Substances That Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. 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.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public 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 poses a health risk.

Contaminants that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

Inorganic Contaminants, such as salts and metals, that can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

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

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.
Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2018. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available should you ever have any questions or concerns about your water.

Community Participation

The City Council meets every first and third Tuesday of the month at 6:00 p.m. in the Council Chambers, 746 Eighth Street, Wasco, California. The public is welcome to attend.

Important Health Information

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than 6 months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant’s blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 ppm may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

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 who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) 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 (800) 426-4791 or http://water.epa.gov/safewater/lead.

Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 water for drinking or cooking. (If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.) If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or at www.epa.gov/safewater/lead.

Source Water Assessment

A Source Water Assessment Plan (SWAP) was completed in 2002 and is available at our office. This plan is an assessment of the delineated area around our listed sources, through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the water supply’s susceptibility to contamination by the identified potential sources. If you would like to review the SWAP, please feel free to contact our office during regular office hours.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen and disinfectant levels and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

For more information about this report, or for any questions relating to your drinking water, please call Water Superintendent Jeff Tackett at (661) 758-7270.
### REGULATED SUBSTANCES

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>YEAR SAMPLED</th>
<th>MCL (ppb)</th>
<th>PHG (ppb)</th>
<th>AMOUNT DETECTED</th>
<th>RANGE LOW-HIGH</th>
<th>VIOLATION</th>
<th>TYPICAL SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2,3-Trichloroethylene [1,2,3-TCP] (ppb)</td>
<td>2018</td>
<td>0.7</td>
<td>0.7</td>
<td>48</td>
<td>17–110</td>
<td>Yes</td>
<td>Discharge from industrial and agricultural chemical factories; leaching from hazardous waste sites; cleaning and maintenance solvent, paint and varnish remover, and degreasing agent; by-product of other compounds and pesticides.</td>
</tr>
<tr>
<td>Arsenic (ppb)</td>
<td>2016</td>
<td>10</td>
<td>0.004</td>
<td>2.3</td>
<td>2.0–2.6</td>
<td>No</td>
<td>Emission of natural deposits; runoff from orchards, grass and electronics production facilities.</td>
</tr>
<tr>
<td>Barium (ppb)</td>
<td>2016</td>
<td>1</td>
<td>2</td>
<td>0.05</td>
<td>0.04–0.07</td>
<td>No</td>
<td>Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits.</td>
</tr>
<tr>
<td>Dibromochloropropane [DBCP] (ppb)</td>
<td>2018</td>
<td>2</td>
<td>1.7</td>
<td>12.3</td>
<td>ND–61</td>
<td>No</td>
<td>Banned carcinogen that may still be present in soils due to nonuniform use on soybeans, cotton, vineyards, tomatoes, and tree fruit.</td>
</tr>
<tr>
<td>Gross Alpha Particle Activity (g/CCl)</td>
<td>2017</td>
<td>0.8</td>
<td>0.8</td>
<td>ND</td>
<td>NA</td>
<td>No</td>
<td>Emission of natural deposits.</td>
</tr>
<tr>
<td>Halofluorocarbons (ppb)</td>
<td>2018</td>
<td>60</td>
<td>NA</td>
<td>0.3</td>
<td>ND–1.3</td>
<td>No</td>
<td>By-product of drinking water disinfection.</td>
</tr>
<tr>
<td>Hexavalent Chromium (ppb)</td>
<td>2014</td>
<td>0.02</td>
<td>0.02</td>
<td>3.8</td>
<td>3.1–4.5</td>
<td>No</td>
<td>Discharge from electroplating factories; leather tanneries; wood preservation; chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits.</td>
</tr>
<tr>
<td>Nitrate as nitrate (ppm)</td>
<td>2018</td>
<td>45</td>
<td>45</td>
<td>34</td>
<td>16–62</td>
<td>No</td>
<td>Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.</td>
</tr>
<tr>
<td>Nitrate as nitrogen (ppm)</td>
<td>2018</td>
<td>10</td>
<td>10</td>
<td>7.7</td>
<td>5.8–14</td>
<td>No</td>
<td>Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits.</td>
</tr>
<tr>
<td>Total Chlorine Residual (ppm)</td>
<td>2017</td>
<td>4.0 [as CDI]</td>
<td>4.0 [as CDI]</td>
<td>0.6</td>
<td>0.02–1.25</td>
<td>No</td>
<td>Drinking water disinfectant.</td>
</tr>
<tr>
<td>TTHMs (Total Trihalomethanes) (ppb)</td>
<td>2018</td>
<td>80</td>
<td>NA</td>
<td>5.5</td>
<td>ND–20</td>
<td>No</td>
<td>By-product of drinking water disinfection.</td>
</tr>
</tbody>
</table>

Top water samples were collected for lead and copper analyses from sample sites throughout the community.

