

Water Report

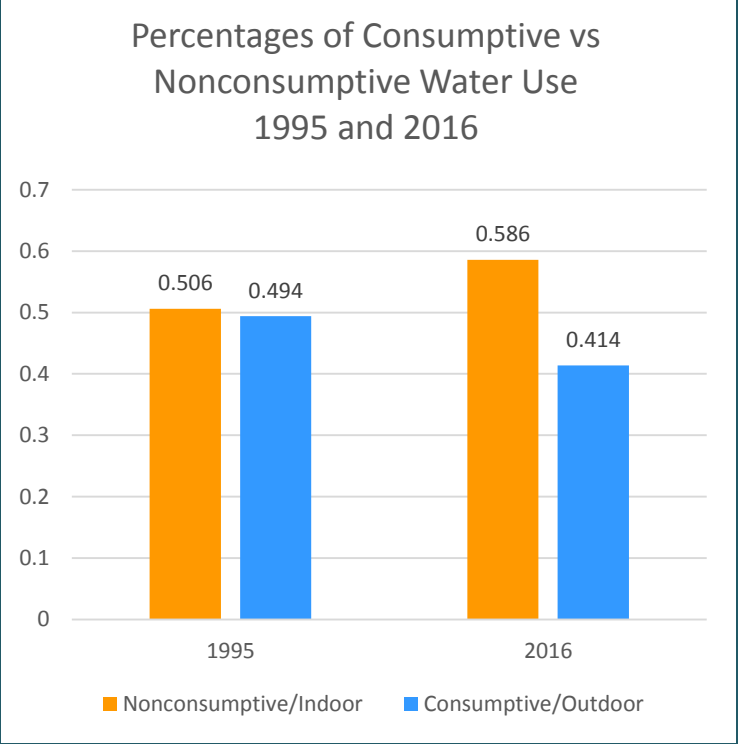
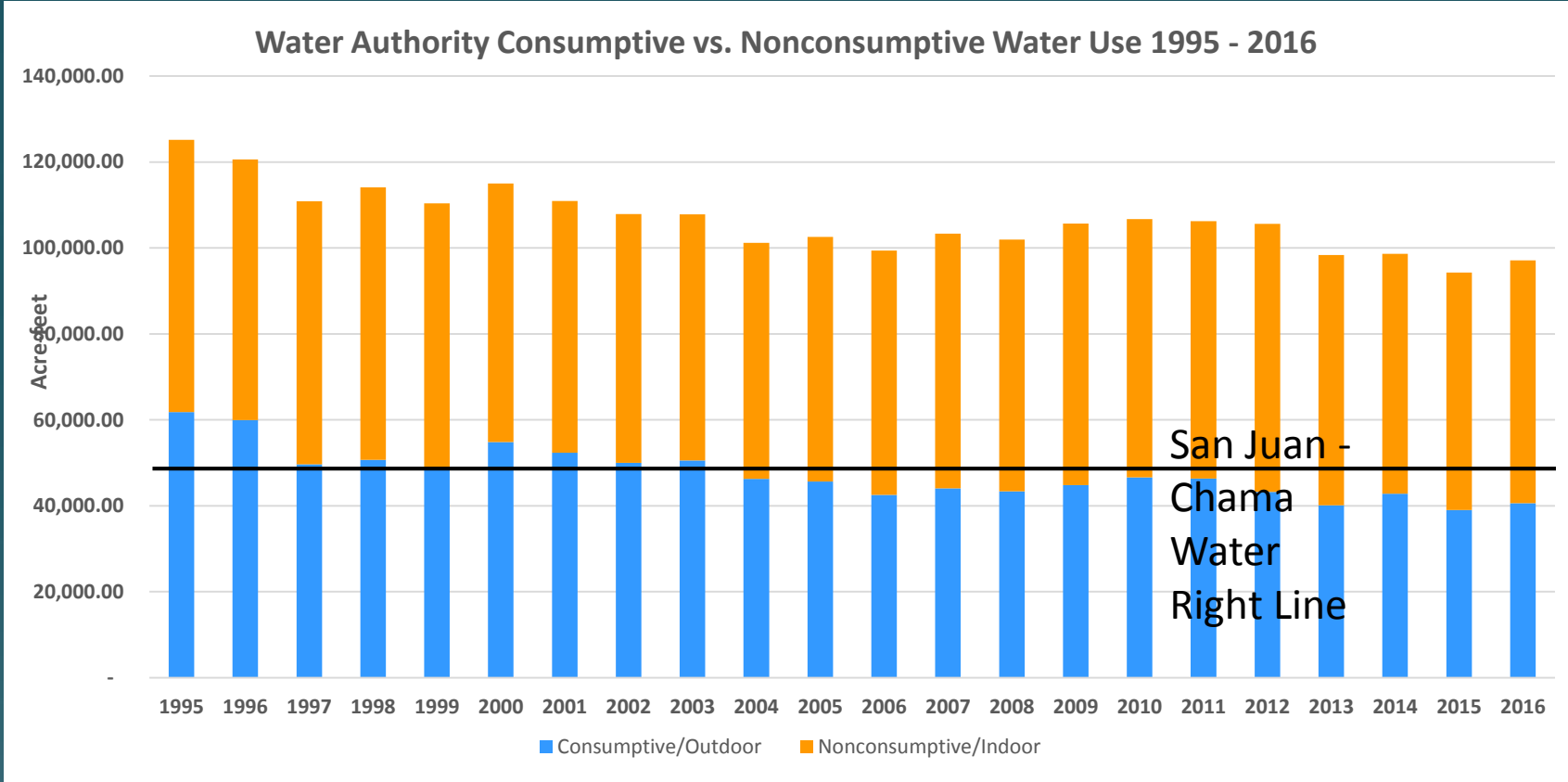
ABCWUA Board Meeting

