**Chandler Detected Regulated Contaminants 2012, 2013 & 2014:**

<table>
<thead>
<tr>
<th>Contaminant (units)</th>
<th>MCL</th>
<th>MCLG</th>
<th>Average (of samples)</th>
<th>Range of Samples (Low to high)</th>
<th>MCL Violation</th>
<th>Likely Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic (ppb)</td>
<td>10</td>
<td>0</td>
<td>0.7</td>
<td>0.5 - 9.8</td>
<td>No</td>
<td>Erosion of natural deposits</td>
</tr>
<tr>
<td>Barium (ppm)</td>
<td>2</td>
<td>2</td>
<td>0.08</td>
<td>0.017 - 0.13</td>
<td>No</td>
<td>Erosion of natural deposits</td>
</tr>
<tr>
<td>Chromium (ppb)</td>
<td>100</td>
<td>100</td>
<td>9.77</td>
<td>&lt;1 - 22</td>
<td>No</td>
<td>Erosion of natural deposits</td>
</tr>
<tr>
<td>Fluoride (ppm)</td>
<td>4</td>
<td>4</td>
<td>0.50</td>
<td>0.4 - 1.3</td>
<td>No</td>
<td>Natural deposits, water additive that promotes strong teeth</td>
</tr>
<tr>
<td>Selenium (ppb)</td>
<td>50</td>
<td>50</td>
<td>1.36</td>
<td>&lt;2.0 - 12.0</td>
<td>No</td>
<td>Erosion of natural deposits</td>
</tr>
<tr>
<td>Nitrate (ppm)</td>
<td>10</td>
<td>10</td>
<td>2.9</td>
<td>&lt;0.2 - 9.5</td>
<td>No</td>
<td>Erosion of natural deposits</td>
</tr>
<tr>
<td>Sulfate (ppb)</td>
<td>N/A</td>
<td>N/A</td>
<td>171</td>
<td>84 - 270</td>
<td>N/A</td>
<td>Erosion of natural deposits</td>
</tr>
<tr>
<td>Total Arsenic (ppb)</td>
<td>200</td>
<td>0</td>
<td>9.65</td>
<td>&lt;20.0 - 44.0</td>
<td>No</td>
<td>Leaching from leaching waste tanks and distribution lines</td>
</tr>
<tr>
<td>Copper (ppm)</td>
<td>350</td>
<td>5</td>
<td>0.17</td>
<td>&lt;1.0 - 3.4</td>
<td>No</td>
<td>Erosion of natural deposits</td>
</tr>
<tr>
<td>Barium (ppb)</td>
<td>5</td>
<td>6</td>
<td>0.002</td>
<td>&lt;0.1 - 0.12</td>
<td>No</td>
<td>Plastic pipes</td>
</tr>
<tr>
<td>Phosphate (ppb)</td>
<td>15</td>
<td>15</td>
<td>0.2</td>
<td>&lt;0.6 - 3.9</td>
<td>No</td>
<td>No discharge from chemical factories</td>
</tr>
<tr>
<td>Chromium (ppb)</td>
<td>50</td>
<td>0</td>
<td>0.10</td>
<td>&lt;0.6 - 3.9</td>
<td>No</td>
<td>No discharge from chemical factories</td>
</tr>
<tr>
<td>Uranium (ppb)</td>
<td>5</td>
<td>0</td>
<td>4</td>
<td>&lt;0.8 - 3.9</td>
<td>No</td>
<td>No discharge from chemical factories</td>
</tr>
<tr>
<td>Total Lead (ppb)</td>
<td>350</td>
<td>0</td>
<td>0.025</td>
<td>&lt;0.4 - 3.9</td>
<td>No</td>
<td>No discharge from chemical factories</td>
</tr>
<tr>
<td>Total Radium (ppb)</td>
<td>5</td>
<td>0</td>
<td>0.01</td>
<td>&lt;0.004</td>
<td>No</td>
<td>No discharge from chemical factories</td>
</tr>
</tbody>
</table>

**Definitions:**
- **Contaminant:** A physical, chemical, biological, or radioactive substance in drinking water that can affect health.
- **MCL (Maximum Contaminant Level):** The highest level of a contaminant allowed in drinking water. There is convincing evidence that health effects occur at or below the MCL.
- **MCLG (Maximum Contaminant Level Goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health.