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>YEAR SAMPLED</th>
<th>AL</th>
<th>PHG</th>
<th>AMOUNT DETECTED</th>
<th>SITE AT TESTED</th>
<th>VIOLATION</th>
<th>TYPICAL SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper (ppb)</td>
<td>2017</td>
<td>1.3</td>
<td>0.3</td>
<td>0.031</td>
<td>0/32</td>
<td>No</td>
<td>Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.</td>
</tr>
<tr>
<td>Lead (ppb)</td>
<td>2017</td>
<td>15</td>
<td>0.2</td>
<td>1.7</td>
<td>0/32</td>
<td>No</td>
<td>Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.</td>
</tr>
</tbody>
</table>

### SECONDARY SUBSTANCES

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>YEAR SAMPLED</th>
<th>SIEMC</th>
<th>PHG</th>
<th>AMOUNT DETECTED</th>
<th>RANGE LOW-HIGH</th>
<th>VIOLATION</th>
<th>TYPICAL SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron (ppb)</td>
<td>2016</td>
<td>300</td>
<td>NS</td>
<td>58.3</td>
<td>ND–230</td>
<td>No</td>
<td>Leaching from natural deposits; industrial wastes.</td>
</tr>
<tr>
<td>Sulfate (ppb)</td>
<td>2016</td>
<td>500</td>
<td>NS</td>
<td>28</td>
<td>21–33</td>
<td>No</td>
<td>Runoff/leaching from natural deposits; industrial wastes.</td>
</tr>
<tr>
<td>Total Dissolved Solids (ppb)</td>
<td>2016</td>
<td>1,000</td>
<td>NS</td>
<td>210</td>
<td>170–240</td>
<td>No</td>
<td>Runoff/leaching from natural deposits.</td>
</tr>
</tbody>
</table>

### UNREGULATED SUBSTANCES

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>YEAR SAMPLED</th>
<th>AMOUNT DETECTED</th>
<th>RANGE LOW-HIGH</th>
<th>TYPICAL SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoride (ppm)</td>
<td>2016</td>
<td>83.2</td>
<td>72–100</td>
<td>Naturally occurring.</td>
</tr>
<tr>
<td>Sodium (ppm)</td>
<td>2016</td>
<td>35</td>
<td>32–40</td>
<td>Naturally occurring.</td>
</tr>
<tr>
<td>Specific Conductivity (μS/cm)</td>
<td>2016</td>
<td>324</td>
<td>265–453</td>
<td>Substances that form ions when in water; seawater influence.</td>
</tr>
</tbody>
</table>

### About Our Violations

During the summer of 2018, we did not monitor for the presence of synthetic organic chemicals (SOCs) in the public drinking water system. Upon notification of any violation by the California Environmental Protection Agency, we immediately analyzed our water supply for SOCs. Results of the analysis have been received and properly recorded as required by state and federal law. We do not believe that missing this monitoring requirement had any impact on public health and safety. We have already taken steps to ensure that adequate monitoring and reporting will be performed in the future so that this oversight will not be repeated.

Our water system recently failed a drinking water standard. Although this is not an emergency, as our customers, you have a right to know what you should do, what happened, and what we are doing to correct this situation.

To mitigate this concern, the City of Wasco is aggressively working towards installing treatment facilities at all of the City Well sites in order to continue to provide clean drinking water. 1,2,3-TCP levels will gradually improve over time as treatment facilities are constructed at each of our water well sites. We anticipate completely resolving the problem within 2 years, your patience regarding this matter is appreciated. Currenly the City is determining the most feasible method to treat the well sites.

### Definitions

90th Percentile: The levels reported for lead and copper represent the 90th percentile of all samples taken during the same time period.

AL (Regulatory Action Level): The concentration of a contaminant which, if exceeded, requires treatment or other requirements that a water system must follow.

μS (micromhos per centimeter): A unit expressing the amount of electrical conductivity of a solution.

LRA (Locational Running Annual Average): The average of the most recent four annual analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amounts Detected values for TTHMs and HAA5 are reported as the highest LRA.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set by the U.S. EPA.

MDL (Method Detection Limit): The lowest level of a contaminant that can be detected with certainty in drinking water. There is convincing evidence that addition of a contaminant is necessary for control of microbial contaminants.

MDL (Maximum Residual Disinfectant Level Goal): The level of a disinfectant that must be maintained below which there is no known or expected risk to health. MDLs are set by the U.S. EPA.

MDL (Maximum Residual Disinfectant Level Goal): The level of a disinfectant that must be maintained below which there is no known or expected risk to health. MDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA (Not applicable)

ND (Not detected): Indicates that the analyte was not found by laboratory analysis.

NS (No standard)

μC/L (picocuries per liter): A measure of radionuclides.

PDWS (Primary Drinking Water Standards): Maximum levels of all MCLs and MDLs for contaminants that affect health, along with their monitoring and reporting requirements and water treatment requirements.

PHG (Public Health Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

ppb (parts per billion): One part substance per billion parts water (micrograms per liter).

ppm (parts per million): One part substance per million parts water (milligrams per liter).

ppt (parts per trillion): One part substance per trillion parts water (nanograms per liter).

### How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria prior to filling up the tap water, the bacteria can grow and the disinfectant has dissipated. Some experts believe that water can be stored up to 6 months before needing to be replaced. Refrigeration will help slow the bacterial growth.

### Where Does My Water Come From?

The source of Wasco's drinking water is the Kern County Subbasin, from which it is pumped to the surface by a system of groundwater wells. The aquifer is replenished through natural runoff from the Sierra Nevada Mountains as well as seepage from the many irrigation canals that transport water into the area from other regions of the state.

The City of Wasco owns and operates your domestic water supply and distribution systems. The water system is comprised of six active groundwater wells and approximately 94 miles of water distribution lines.

### Water Conservation Tips

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by taking steps to save as much water as you can.

- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by pouring a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.