 PPB ⁴		42 PPB (highest LRAA ⁵).	80 PPB	Not Applicable	0.15 PPB	
Haloacetic Acids (HAA5s) ³	Yes	By-product of chlorination.	2017	0–19 PPB ⁴		14 PPB (highest LRAA ⁵).	60 PPB	Not Applicable	0.06 PPB	
Lead & Copper		Source	Year of Samples	90th Percentile	No. of Samples that Exceed Action Level	Maximum Detected	Action Level ⁶	Maximum Contaminant Level Goal	Detection Limit	
Zones 1-20 (50 samples every 3 years)	Lead	Yes	Corrosion of household plumbing.	2015	2 PPB	Zero	4 PPB	15 PPB	Zero PPB	1.0 PPB
	Copper	Yes	Corrosion of household plumbing.	2015	0.29 PPM	Zero	0.47 PPM	1.3 PPM	Zero PPM	0.01 PPM

¹ Meets USEPA standards for safe drinking water. ² TTHMs are the sum of the concentrations of the trihalomethane compounds. ³ HAA5s are the sum of the concentrations of the haloacetic acid compounds. ⁴ The range represents the minimum and maximum of all quarterly analytical results at all 12 locations. ⁵ The Locational Running Annual Average (LRAA) is the average of analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

⁶ Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. The Action Level is compared to the concentration detected in the 90th percentile sample.



Albuquerque Bernalillo County
Water Utility Authority

Compliance With Other Drinking Water Regulations

Unregulated substances detected during UCMR3 in 2015: Laboratory Minimum Reporting Level (MRL*)

Substance Name	MRL	Range of Results	Average of Results
1,4-dioxane	0.07 PPB	<0.07 to 0.19 PPB	<0.07 PPB
Chlorate	20 PPB	<20 to 169 PPB	88 PPB
Chromium, total	0.2 PPB	<0.2 to 9 PPB	0.96 PPB
Chromium-6	0.03 PPB	<0.03 to 7.3 PPB	0.97 PPB
Molybdenum	1 PPB	<1.1 to 7.5 PPB	3.1 PPB
Strontium	0.3 PPB	144 to 631 PPB	379 PPB
Vanadium	0.2 PPB	<0.2 to 14 PPB	3.4 PPB

* MRL is the lowest concentration that can be detected by laboratory equipment.



Albuquerque Bernalillo County
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Required Educational Language

USEPA Health Effects Language:

Some people who drink water containing **barium** in excess of the MCL over many years could experience an increase in their blood pressure.

Some people who drink water containing **bromate** in excess of the MCL over many years may have an increased risk of getting cancer.

Some people who drink water containing **chromium** in excess of the MCL over many years could experience allergic dermatitis.

Some people who drink water containing **xylene**s in excess of the MCL over many years could experience damage to their nervous system.



Optional Info



Albuquerque Bernalillo County
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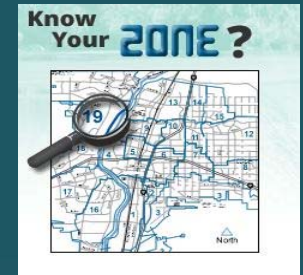
Voluntary Lead Program Results

2017 Customer Requested Testing				2015 USEPA Required Testing			
Parameter	Minimum	Maximum	90th Percentile	Minimum	Maximum	90th Percentile	Action Level
Lead PPB	0	4.7	1.6	0	4	2	15
Copper PPM	0	0.46	0.24	0.03	0.47	0.29	1.3