**Notes:**
- The table allows water systems to report for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative, is more than one year old.
- **Some average values are less than the low range due to substituting non-detect (<) values with zero, per the regulations governing compliance calculations.**

**Chlorine (Distribution System):**
- ppm Maximum = 4.0 ppm / Minimum = Trace Amount
- Annual Percentage
- MRDLG (Maximum Contaminant Level Goal): 4.0
- MRDL (Maximum Contaminant Level): 0.2

**Lead and Copper Study 2013:**
- ppm Maximum = 1.3 ppm / Minimum = Trace Amount
- Action level = 1.3 ppm
- Action level requirement = 90th percentile

**Additional Definitions:**
- **Action level:** The concentration of a contaminant, which if exceeded, triggers treatment or other requirements that a water system must follow.
- **MRDL (Maximum Residual Disinfectant Level):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that health effects occur at or below the MRDL.
- **MRDLG (Maximum Residual Disinfectant Level Goal):** The level of a disinfectant in drinking water 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.
- **MRAD (Maximum Residual ATR Disinfectant Level):** The highest level of an AT disinfectant allowed in drinking water. There is convincing evidence that health effects occur at or below the MRAD.
- **MRADL (Maximum Residual ATR Disinfectant Level Goal):** The level of an AT disinfectant in drinking water below which there is no known or expected risk to health. MRADLs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**City of Chandler**

**Distribution System Detections 2013:**

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Units</th>
<th>Maximum Contaminant Level</th>
<th>MCLG</th>
<th>Results</th>
<th>MCL Violation</th>
<th>Sources in Drinking water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total coliform bacteria</td>
<td>P/A</td>
<td>No more than 3% of monthly samples may be total coliform positive</td>
<td>0.0 %</td>
<td>0.21%</td>
<td>0.0% - 1.29%</td>
<td>Naturally present in the environment</td>
</tr>
<tr>
<td>Chlorine</td>
<td>ppm</td>
<td>Maximum = 4.0 ppm / Minimum = Trace Amount</td>
<td>1.3 annual avg. (MRDLG: 1.0 ppm minimum)</td>
<td>No</td>
<td>Water additive used to control microbes</td>
<td></td>
</tr>
<tr>
<td>TTHMs</td>
<td>ppm</td>
<td>Maximum = 4.0 ppm / Minimum = Trace Amount</td>
<td>0.001%</td>
<td>100%</td>
<td>No</td>
<td>Soft water</td>
</tr>
<tr>
<td>11993/15 Total Haloformines</td>
<td>ppm</td>
<td>Maximum = 4.0 ppm / Minimum = Trace Amount</td>
<td>0.0001%</td>
<td>100%</td>
<td>No</td>
<td>By-product of drinking water disinfection</td>
</tr>
<tr>
<td>Total Radionuclides</td>
<td>ppm</td>
<td>Maximum = 4.0 ppm / Minimum = Trace Amount</td>
<td>0.0001%</td>
<td>100%</td>
<td>No</td>
<td>By-product of drinking water disinfection</td>
</tr>
</tbody>
</table>

**City of Chandler**

**City of Chandler 2013:**

<table>
<thead>
<tr>
<th>Contaminant (units)</th>
<th>Maximum Contaminant Level</th>
<th>MCLG</th>
<th>Results</th>
<th>Sources in Drinking water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead (ppb)</td>
<td>Action level = 1.3 ppm / Maximum = 10.0 ppm</td>
<td>10.0</td>
<td>0</td>
<td>Corrosion of household plumbing systems, erosion of natural deposits</td>
</tr>
<tr>
<td>Copper (ppm)</td>
<td>Action level = 1.3 ppm / Maximum = 5.0 ppm</td>
<td>5.0</td>
<td>0</td>
<td>Corrosion of household plumbing systems, erosion of natural deposits</td>
</tr>
</tbody>
</table>

**Notes:**
- The table allows water systems to report for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative, is more than one year old.
- Some average values are less than the low range due to substituting non-detect (<) values with zero, per the regulations governing compliance calculations.

**Chlorine (Distribution System):**
- ppm Maximum = 4.0 ppm / Minimum = Trace Amount
- Annual Percentage
- MRDLG (Maximum Contaminant Level Goal): 4.0
- MRDL (Maximum Contaminant Level): 0.2

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- ppm Maximum = 1.3 ppm / Minimum = Trace Amount
- Action level = 1.3 ppm
- Action level requirement = 90th percentile

**Additional Definitions:**
- **Action level:** The concentration of a contaminant, which if exceeded, triggers treatment or other requirements that a water system must follow.
- **MRDL (Maximum Residual Disinfectant Level):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that health effects occur at or below the MRDL.
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- **MRAD (Maximum Residual ATR Disinfectant Level):** The highest level of an ATR disinfectant allowed in drinking water. There is convincing evidence that health effects occur at or below the MRAD.
- **MRADL (Maximum Residual ATR Disinfectant Level Goal):** The level of an ATR disinfectant in drinking water below which there is no known or expected risk to health. MRADLs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. This population should seek advice about appropriate means to minimize exposure to contaminants in drinking water. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

The sources of drinking water (both tap water and bottled water) include groundwaters, surface waters, and treated wastewaters. Groundwaters originate from rainfall, snowmelt, and other surface waters that percolate through the soil and rock before emerging at springs, wells, reservoirs, ponds, or rivers. As water travels over the surface of the land or through the ground, it dissolves naturally occurring substances, such as carbon dioxide, bicarbonates, sulfates, and trace elements. In some cases, contaminants in groundwaters result from human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, mining activities, agricultural activities, and/or erosion of natural deposits.
- 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 stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring, or the result of oil and gas production and mining activities. In order to ensure tap water is safe to drink, the EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The United States Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water providing the same level of protection for public health. Information on these regulations may be obtained by calling 1-888-463-6332.

