

Flushing Facts

What is it?

Unidirectional Flushing (UDF) is a method of cleaning the inside of water mains within the distribution system. This UDF technique creates high flow velocities of water by isolating certain sections of water mains. This high velocity water flow allows for scouring of the inside wall of the water mains. The UDF program is completed by closing water valves in a specific manner to create water movement in one direction while opening fire hydrants at the end of that section. Maintaining this flushing sequence is important so that the water flows in one direction and then completely flushed from the system.

Why do we do unidirectional flushing?

Slow moving water in the distribution system allows sediment and bacterial growth to grow over time. These deposits can result in water quality problems and contribute to the corrosion of some of the water distribution system. UDF removes bacterial growth, increases disinfectant residual, improves colour, and removes turbidity and restores flow in the water distribution system.

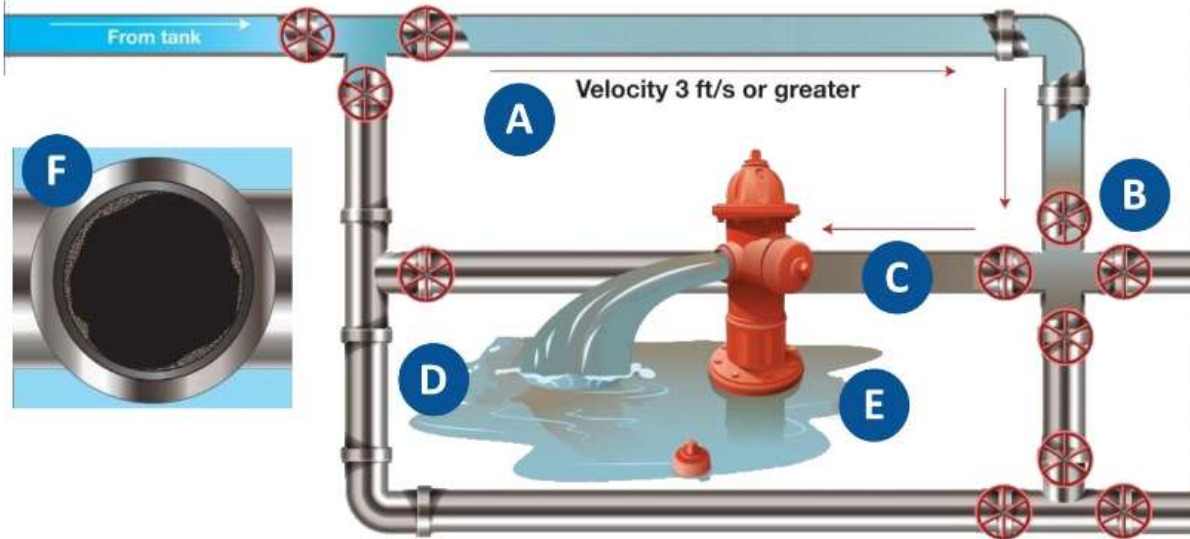
What are the benefits of unidirectional flushing?

The benefits are improving water quality, colour, and flow of clean water through the distribution system. A preventative maintenance program is also implemented on valves and hydrants in conjunction with the UDF program.

Are residents affected by unidirectional flushing?

Water valves and fire hydrants near your residence may be used to discharge water onto the street for several minutes. There may be a slight drop in water pressure or a presence of discolouration from the minerals and sediments that are being flushed out of the water mains. Your water service should not be disrupted during the flushing process. If a discoloration is noticed in your water, please turn the tap off for 15 minutes. Then flush from your bathtub tap or outside tap until the water runs clear.

The Benefits of Unidirectional Flushing



A Velocity of water is much higher in UDF than in Conventional Flushing, providing better pipe scouring.

B Valves are opened and closed during UDF, allowing water systems to locate broken or closed valves. Exercising hydrants and valves prolongs their life.

C During Conventional Flushing, dirty water is recirculated through the system, whereas UDF forces water in one direction, from a clean source through a dirty pipe, providing superior wall cleaning.

D Sediment, corrosion, and biofilm are forcefully flushed out during UDF, whereas they remain circulating in the system during conventional flushing.

E UDF actually uses up to 40% less water than conventional flushing.

F Conventional Flushing does not produce a high enough velocity to adequately scour pipe walls.