



# ANNUAL WATER QUALITY REPORT

WATER TESTING  
PERFORMED IN 2018



Presented By  
the  
Town of Florence





We are pleased to present the Town of Florence Annual Consumer Confidence Report. You are receiving this report as one of the lucky people who call Florence home. Through decades of planning, strategic action and sustainable practices, the Town of Florence is positioned our access of water supplies for many years to come. The Town of Florence has inspectors, technicians, engineers and water treatment specialists that work diligently to keep our water system performing properly ensuring the safety of your drinking water.

We are confident that the information in this report will shed some light not only on the quality of your drinking water, but the value of water and how much effort and dedication goes into providing you this precious resource.

### **What is a water quality report?**

The environmental Protection Agency (EPA) created the Safe Drinking Water Act (SDWA) in 1974 as a set of regulations to ensure water quality across the country. The SDWA requires that an annual water quality report, or Consumer Confidence Report, be created and distributed to all water customers to provide them with details about where their water comes from, and what it contains, and how it compares to the nation-wide standards created by regulatory agencies. This report acts as a snapshot for water quality in the Town of Florence from Jan - Dec 2018.



### **Source Water Information**

Sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells, depending on the location. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.



The source of drinking water for Florence is groundwater. This water is pumped from the Town's four drinking water wells; No. 1 (55-610432), No. 3 (55-215446), No. 4 (55-619533) and No. 5 (55-619534) directly into the distribution system and provides a consecutive connection source of water.



In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Based on the information currently available on the hydrogeologic settings and the adjacent land uses that are in the specified proximity of the drinking water source(s) of this public water system, the Arizona Department of Environmental Quality (ADEQ) has given a high risk designation for the degree to which this public water system drinking water source(s) are protected. A designation of high risk indicates there may be additional source water protection measures which can be implemented on the local level. This does not imply that the source water is contaminated nor does it mean that contamination is imminent. Rather, it simply states that land use activities or hydrogeologic conditions exist that make the source water susceptible to possible future contamination.



Further source water assessment documentation can be obtained by contacting ADEQ.



## Why are there contaminants in my drinking water?

Contamination can come from many sources.

**Microbial contaminants**, such as viruses and bacteria may come from sewage treatment plants, septic systems, agricultural livestock, livestock operations and wildlife.

**Pesticides and herbicides** that may come from a variety of sources, such as agriculture, urban stormwater runoff, and residential uses.

**Inorganic contaminants**, such as salts and metals, can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil / gas production, mining or farming.

**Organic chemical contaminants**, including synthetic and volatile organic chemicals, are byproducts of industrial processes and petroleum production and may come from gas stations, urban stormwater runoff and/or septic systems.

**Radioactive contaminants**, that can be naturally occurring or be the result of oil and gas production and mining activities.



## Are some people more vulnerable to water quality contamination?

Some people may be more vulnerable to contaminants in drinking water than the general population. 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426 - 4791.

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 of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S.

Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and microbiological contaminants, call the *EPA Safe Drinking Water Hotline* at 1-800-426-4791.



## Information about Arsenic

If arsenic is less than or equal to the Maximum Contaminant Level (MCL), your drinking water meets EPA's standards. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects 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 damage and circulatory problems.



## Information about Nitrate

Nitrate in drinking water at levels above 10 parts per million (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. If you are caring for an infant and detected nitrate levels above 5 ppm, you should ask advice from your health care provider.





### **Have questions about the CCR?**

*We want our valued customers to be informed about their water quality. If you want to learn more about public participation or to attend any of our regularly scheduled meetings, please contact Timm Wainscott, Water Superintendent at 520-868-7619 for additional opportunity and meeting dates and time.*

### **Information about Lead**

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Florence Water Company is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using the water for drinking or cooking. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/sfewater/lead](http://www.epa.gov/sfewater/lead).



### **DEFINITIONS**

**AL = Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements.

**Level 1 Assessment:** A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria was present.

**Level 2 Assessment:** A very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation occurred and/or why total coliform bacteria was present.

**MCL = Maximum Contaminant Level:** The highest level of a contaminant that is allowed in drinking water.

**MCLG = Maximum Contaminant Level Goal** – The level of contaminant in drinking water below which there is no known or expected risk to health.

**MFL = Million Fibers per Liter**

**MRDL = Maximum Residual Disinfectant Level:** The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap.

**MRDLG = Maximum Residual Disinfectant Level Goal.** The level of disinfectant added for treatment at which no known or anticipated adverse effect on health of persons would occur.

**MREM = Millirems per year:** A measure of radiation absorbed by the body.

**MRL=Minimum Reporting Limit:** The smallest measured concentration of a substance that can be reliably measured by a given analytical method.