### Contaminants of concern

In 1996 amendments to the Safe Drinking Water Act required the EPA to establish criteria for a program to monitor unregulated contaminants and publish a list of up to 30 contaminants to be monitored every three years. The EPA published the final rule for the Third Unregulated Contaminant Monitoring Regulation Cycle (UCMR3) to meet this requirement in the Federal Register on May 2, 2012. UCMR3 required a total of 28 compounds to be analyzed, with the Chandler's assigned sampling period being calendar year 2014. Twenty of the 28 compounds were not detected in our water system. All the detections were in the lower parts per billion range, which is equivalent to one gallon in one billion gallons.

### Cryptosporidium and Giardia

The City of Chandler sampled its water for the presence of the protozoans Cryptosporidium and Giardia in 2005. Though rare, Cryptosporidium and/or Giardia have been identified in the source water Chandler receives from the Consolidated Contaminant Monitoring Program (CCMP) in the City's SWTP exceeding EPA requirements for removal of Cryptosporidium and Giardia. Another round of sampling has begun in 2015.

### Nitrates

The highest nitrate level measured in Chandler’s water during 2014 was 9.5 parts per million (ppm). The average was 2.9 ppm which is well below the EPA limit of 10 ppm. Nitrates 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. Nitrates levels may rise quickly for short periods of time due to rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider.

### Arsenic

While drinking water meets EPA’s maximum contaminant level (MCL) standard of 10 ppb for arsenic, it does contain low levels of arsenic. Compliance with the MCL is based on the drinking water analysis results. Further testing would be required to establish the potential of arsenic's health effects on population. Arsenic in drinking water can cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

### Lead and Copper Testing

Federal regulations require all cities test for lead and copper at selected customer’s taps at least once every three years. The City of Chandler last conducted lead and copper tap sampling in the summer of 2013, with the concentration of lead and copper well below regulatory limits. The next round of lead and copper sampling will be in June/September 2016. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Chandler is responsible for providing high quality drinking water, but cannot control the variety of materials used in household 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 water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested by a commercial laboratory. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the EPA’s Safe Drinking Water Hotline (1-800-426-4791) or at http://www.epa.gov/safewater/lead.

### Organic Chemicals Contaminants

This category includes synthetic organic chemicals (SOC) and volatile organic chemicals (VOC), which are by-products of industrial processes and petroleum production. They can also come from gas stations, urban stormwater runoff, and septic systems. During the 2011-2013 monitoring cycle, there were no exceedances in original or unfiltered results. However, during the 2013-2015 monitoring cycle, 4 contaminants were reported as exceedances. Each exceedance was determined to be the result of the method detection limit and is linked to other health effects such as skin damage and circulatory problems.

### Total Trihalomethanes (TTHMs)

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

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### City of Chandler Water Supply Statistics

- 19.67 billion gallons of drinking water was supplied to Chandler water users in 2014. (A daily average of 53.9 million gallons!) - The SVWTP supplied 4.16 billion gallons, or 21.2% of the City’s total drinking water. - 27 active wells supply groundwater from aquifers underlying the State, and Federal government regulatory agencies for 2014. (A daily average of 53.9 million gallons!) - The City of Chandler Municipal Utilities Department is committed to providing a safe supply of drinking water to its customers. As a result of this strong commitment, the City of Chandler routinely performs more tests on the water residents receive than is required by Federal and State regulations. The City of Chandler is committed to describing the quality of your drinking water to comply with State and U.S. Environmental Protection Agency (EPA) regulations. Much of the language used is mandated by these regulations. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect your drinking water sources. We are proud to report Chandler’s water meets, or exceeds, all Federal and State water quality standards set by the County, State, and Federal government regulatory agencies for 2014. This brochure provides valuable information about your drinking water, including information about its source and quality.