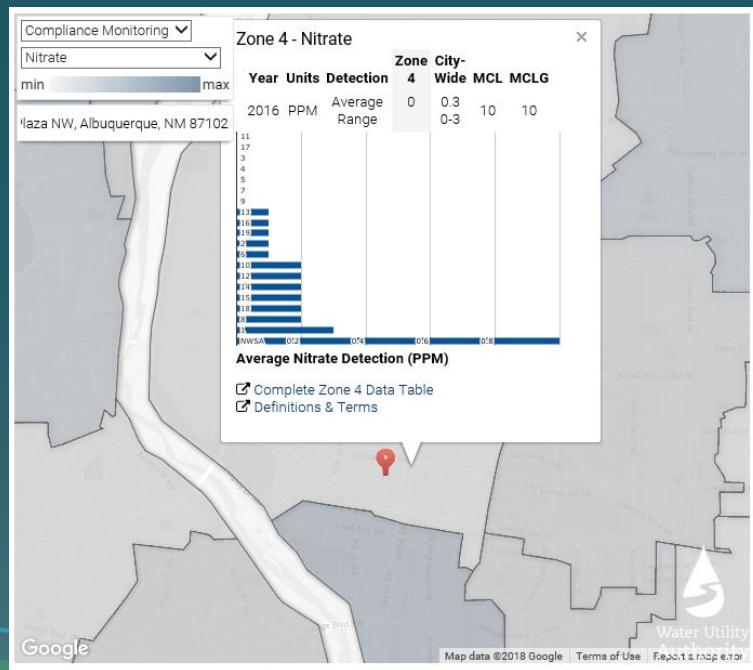


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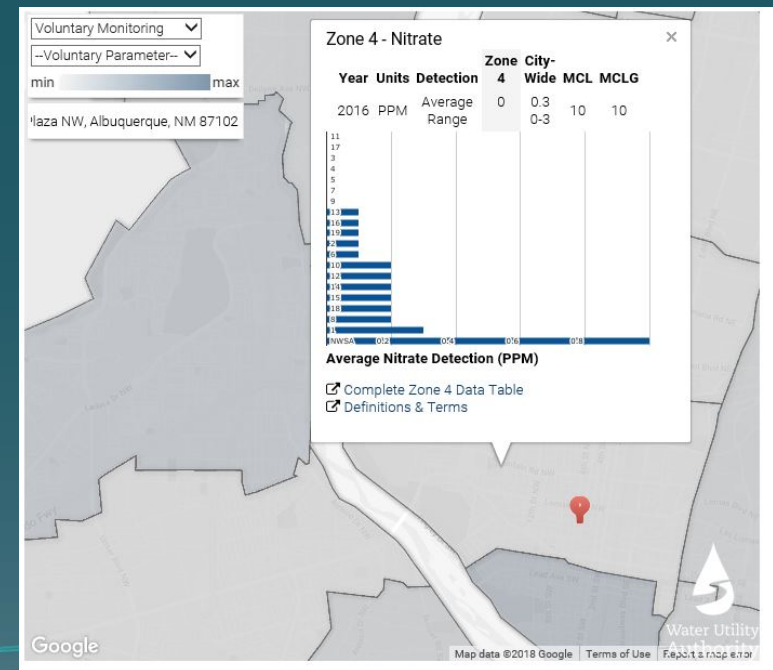
Additional Information Available



Compliance Monitoring



Voluntary Monitoring



www.abcwua.org/waterquality

Water Utility Authority

Lead Testing Program and Rebate

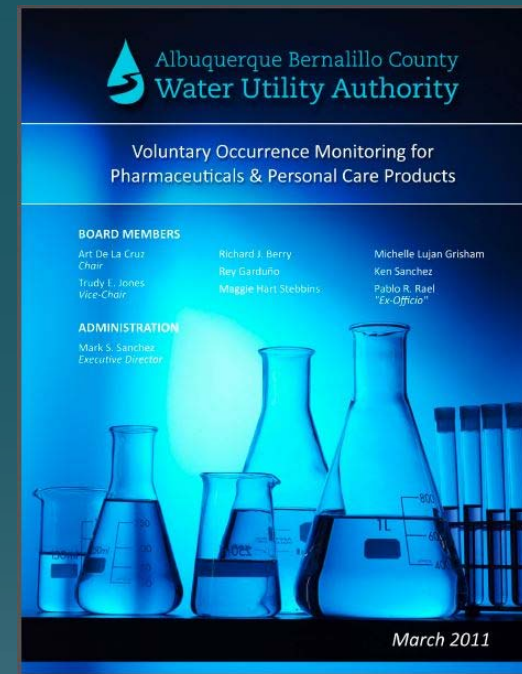
- Voluntary Testing
 - Also available in 2018
 - Sign up Online
 - www.abcwua.org/leadsurvey.aspx
 - Call 289-3653
- 2018 Compliance Testing Rebates
 - \$20 off water bill
 - 50 Qualifying Customers
 - Sign up Online
 - www.abcwua.org/lead-rebate.aspx