**NA = Not Applicable:** Sampling was not completed by regulation or was not required.

**NTU = Nephelometric Turbidity Units:** A measure of water clarity.

**PCi/L = Picocuries per Liter:** A measure of the radioactivity in water.

**PPM = Parts per Million** or Milligrams per liter (mg/L).

**PPB = Parts per Billion** or Mircograms per liter (pg/L).

**PPT = Parts per Trillion** or Nanograms per liter.

**PPQ = Parts per Quadrillion** or Picograms per liter.





## WATER QUALITY DATA:

Microbiological (RTCR)	TT Violation Y or N	Number of Positive Samples	Positive Sample(s) Month & Year	MCL	MCLG	Likely Source of Contamination	
E. Coli	N	0	0	0	0	Human and animal fecal waste	
Disinfectants	MCL Violation Y or N	Running Annual Average (RAA)	Range of All Samples (Low-High)	MRDL	MRDLG	Sample Month & Year	Likely Source of Contamination
Chlorine/Chloramine (ppm)	N	1.0 ppm	1.0 – 1.0 ppm	4	4	2018	Water additive used to control microbes
Disinfection By-Products	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	N	2.0 ppb	2.1 – 2.2 ppb	60	N/A	2018	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N	19.0 ppb	10.0 – 19.2 ppb	80	N/A	2018	By-product of drinking water disinfection
Lead & Copper	MCL Violation Y or N	90 <sup>th</sup> Percentile	Number of Samples Exceeds AL	AL	ALG	Sample Month & Year	Likely Source of Contamination
Copper (ppm)	N	0.2 ppm	0	1.3	1.3	2018	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	.0 ppb	0	0	0	2018	Corrosion of household plumbing systems; erosion of natural deposits
Radionuclides	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Alpha Emitters (pCi/L)	N	3.0 pCi/L	3.0 – 3.0 pCi/L	15	0	2018	Erosion of natural deposits
Inorganic Chemicals (IOC)	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Arsenic <sup>1</sup> (ppb)	N	3.6 ppb	2.2 – 3.6 ppb	10	0	2012	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	N	0.0048 ppm	0.0026-0.0048 ppm	2	2	2012	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	N	3.6 ppb	1.5 – 3.6 ppb	100	100	2012	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	N	1.0 ppm	.67 – 1.0 ppm	4	4	2012	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	N	10.0 ppm	2.3 – 10.0 ppm	10	10	2018	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

### Violation Summary (for MCL, MRDL, AL, TT, or Monitoring & Reporting Requirement)

Violation Type	Explanation, Health Effects	Time Period	Corrective Actions
Reporting failure	Late reporting for residual disinfection level samples, reported 4/11/2019.	1 <sup>st</sup> Quarter 2018	Late reporting violation was returned to compliance on 4/12/2019

### Assessments for the Revised Total Coliform Rule (RTCR)

**Coliforms** are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. If coliform is found, then the system is responsible to look for potential problems in water treatment or distribution. When this occurs, the water system is required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year, we were required to conduct 1 Level 1 assessment(s). 1 Level 1 assessment(s) was completed, we were required to take no corrective actions.

**E.coli** are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. If E. coli bacteria is found, the water system is required to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year, we were required to conduct 1 Level 1 assessment(s). 1 Level 1 assessment(s) was completed, we were required to take no corrective actions.

Water Conservation Guide

WATER WISDOM

MATCH THE WATER-**SAVING** TIP TO THE **AMOUNT** OF WATER **SAVED**



1. Use a hose nozzle and turn off the water while you wash your car or bike and save this much water.



2. You'll save this much water if you time your shower to keep it under 5 minutes.



3. If you turn off the shower while you shampoo, how many gallons will you save?

A. MORE THAN 50 GALLONS A WEEK

B. UP TO 80 GALLONS EVERY TIME

C. 4 GALLONS EVERY MINUTE

D. MORE THAN 100 GALLONS

E. UP TO 1000 GALLONS A MONTH



4. Turn off the water while you brush your teeth and you'll keep this much water from going down the drain.



5. Use a broom instead of a hose to wash off driveways and sidewalks and save this much water.

Answers 1)D 2)E 3)A 4)C 5)B

FIND ALL THESE EASY **WAYS** TO **SAVE WATER**

S	R	E	L	K	N	I	R	P	S	T	S	U	J	D	A
T	U	Q	A	Z	B	Y	R	F	C	N	K	I	O	L	M
N	I	S	H	O	R	T	S	H	O	W	E	R	S	N	P
A	B	X	E	T	G	C	E	A	L	Z	L	I	J	M	K
L	Q	Z	U	M	B	A	O	V	L	P	Z	Y	I	V	S
P	X	Z	J	I	U	M	Y	U	E	Q	Z	E	S	K	K
E	U	B	V	M	X	L	J	M	C	C	O	V	X	E	A
V	Z	O	K	O	A	U	C	R	T	W	N	P	L	M	E
I	U	N	R	O	E	X	W	H	R	L	E	P	J	C	L
T	I	M	E	R	S	W	E	P	A	C	S	I	R	E	X
A	A	B	C	B	Z	T	E	P	I	C	O	I	R	E	I
N	V	E	P	I	U	H	V	J	N	L	H	O	X	E	F
X	M	W	A	T	E	R	D	E	E	P	L	Y	R	I	S

