# S441 BMPs for Potable Water Line Flushing, Water Tank Maintenance, and Hydrant Testing

**Description of Pollutant Sources:** Flushing is a common maintenance activity used to improve pipe hydraulics and to remove pollutants in systems. Flushing done improperly can result in the discharge of solids to receiving waters. Hydrant testing may result in the discharge of rust particles.

Chemicals used in line flushing and tank maintenance are highly toxic to aquatic organisms and can degrade receiving waters.

**Pollutant Control Approach:** Dechlorinate and pH adjust water used for flushing, tank maintenance, or hydrant testing. Dispose of the water to the sanitary sewer if possible.

## Applicable Operational BMPs:

- Remove solids from associated curbs and gutters before flushing water. Use erosion and sediment control BMPs such as BMP C235: Wattles, BMP C220: Inlet Protection, etc. to collect any solids resulting from flushing activities.
- If using super chlorination or chemical treatment as part of flushing, discharge water to the sanitary sewer. If sanitary sewer is not available, the water may be infiltrated to the ground as long as all of the following are met:
    - The water is dechlorinated to a total residual chlorine of 0.1 ppm or less.
    - Water quality standards are met.
    - A diffuser is used to prevent erosion.
    - The water does not cross property lines.
- Discharging water to a drainage system requires approval from the local jurisdiction. Check with the local jurisdiction to determine their requirements for approval. Most jurisdictions will require the water to be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less and pH adjusted if necessary. Water must be volumetrically and velocity controlled to prevent resuspension of sediments or pollutants in the Municipal Separate Storm Sewer System (MS4).
- Do not over apply dechlorination agents. This can deplete the dissolved oxygen concentration and reduce the pH in discharge / receiving waters.

## Optional Operational BMPs:

- If possible, design flushing to convey accumulated material to strategic locations, such as to the sanitary sewer or to a treatment facility; thus, preventing re-suspension and overflow of a portion of the solids during storm events.
- If possible, conduct flushing and tank maintenance activities on non-rainy days and during the time of year that poses the least risk to aquatic biota.

## Optional Treatment BMPs:

- Treatment for dechlorinating can include an application of a stoichiometric quantity of:
    - Ascorbic Acid, Sodium Ascorbate (Vitamin C)
    - Calcium Thiosulfate
    - Sodium Sulfite tablets
    - Sodium Thiosulfate
    - Sodium Bisulfite
    - Alternate Dechlorination Solutions