Albuquerque Bernalillo County
Water Utility Authority

Pharmaceuticals and Personal Care Products (PPCPs)

- 2011 Report
 - Sampling 2009 – 2011
 - 113 PPCPs Tested
 - 5 Locations
 - Very Low Level Detections
 - Ibuprofen
 - Testosterone
 - Naproxen
 - Cholesterol



PPCPs – 2011 Breakdown of Results

Figure a. Frequency of Occurrence of 113 PPCPs in Finished Drinking Water

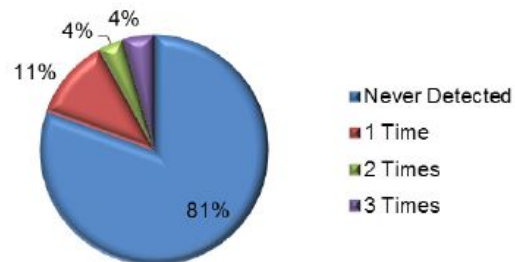
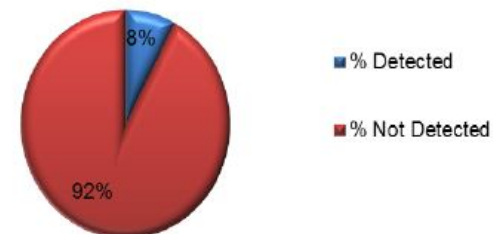


Figure b. Percent of Detections (After Blank Correction) vs. Total Analyses in Finished Drinking Water



PPCPs – 2011 Results Cont.