May 17, 2017

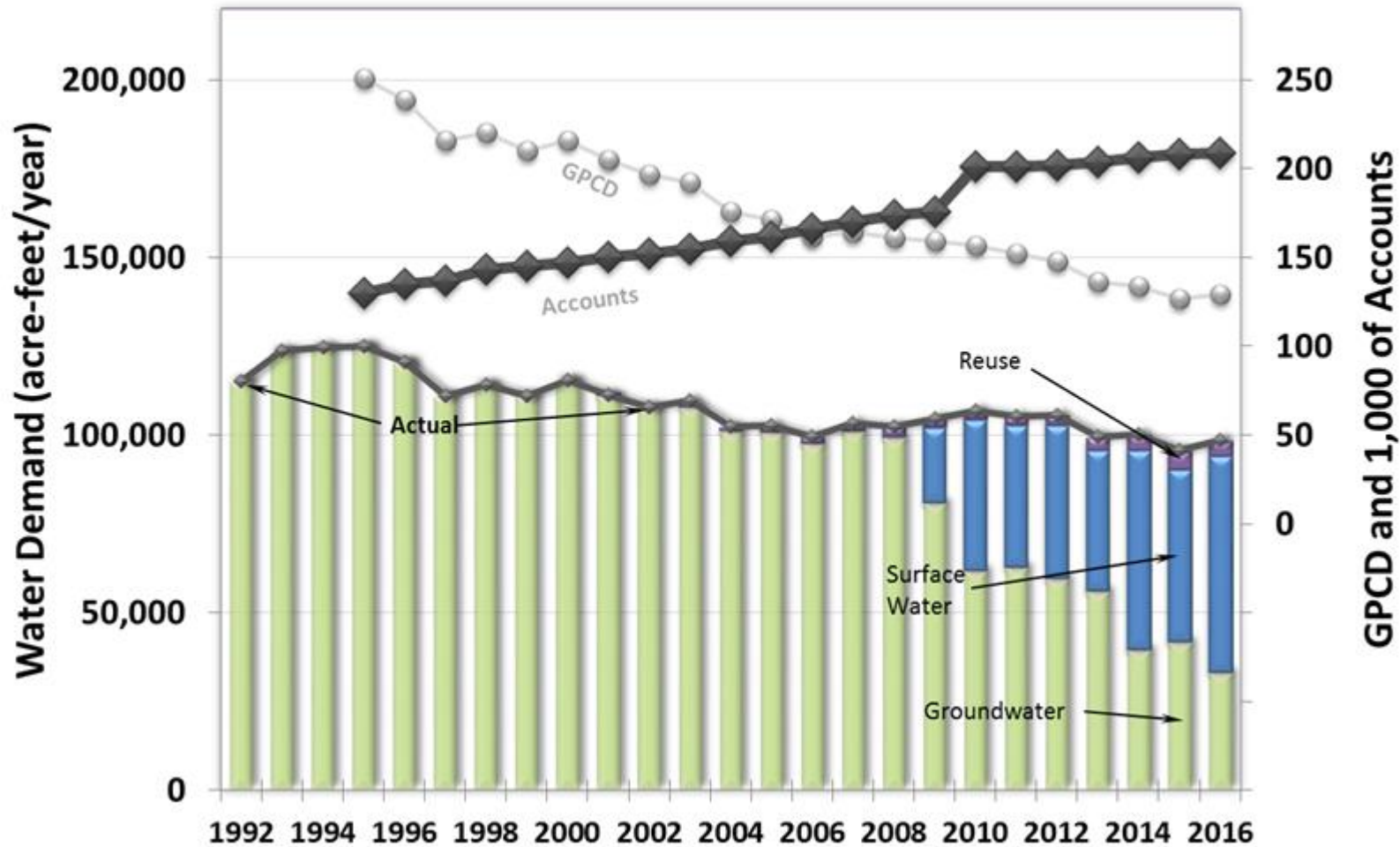
Katherine Yuhas, Water Resources Division Manager