- HOSE NOZZLE
- SHORT SHOWERS
- BROOM
- FIX LEAKS
- NATIVE PLANTS
- COLLECT RAIN
- TIMER
- WATER DEEPLY
- ADJUST SPRINKLERS
- USE MULCH
- XERISCAPE



# Simple Steps to SAVE WATER

## Outdoors & In



### TEST WITH TRACKS

Water your lawn and landscape only when it is actually needed, such as when footprints are left when you walk across the grass.

### SPRINKLE WITH CARE

Apply moderate amounts of water to create a healthy, drought and stress-tolerant lawn. For most Arizona soils, applying no more than three-quarters of an inch of water per application is enough to revitalize the grass. Use spray heads designed for planting beds. Position the sprinkler so that you water only the lawn and shrubs, not paved areas.



### PLANT FRIENDLY LAWNS

Plant native or drought-tolerant vegetation that thrives in the native soil and local weather conditions. Go native, and resist the urge to water it and just let it go brown during the dry season. It will come back, as nature intended, when the rains come.



### AVOID BUZZ CUTS

Cut your grass at the highest recommended height for your turf species or the highest setting on your lawn mower. Cut no more than one-third of the grass length at one time to encourage grass roots to grow deeper.



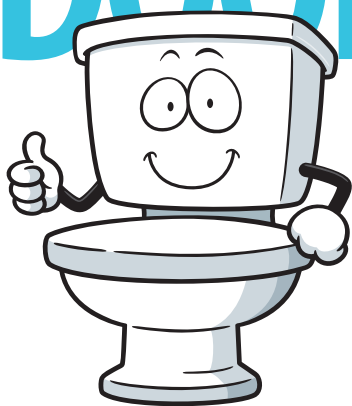
## OUTDOORS

### FERTILIZE RESPONSIBLY

Excessive nutrients flowing into our waterways do not only come from big industry or agriculture. The use of fertilizer and pesticides on our yards results in pollutants contaminating the waterways in stormwater runoff when it rains. Residents are encouraged not to use fertilizers or pesticides during the warmer months and to use them in the correct amounts during other times of the year.



## INDOORS



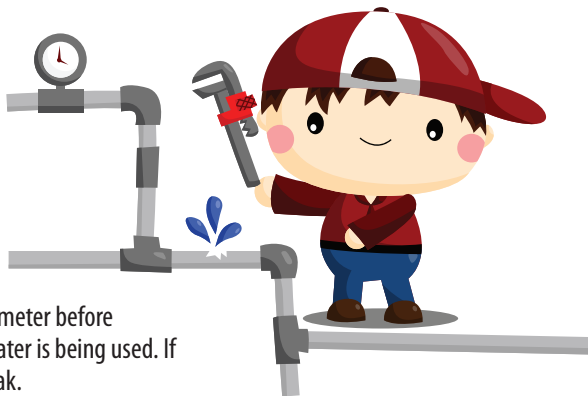
### NOZZLE THE NOSE OF YOUR HOSE

Equip hoses with automatic shutoff nozzles for car washing, hand watering, etc.



### COLOR YOUR WATER

Detect a leaking toilet by adding a few drops of food coloring to the tank. If the tank is leaking, color will appear in the bowl within 30 minutes. Replace the bad parts or consider upgrading to water-efficient toilets. Avoid flushing the toilet unnecessarily. Dispose of tissues, insects and other such waste in a trash can rather than in the toilet.



### CHECK YOUR WATER METER

Check for leaking pipes by reading your meter before and after a two-hour period when no water is being used. If the readings are different, you have a leak.



### TIME YOUR SHOWERS

By timing your showers to keep them under five minutes and installing low-flow shower heads, you can save water. The older the shower head, the more water it uses. New low-flow shower heads use only 2 gallons of water per minute or less. Older fixtures use as much as 5 gallons per minute.



### TURN IT OFF

Turn off the water while brushing your teeth or shaving.



### LOAD IT UP

Set clothes washing machines that have variable settings for water volume at the minimum amount required per load. If load size cannot be set, operate the washer with full loads only.

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