

# Taste and Odor Fact Sheet



## Does your drinking water taste or smell funny?

Drinking water imported from the Sacramento-San Joaquin Delta or captured as rainfall in local reservoirs can occasionally have noticeable taste and odor, depending on the time of year and the source of the water coming into our treatment plants. The predominant tastes and odors are musty or earthy (caused by algae), salty (caused by high salinity levels), or rotten-egg (caused by a lack of oxygen). The swimming pool taste or odor often encountered in drinking water is caused by the chlorine used in the disinfection process. Despite these occasional tastes and odors noted, Valley Water assures the community that all of our tap water meets federal and state standards for safety.

### Taste and Odor: Chlorinous

During the treatment process, chlorine is added to water as a disinfectant. Before the water leaves the treatment plant, ammonia is added to form chloramines to keep the water disinfected while it is distributed to homes and businesses.

Chloramines, rather than chlorine, are used to maintain a disinfectant residual because they are more stable, form fewer disinfection by-products, and tend to produce less offensive tastes and odors. However, they may impart chlorinous or medicinal taste and odor to your drinking water.

### Taste and Odor: Musty or earthy

Earthy or musty tastes and odors, particularly in hot water, are often the result of an algal bloom in the untreated water supply. Algae thrive when water is warm and there is abundant sunlight. Thus, taste and odor-producing algae typically bloom in the late summer or fall.

Although Valley Water's modern treatment plants remove the algae, some of their taste and odor-causing metabolites may remain. The two most common metabolites are geosmin and 2-methylisoborneol (MIB). Even though these compounds are harmless, the human



senses of taste and smell are extremely sensitive to them and can detect them in the water at concentrations as low as four parts per trillion.

### Taste and Odor: Rotten egg

A rotten egg smell typically occurs from a lack of oxygen in reservoirs, lakes and wells. It is caused by bacterial decomposition of algae and organics which, when no oxygen is present, produces hydrogen sulfide. Hydrogen sulfide emits a rotten egg smell. Valley Water's treatment process reoxygenates the water and removes the rotten egg odor. Although unlikely, some residual odor may remain.

### Taste and Odor: Salty

While some areas of Santa Clara County rely on groundwater, about half of the water used in the county originates hundreds of miles away in the Sierra Nevada and is delivered through the Sacramento-San Joaquin River Delta or San Francisco's Hetch Hetchy system. Most of the remainder comes from local rainfall, much of which is captured in the Valley Water's 10 local reservoirs.

When California experiences a drought, salinity levels in the Delta typically increase, sometimes significantly. This may result in a very slight salty taste in your tap water.

## Other Taste and Odor

You may occasionally notice other common odors in your tap water such as fishy, grassy or marshy. These are also caused by compounds produced by different types of algae. Although these compounds may impart an odor, they do not adversely affect the safety of your drinking water.

## Monitoring

In addition to weekly laboratory analyses which measure the concentrations of taste- and odor-causing compounds, Valley Water has a Flavor Profile Analysis (FPA) panel that meets on a regular basis. The FPA panel consists of a group of persons trained to identify flavors and aromas in untreated source water and treated drinking water.

Another measure, threshold odor number (TON) testing, is conducted by treatment plant operators on the raw, settled and treated water, at a minimum, routinely every four hours. This is done more frequently as needed when taste- and odor- causing compounds are determined to be elevated by the lab. The test is used to subjectively quantify the level of odors in water.

## Treatment

Valley Water's current methods for the removal of taste and odor include the use of powdered activated carbon, ozone and peroxone (a combination of ozone and hydrogen peroxide). Penitencia and Santa Teresa water treatment plants currently have powdered activated carbon, ozone and peroxone systems. Valley Water's third and oldest treatment plant, Rinconada, uses powdered activated carbon and is undergoing major upgrades including the installation of an ozone system which will significantly improve the tap water produced at this plant.

## What We Do

Valley Water manages an integrated water resources system that includes the supply of clean, safe water, flood protection and stewardship of streams on behalf of Santa Clara County's 2 million residents. Valley Water effectively manages 10 dams and surface water reservoirs, three drinking water treatment plants, an advanced recycled water purification center, a state-of-the-art water quality laboratory, nearly 400 acres of groundwater recharge ponds and more than 275 miles of streams.

We provide wholesale water and groundwater management services to local municipalities and private water retailers who deliver drinking water directly to homes and businesses in Santa Clara County.

## Contact Us

For general information about water quality, contact Water Quality Unit Manager Peter Zhou at (408) 630-2365 or [pzhou@valleywater.org](mailto:pzhou@valleywater.org).

For specific questions regarding your tap water, contact your water service provider. If you're not certain who

<https://www.valleywater.org/your-water/find-my-water-retailer>

Si habla español y tiene preguntas sobre el contenido de este mensaje por favor de comunicarse con Jose Villarreal al [JVillarreal@valleywater.org](mailto:JVillarreal@valleywater.org) o (408) 630-2879.

Nếu bạn nói tiếng Việt và có thắc mắc về nội dung của thông báo này, xin vui lòng liên hệ với Hoan Cutler [HCutler@valleywater.org](mailto:HCutler@valleywater.org) hoặc (408) 630-3135.

如果你說中文並對上述訊息有疑問，請聯繫 Julia Tat, 電郵 [jtat@valleywater.org](mailto:jtat@valleywater.org), 或者電話: (408) 630-3168.

## CONTACT US

To find out the latest information on Valley Water projects or to submit questions or comments, contact **Peter Zhou** at (408) 630-2365 or [pzhou@valleywater.org](mailto:pzhou@valleywater.org) or use our **Access Valley Water** customer request system at [\*\*https://delivr.com/2x9ff\*\*](https://delivr.com/2x9ff).



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