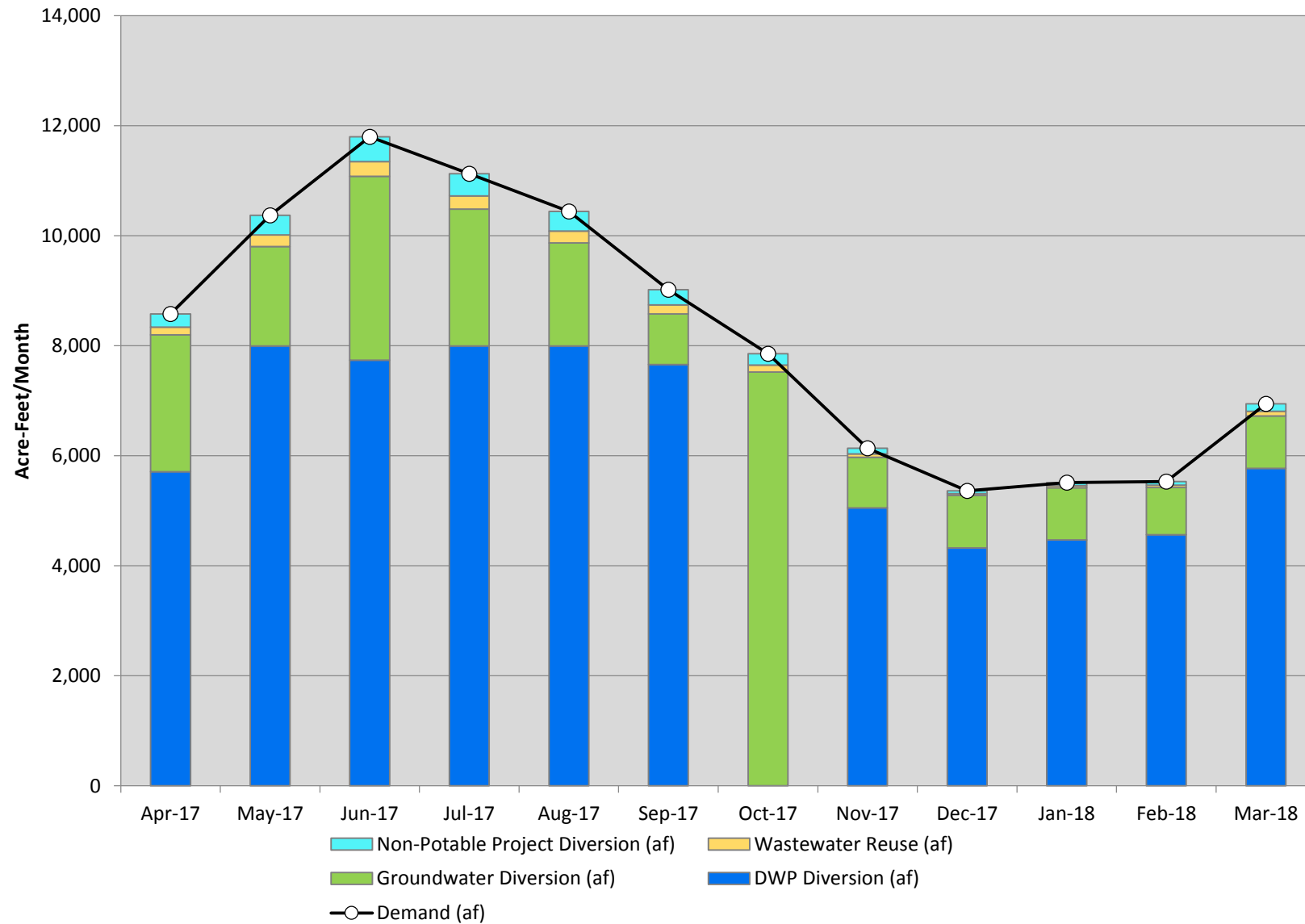
Albuquerque Bernalillo County
Water Utility Authority



Demand and Water Sources



Annual Operating Plan: Water Authority Monthly Water Diversions



2016 Consumer Confidence Report

Mark Kelly, P.E.
Compliance Division Manager



Albuquerque Bernalillo County
Water Utility Authority

Why have a CCR?