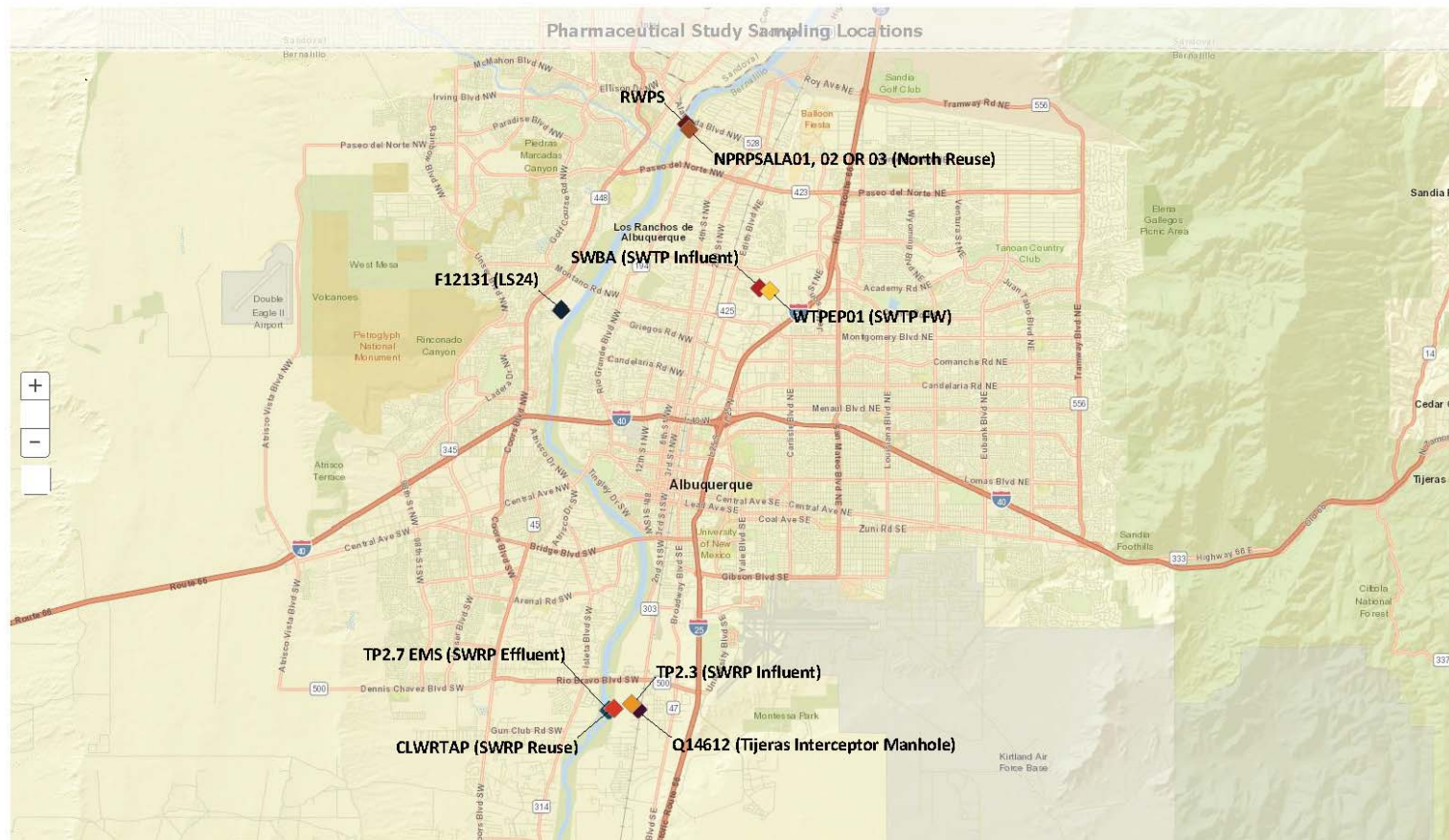
Table 4a. Comparison of Substance Concentration in Finished Water to Commonly Prescribed Dose or Dietary Amount

Substance	Classification	Level Detected (ng/L)	Commonly Prescribed Dose or Dietary Amount	Volume of Water Needed to Consume to Meet Prescribed Dose or Dietary Amount		Years of Consumption at Two (2) Liters to Meet Prescribed Dose
				Liters	Gallons	
Ibuprofen	Analgesic	50.8	200 mg	3,940,000	1,041,000	5,390
Testosterone	Sex hormone	23.3	200 mg	8,580,000	2,270,000	11,800
Campesterol	Plant sterol	23.9	33.7 mg/Tbsp Vegetable Oil	1,410,000	372,000	1,930
Stigmasterol	Plant sterol	114	0.4 mg/Tbsp Vegetable Oil	3,510	927	5
Naproxen	Non-steroidal anti-inflammatory drug	210	250 mg	1,190,000	314,000	1,630
2-Hydroxy-Ibuprofen	Metabolite of Ibuprofen	545	200 mg	367,000	97,000	503
Beta-Sitosterol	Plant sterol	462	57.8 mg/Tbsp Vegetable Oil	125,000	33,000	171
Cholesterol	Sterol	4060	200 mg	49,300	13,000	67



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PPCPs – Sampling Locations for Update



PPCPs – Schedule for Sampling

- Timing to Match Rio Grande
 - Base Flow – January/February/March
 - High Flow – May/June
 - Irrigation – July/August
 - Low Flow – September/October/November
- Staggering of Sampling



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PPCPs – Final Report

- Format Similar to 2011 Report – posted on website
- Compare results from 2018 to 2011
- Present Result Findings to Board Spring 2019



Albuquerque Bernalillo County
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