### Drinking Water and Your Health

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 users are exposed to a significant health risk. Some contaminants can cause long-term health problems by reacting with other chemicals in water to create contaminants and potential health effects can be obtained by calling the Environmental Protection Agency’s (EPA) Safe Drinking Water Hotline at 1-800-426-4791.
Protecting Chandler’s Water Supply

Backflow Prevention

The City of Chandler has a backflow prevention program ensuring proper installation and maintenance of thousands of backflow prevention devices throughout the City. These devices ensure hazards originating on customer’s property and from temporary connections do not impair or alter the water in the City’s water distribution system. Return of any water to the City’s water distribution system after the water has been used for any purpose on the customer’s premises or within the customer’s piping system is unacceptable. Backflow prevention devices range from vacuum breakers on household hose bibs to large commercial reduced-pressure principal devices found throughout the City.

Source Water Assessment and Protection Program (SWAP)

The Arizona Department of Environmental Quality (ADEQ) completed a source water assessment for drinking water wells and surface water sources for Chandler’s public water system in 2005. The assessment reviewed adjacent land uses that may pose a potential risk to water sources. These risks include, but are not limited to, gas stations, landfills, dry cleaners, agriculture fields, wastewater treatment plants, and mining activities. Once ADEQ identified the adjacent land uses, they were ranked on their potential to affect the water source.

All surface water sources are considered high risk due to their exposure to open air. The overall risk posed to surface water is addressed by EPA through its increased monitoring requirements for surface water sources.

Two of Chandler’s drinking water wells were considered high risk based on adjacent land use criteria. The Chandler public water system conducts regular monitoring of drinking water entering the water distribution system from all wells to ensure land uses have not impacted the source water.

The complete report is available for inspection at ADEQ, 1110 W. Washington, Phoenix, Arizona 85007, between the hours of 8:00 a.m. and 5:00 p.m. Electronic copies are available from ADEQ at dml@azdeq.gov. For more information, visit ADEQ’s Source Water Assessment and Protection Unit website at http://www.azdeq.gov/environ/water/dw/swap.html.

Storm Water Pollution Prevention Tips

“Be the solution to storm water pollution” – common storm water pollutants include sediment, motor oil and other vehicle fluids, pet waste, yard debris, metals, pesticides, fertilizers and herbicides, to name a few. For more information on storm water pollution prevention, please go to www.chandleraz.gov and search “stormwater”.
Guidelines for Everyday Pollution Prevention – “Only Rain In the Storm Drain”

• Sweep yard debris and properly dispose of in the trash, rather than blowing or hosing into the street.
• Contain pool or spa water on private property or dispose of it in the sanitary sewer cleanout associated with your home. For more information call 480-782-3507 or search “pool drainage” at www.chandleraz.gov.
• Use fertilizers and pesticides sparingly and as directed by the manufacturer.
• Pick up after your pet and properly dispose of the waste in the trash.
• Wash your car on a lawn or other unpaved surface, or use a commercial car wash.
• Always use a nozzle on your garden hose around the home. Do not let the water free flow into the street.
• Maintain vehicles to be free of leaks and do not park leaking vehicles on the street.
• Do not over-water your lawn.
• Report illegal dumping into streets and storm drains by calling 480-782-3503 or at www.chandleraz.gov.
• Minimize your purchase and use of hazardous products. Dispose of unused quantities properly. Please contact Solid Waste Services at 480-782-3510 for proper disposal guidelines of hazardous waste materials such as used motor oil and other similar fluids.

Seasonal Changes in Flavor

The flavor of Chandler’s water may change at certain times of the year, depending on the water source.

Chandler works with SRP to minimize algae in the canal system and to provide treatment at the SWTP to reduce off-flavors and odors. Arizona State University and the City of Chandler have partnered to routinely monitor for taste and odor precursors in the Consolidated Canal. This allows the treatment plant to have more precise control over taste and odor events and to better utilize resources and manage cost.

Who do I contact with questions about Chandler’s Drinking Water?

If you have any questions about your tap water or the information in this report, please call 480-782-3660 during normal business hours (8:00 a.m. to 5:00 p.m., Monday through Friday). You can also visit our website at http://www.chandleraz.gov.

Citizens who wish to address the City Council about water issues may do so at regularly scheduled City Council meetings normally held the 2nd and 4th Thursday of each month. The meetings are held at Chandler City Hall Council Chambers, 175 S. Arizona Avenue. For information about specific meeting times and agenda items, please contact the City Clerk’s office at 480-782-2180, or visit http://www.chandleraz.gov and click on Government tab and then select City Council Agendas & Minutes from the drop down menu on the home page.

If you have questions or desire more information, visit www.chandleraz.gov/waterquality, or call (480) 782-3660 Monday through Friday 8 a.m. – 5 p.m., or mail your inquiry to City of Chandler, Mail Stop 803, P.O. Box 4008, Chandler, AZ 85244-4008. If you have questions or desire more information, visit www.chandleraz.gov/waterquality, or call (480) 782-3660 Monday through Friday 8 a.m. – 5 p.m., or mail your inquiry to City of Chandler, Mail Stop 803, P.O. Box 4008, Chandler, AZ 85244-4008.