SDWA Required

Public notice of what was detected during required monitoring of regulated contaminants

How does our drinking water compare to the SDWA set maximums?



Albuquerque Bernalillo County
Water Utility Authority

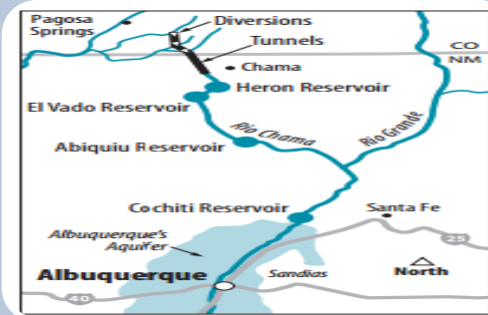
Requirements

How to Contact Us

Emergency repair hotline 842-WATR(9287)
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@abcwua.org

Information Websites

Albuquerque Bernalillo County Water Utility Authority www.abcwua.org
City of Albuquerque www.cabq.gov
Bernalillo County www.bernco.gov
Bernalillo County Water Conservation www.bernco.gov/water
NM Environment Department Drinking Water Bureau www.nmenv.state.nm.us/dwb/index.htm
American Water Works Association www.awwa.org
USEPA www.epa.gov/safewater



Definitions

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. We monitor untreated water for the presence of *Cryptosporidium*. If ingested, these parasites may produce symptoms of nausea, stomach cramps, diarrhea, and associated headaches. Note: *Cryptosporidium* is reported in oocysts, which are spores of the organism.

Based on the levels of *Cryptosporidium* found in source water, the ABCWUA acquires water systems to use specific treatment techniques and to demonstrate their efficiency. The surface water treatment 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 USEPA specified Method Detection Limit.

Maximum Contaminant Level (MCL): The highest level of a contaminant allowable 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.

ND (<1 PPB): Not Detected at the Method Detection Limit specified in parentheses.

Parts Per Billion (PPB): Parts per billion or micrograms per liter (µg/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.

Water System Information

- Contact Information

Sources of Water

Definitions



Albuquerque Bernalillo County
Water Utility Authority

Requirements

As a Result of Compliance Monitoring at Entry Points to the Distribution System

USEPA requires registration for lead in the amount of certain substances in drinking water. USEPA defines when or how often compliance test substances must be collected. The table below shows the collection frequency for the most water quality testing done at the Entry Points in the Distribution System (EPs) in compliance with USEPA. Checkmark (✓) means Health Effects

Substance	Sample Collection Date	Maximum Detected	Average Detected	Maximum Detected	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	Source	Health Effects Language
Arsenic	2016-2019	200 ppm	1 ppm	0.05%	10 ppm (0.05%)	200 ppm (0.05%)	Division of natural volcanic deposits.	See Section of page 3
Barium	2016-2019	200 ppm	200 ppm	0.15%	2 ppm (0.15%)	2 ppm (0.15%)	Division of natural deposits.	
Cadmium	2016-2019	200 ppm	1 ppm	0.05%	100 ppm (0.05%)	100 ppm (0.05%)	Division of natural deposits.	
Chloride	2016-2019	0.1 ppm	0.1 ppm	1.25%	4 ppm (0.1 ppm)	4 ppm (0.1 ppm)		Not Applicable
Fluoride	2016	200 ppm	0.1 ppm	0.15%	10 ppm (0.15%)	10 ppm (0.15%)	Division of natural deposits.	Not Applicable
Organic								
Total Solids	2016-2019	0.05 ppm	0.05 ppm	0.015 ppm	10 ppm (0.000005 ppm)	10 ppm (0.000005 ppm)	Discharge from production in chemical facilities.	See page 3.
Residual Free Chlorine Activity	2016-2019	200 ppm	0.4 ppm	1.25 ppm	15 ppm (0.4 ppm)	200 ppm (0.4 ppm)	Division of natural deposits.	Not Applicable
Uranium	2016-2019	200 ppm	1 ppm	0.05%	30 ppm (0.1 ppm)	200 ppm (0.1 ppm)	Division of natural deposits.	Not Applicable
Disinfectants								
Chlorine	2016	200 ppm	Not Applicable	Not Applicable	TT = Maximum reported disinfectant level of water with 0.4 ppm.	Not Applicable	Disinfectant (underlines toxicologic).	Not Applicable

TT near or 100% of MCL.

