

Conservation

The City of Fountain Valley saves water during flushing maintenance by flushing only when absolutely necessary and using the unidirectional flushing method. Unidirectional flushing is an engineering method to move water through the system in only one direction causing the water to move at greater velocity and strength. This cleans the pipes more effectively at a faster pace, which means less water is discharged using this method.

Capturing Discharged Water

Recapturing flushed water is difficult and not cost effective. Effectively cleaning the pipes through flushing requires the water to run at high flow rates, which prevents capture. Using water trucks to collect and transport the water is neither cost effective, nor mechanically possible considering the necessary flow velocity and duration to adequately flush the system.

Protecting the Environment

Discharged water is generally channeled into storm drains, which lead to natural bodies of water. For this reason, discharged water is dechlorinated to protect wildlife and sensitive species. Once dechlorinated the discharged water can drain to local channels and to the ocean benefiting the health and well-being of these bodies of water.

Water system flushing is regulated by the California Regional Water Quality Control Board.

Requirements include:

- **Dechlorination** to remove chlorine residual before water is released.
- Use of **Best Management Practices** to minimize silt and debris from entering storm drains.
- **Managing flow** to storm drains to minimize impact on the surrounding environment.

System Maintenance Schedule

Due to system design, maintenance of the water distribution system is most effectively completed geographically. Routine maintenance of the system is completed by the City of Fountain Valley on a continuous cycle, as well as on an as needed basis.

Scheduled maintenance will occur Monday through Thursday from 8am to 3pm.



City of Fountain Valley
Public Works Department
17300 Mt. Herrmann Street
Fountain Valley, CA 92708
Phone: 714-593-4600
After-Hours Emergencies: 714-593-4483
www.fountainvalley.org

Water Quality Flushing Program

Protecting City of Fountain Valley's
Water Quality & Maintaining the Water
Distribution System

*City of Fountain Valley
Public Works Department*



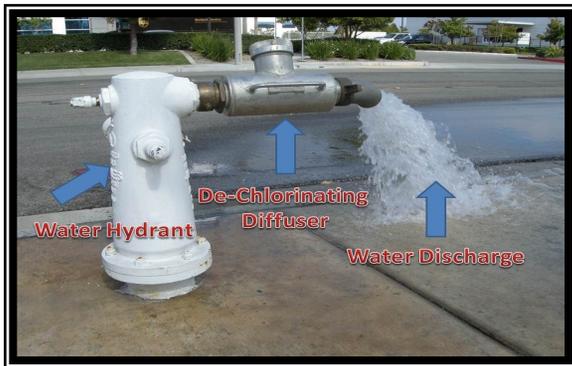
Fountain Valley's Water System

The City of Fountain Valley owns and operates its own Water System. Annually, about 3 billion gallons of water are treated at our six well sites and through an imported water connection for use by Fountain Valley residents and businesses. Once treated, water is delivered to the community through the water distribution system consisting of 187 miles of pipeline and 2 storage reservoirs that are located in the City to store the water. Reservoirs are kept at specific levels to create adequate water pressure and for fire-protection purposes. Our top priority is to provide safe, reliable, high quality water to City customers at one of the lowest rates in Orange County.

Water Main Flushing

Water system flushing is a standard industry practice used by water agencies to maintain water quality and protect public health. Flushing operations are required on a regular basis by the California Department of Public Health. Additionally, the accumulation of sediments between routine flushes may occur, resulting in the need to perform additional flushing.

There are two reasons water system flushing may be necessary—**water quality** and **scheduled maintenance**.



Water Quality

The City of Fountain Valley conducts routine water quality tests at 30 different sites throughout the water system on a weekly basis. If test results show chlorine residual levels lower than required, flushing may be needed within the system.

In all water distribution systems, water quality can deteriorate during delivery and storage because of factors such as distance from the well sites, proximity to dead-end water mains, type and condition of mains, and the quantity of water use. Over time, water in the pipe “ages” and water quality lessens because the water loses its chlorine residual. Maintaining an adequate but safe chlorine residual level is a requirement of the United States Environmental Protection Agency and the California Department of Public Health.

Scheduled System Maintenance

The City of Fountain Valley completes routine maintenance of the water system on a continuous cycle for water quality improvement, general maintenance, and emergency preparedness. System flushing occurs as part of this routine maintenance.

What Does Flushing Do?

Over time, small particles accumulate inside water main pipes. Through flushing, water is pushed through the pipes at a high velocity to a discharge point. The rapid movement of water:

- Scours pipe walls to remove residue;
- Eliminates “aged” water;
- Increases chlorine residuals;
- Removes sediment; and
- Improves water quality, taste, and odor.



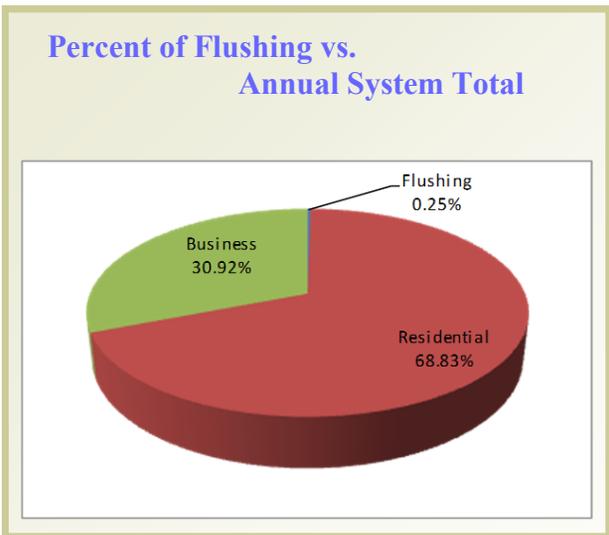
Water quality testing occurs routinely in the field

Where Does Flushing Occur?

The water system can be flushed directly from storage reservoirs, through fire hydrants, air releases, and special pipes designed to flush the system, called blow-offs. The water is released onto the street and into storm drains.

How Much Water is Flushed?

The amount of water flushed by the City each year is about 9 million gallons, which is only .25% of total annual water use.



Water Pressure and Appearance

During flushing, customers may experience a temporary decrease in water pressure or slight water discoloration, which are both normal. Pressure changes during flushing may cause air or fine sediment in service lines to be disturbed causing cloudiness. If water appears cloudy or discolored when first run from the faucet, allow the water to run for a few minutes until it clears. Air and slight discoloration are normal byproducts of the flushing program but neither are harmful or cause for concern.