Unregulated substances detected during UCMR3:
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	2.0 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.

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

USEPA Special Notice For Immuno-compromised Persons

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised people such as persons 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. USEPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline: 1-800-426-4791.

USEPA Arsenic Health Effects Language:

For water containing greater than 5 PPB of arsenic and up to and including 10 PPB of arsenic: While your drinking water meets USEPA's standard for arsenic, it does contain low levels of arsenic. USEPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. USEPA continues to research the health effects of low levels of arsenic, which is a metal known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Detected Contaminants

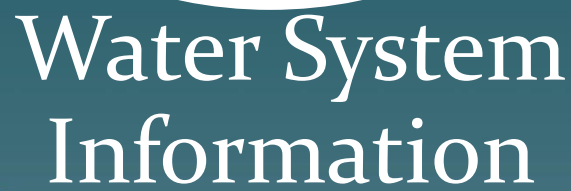
- Entry Points
- Distribution
- Surface Water Plant

Compliance With Other Drinking Water Regulations

- UCMR₃
- LT₂

Educational Information





Ground
Water



Sources
of
Water

Surface
Water



Albuquerque Bernalillo County
Water Utility Authority

Definitions

Definitions

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. We monitor untreated water for the presence of *Cryptosporidium*. If ingested, these parasites may produce symptoms of nausea, stomach cramps, diarrhea, and associated headaches. Note: *Cryptosporidium* is reported in oocysts, which are spores of the organism.

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 surface water treatment 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 USEPA specified Method Detection Limit.

Maximum Contaminant Level (MCL): The highest level of a contaminant allowable 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.

ND (<1 PPB): Not Detected at the Method Detection Limit specified in parentheses.

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

Parts Per Million (PPM): Parts per million or milligrams per liter (mg/L). $1 \text{ PPM} = 1,000 \text{ PPB}$.
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.



Detected Contaminants

2016 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. (Detection limit in Parentheses.)

Substance	Sample Collection Years	Minimum Detected	Average Detected	Maximum Detected	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	Source	Health Effects Language
Metals								
Arsenic	2014-2016	Zero PPB	3 PPB	8 PPB	10 PPB (1 PPB)	Zero PPB (1 PPB)	Erosion of natural volcanic deposits.	See bottom of page 3.
Barium	2014-2016	Zero PPM	Zero PPM	0.2 PPM	2 PPM (0.1 PPM)	2 PPM (0.1 PPM)	Erosion of natural deposits.	
Chromium	2014-2016	Zero PPB	1 PPB	8 PPB	100 PPB (1.0 PPB)	100 PPB (1.0 PPB)	Erosion of natural deposits.	
Minerals								
Fluoride	2014-2016	0.3 PPM	0.5 PPM	1.2 PPM	4 PPM (0.10 PPM)	4 PPM (0.10 PPM)	Erosion of natural deposits.	Not Applicable
Nutrients								
Nitrate	2016	Zero PPM	0.3 PPM	3.0 PPM	10 PPM (0.10 PPM)	10 PPM (0.10 PPM)	Erosion of natural deposits.	Not Applicable
Organics								
Total Xylenes	2014-2016	Zero PPM	0.005 PPM	0.014 PPM	10 PPM (0.00009 PPM)	Zero PPM (0.00009 PPM)	Discharge from petroleum or chemical factories.	See page 3.
Radionuclides								
Gross Alpha Particle Activity	2014-2016	Zero pCi/L	0.6 pCi/L	2.6 pCi/L	15 pCi/L (0.8 pCi/L)	Zero pCi/L (0.8 pCi/L)	Erosion of natural deposits.	Not Applicable
Uranium	2014-2016	1 PPB	3 PPB	6 PPB	30 PPB (1.0 PPB)	Zero PPB (1.0 PPB)	Erosion of natural deposits.	Not Applicable
Disinfectants								
Chlorine	2016	Zero PPM	Not Applicable	Not Applicable	TT = Maintain required chlorine level or restore within 4 hours.	Not Applicable	Disinfectant (sodium hypochlorite).	Not Applicable
		TT met at 100% of sites.						



Albuquerque Bernalillo County
Water Utility Authority

Detected Contaminants

2016 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. (Detection limit in parentheses.)

Substance Detected	Safe Level	DETAILED INFORMATION						
Microbiological		Source	Year of Samples	Minimum Detected	Average Detected	Maximum Detected	Maximum Contaminant Level (or equivalent)	Maximum Contaminant Level Goal (or equivalent)
Total Coliform (240 samples each month)	Yes	Coliforms are bacteria that are normally present in the environment.	2016	—	—	Total coliform bacteria were detected in 0.00% of the samples collected.	Presence of coliform bacteria in 5.0% or more of samples in any month.	0% of samples with detectable coliform bacteria.
Disinfectants								
Chlorine	Yes	Disinfectant (sodium hypochlorite).	2016	0.2 PPM	0.8 PPM	1.5 PPM	4 PPM (MRDL)	4 PPM (MRDLG)
Disinfection By-Products		Source	Year of Samples	Range of Results		Maximum Detected	Maximum Contaminant Level (or equivalent)	Maximum Contaminant Level Goal (or equivalent)
Total Trihalomethanes (TTHMs)¹	Yes	By-product of chlorination.	2016	1-59 PPB ³		41 PPB (highest LRAA ⁴ at site 1).	80 PPB (0.15 PPB)	Not Applicable
Haloacetic Acids (HAA5s)²	Yes	By-product of chlorination.	2016	0-19 PPB ³		14 PPB (highest LRAA ⁴ at site 1).	60 PPB (0.06 PPB)	Not Applicable
Lead & Copper		Source	Year of Samples	90th Percentile	No. of Samples that Exceed Action Level	Maximum Detected	Action Level ⁵	Maximum Contaminant Level Goal
Zones 1-20 (50 samples every 3 years)								
Copper	Yes	Corrosion of household plumbing.	2015	0.29 PPM	Zero	0.47 PPM	1.3 PPM (0.01 PPM)	Zero PPM
Lead	Yes	Corrosion of household plumbing.	2015	2 PPB	Zero	4 PPB	15 PPB (1.0 PPB)	Zero PPB

¹ TTHMs are the sum of the concentrations of the trihalomethane compounds. ² HAA5s are the sum of the concentrations of the haloacetic acid compounds. ³ The range represents the minimum and maximum of all quarterly analytical results at all 12 locations. ⁴ 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. ⁵ 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

Detected Contaminants

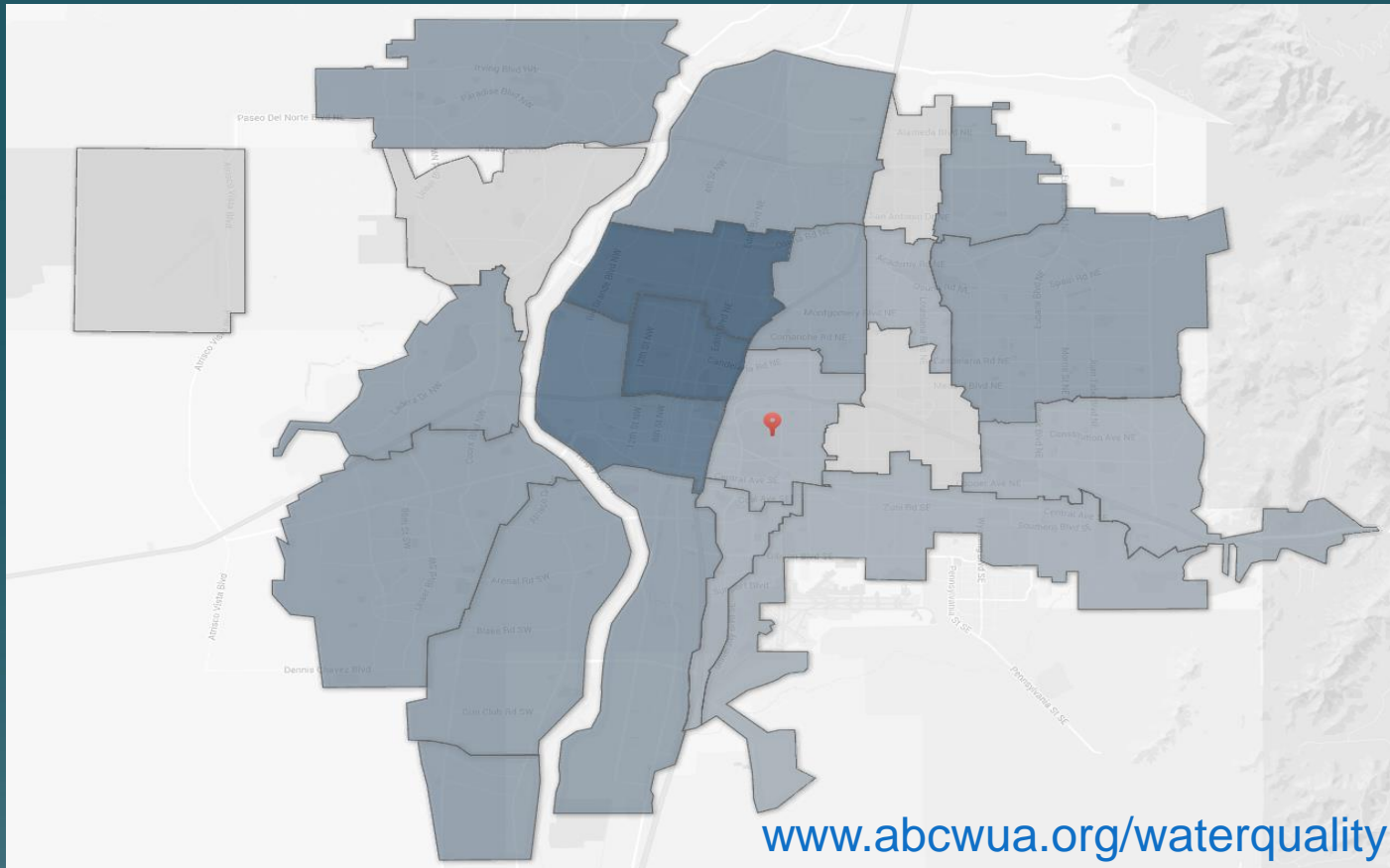
2016 Results of Compliance Monitoring at the Surface Water Treatment Plant

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. (Detection limit in parentheses.)

Substance	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	Minimum Detected	Average Detected	Maximum Detected	Source
Microbiological						
<i>Cryptosporidium</i> (untreated water)	TT	Zero Oocysts/L	Zero Oocysts/L	0.09 Oocysts/L	1.0 Oocyst/L	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 Nephelometric Turbidity Unit (NTU) 95% of the finished water samples must be less than 0.3 NTU	Zero NTU	0.01 NTU 100% of samples taken in each month were less than 0.3 NTU.	Not Applicable	0.10 NTU	Soil runoff.
Total Organic Carbon (TOC)	TT (1.0 PPM)	Not Applicable	ND (<1.0 PPM)	0.9 PPM	1.6 PPM	Naturally present in the environment.
Minerals						
Fluoride	4 PPM (0.10 PPM)	4 PPM	0.35 PPM	0.35 PPM	0.35 PPM	Erosion of natural deposits.
Nutrients						
Nitrate	10 PPM (0.10 PPM)	10 PPM	0.15 PPM	0.15 PPM	0.15 PPM	Erosion of natural deposits.
Disinfection By-Products						
Bromate (for health effects - bottom left, page 3).	10 PPB (1 PPB)	Zero PPB	1.1 PPB	2.6 PPB	4.3 PPB	By-product of drinking water disinfection.
Disinfectants	Maximum Residual Disinfectant Level (MRDL)	Maximum Residual Disinfectant Level Goal (MRDLG)	Minimum Detected	Average Detected	Maximum Detected	Source
Chlorine	4 PPM	4 PPM	0.7 PPM	1.3 PPM	2.0 PPM	Disinfectant (sodium hypochlorite).



Additional Information Available



Albuquerque Bernalillo County
Water Utility Authority

Compliance With Other Drinking Water Regulations

Unregulated substances detected during UCMR3: 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.

More information about the Unregulated Contaminant Monitoring Program is available at www.epa.gov/dwucomr.



Albuquerque Bernalillo County
Water Utility Authority

Educational Information

USEPA Special Notice For Immuno-compromised Persons

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons 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. USEPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline 1-800-426-4791.

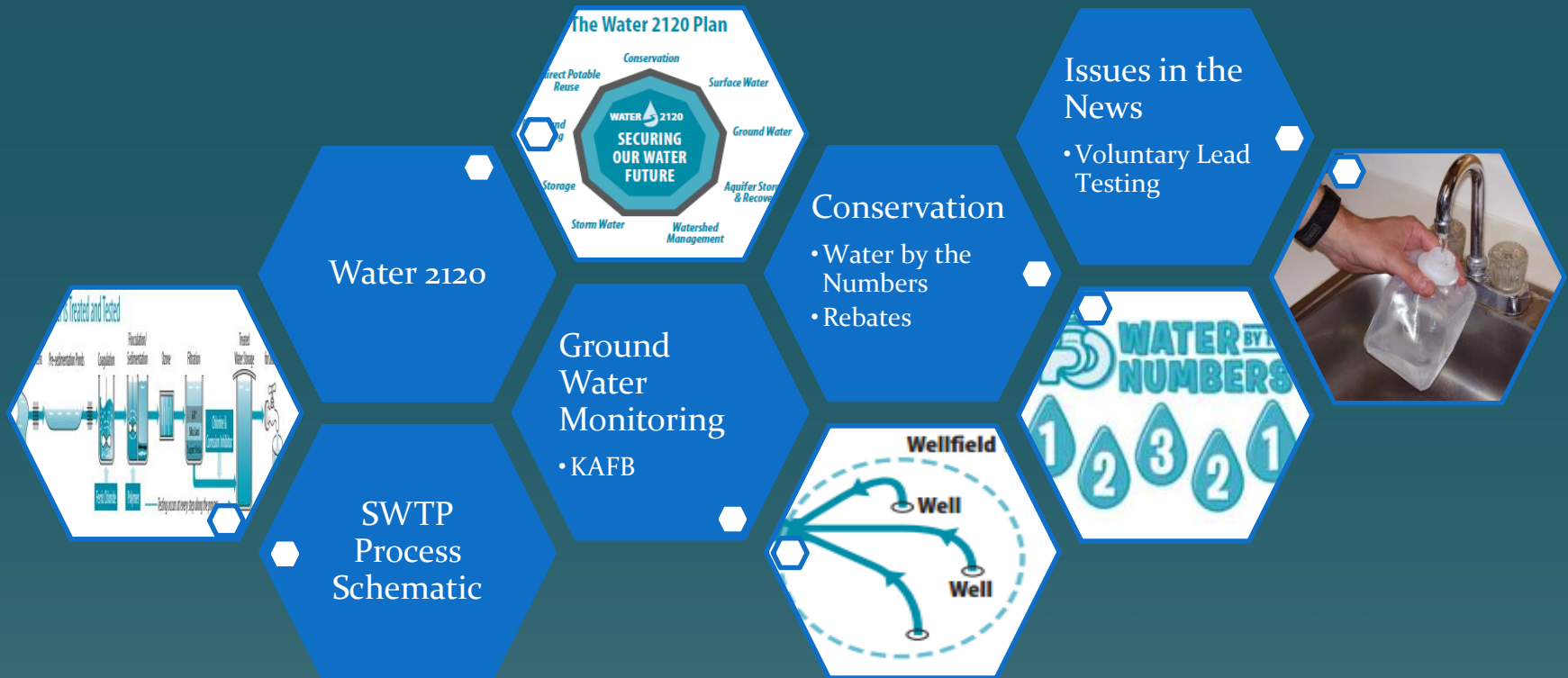
USEPA Arsenic Health Effects Language:

For water containing greater than 5 PPB of arsenic and up to and including 10 PPB of arsenic:

While your drinking water meets USEPA's standard for arsenic, it does contain low levels of arsenic. USEPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. USEPA continues to research the health effects of low levels of arsenic, which is a metal known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.



Optional Info



Albuquerque Bernalillo County
Water Utility Authority

Voluntary Lead Results

2016 Customer Requested Testing				2015 USEPA Required Testing			Action Level
Parameter	Minimum	Maximum	90th Percentile	Minimum	Maximum	90th Percentile	
Lead PPB	0	13	2	0	4	2	15
Copper PPM	0.01	0.39	0.24	0.03	0.47	0.29	1.3



Lead Testing

- Also available in 2017
- Sign up Online
 - www.abcwua.org/leadsurvey
- Call 289-3653



Albuquerque Bernalillo County
Water Utility Authority

Additional Monitoring

- UCMR₄
 - 30 Contaminants
 - Includes Cyanotoxins
- Pharmaceutical and Personal Care Products Monitoring
 - Update 2011 Report
 - 113 Substances
 - 6 Monitoring Locations
 - Will Include Reuse

