

## Cleaning and Disinfecting Non-Pressurized Water Storage Tanks

Non-pressurized drinking water storage tanks should be cleaned and/or disinfected regularly to keep them in a sanitary condition.

**Disinfection** of storage tanks should be completed when:

- Repairs or modifications are made to the well or treatment equipment
- The well is disinfected

**Cleaning and disinfection** of storage tanks should be completed when:

- Starting up a seasonal public water system
- Sediment and/or biological growth is observed in the tank
- Coliform bacteria are detected in the water system
- Repairs or modifications are made to the storage tank

Prior to cleaning, inspect storage tanks for cracks or deterioration. Use care when cleaning or disinfecting older concrete or steel tanks that may be vulnerable to damage during this process.

### **CAUTION:**

**NEVER ENTER STORAGE TANKS!** Storage tanks are confined spaces and should only be entered by qualified professionals.

**WORKING WITH CHLORINE CAN BE HAZARDOUS!** Chlorine can cause damage to the skin, eyes, and respiratory system. Disinfecting a storage tank should only be attempted if you are familiar with your system and know the hazards associated with working with high concentrations of chlorine. Wear protective equipment and contact a licensed professional as needed.

Complete the steps below to clean the inside of tanks if you have access to a high-pressure washer or long handled brush. A high-pressure washer or long handled brush will allow you to reach the sides and bottom of the tank. All equipment should be clean and dedicated for this purpose only.

**Note:** If there is no access to physically clean inside the tank, proceed to **Disinfecting Storage Tanks**.

### Cleaning Storage Tanks

1. Disable any floats in the tank or use other means to manually control the water supply to the tank.
2. Drain the tank down to at least 1/4 full.
3. Working from outside the tank, physically scrub the sides and bottom of the tank using a long handled scrub brush or spray with a high-pressure washer utilizing a potable water source.
4. Concentrate on the air/water interface as this is the section of the tank where the water level is changing and bacterial growth is most likely to occur.
5. Rinse the tank with a potable water source.
6. Drain the tank completely. Use a hose to bypass the septic system. **Do not** drain the tank into your distribution system or septic system.
7. Use a wet/dry vacuum to remove any water or sediment remaining on the bottom of the tank.
8. Fill the tank 3/4 full with a potable water source and **proceed to Disinfecting Storage Tanks**.

## Disinfecting Storage Tanks

1. Disable any floats in the tank or use other means to manually control the water supply to the tank.
2. If the tank is full, drain down to at least 3/4 full.
3. Shut all valves leading to the distribution system lines.
4. Add fresh, unscented chlorine bleach directly to the tank to supply and maintain a chlorine dose of a minimum of 50 parts per million (ppm). See Table 1 below for chlorine concentrations based on the full tank volume.
5. Fill the tank to full volume with a potable water source. This is to allow the chlorine to adequately mix with the water inside the tank.
6. Allow the chlorine solution to remain in the tank for 24 hours. **Do not allow anyone to come into contact with the chlorinated water!**
7. Using chlorine test strips, periodically check for a chlorine residual. A measurable chlorine residual should be maintained during the 24-hour period. If a chlorine residual cannot be detected at any time during this period, repeat steps 2 through 7.
8. Drain the tank completely. Use a hose to bypass the septic system, directing the flow away from vegetation, lakes, and other areas that may be damaged by the chlorine solution. **Do not** drain the tank into your distribution system or septic system.
9. Restore any disabled floats and fill the tank with a potable water source.

## Additional Information

- If it is not feasible for the chlorine solution to remain in the tank for 24 hours, an alternate method is to increase the chlorine residual to 200 ppm and let stand in the tank for three hours. To obtain a residual of 200 ppm, refer to Table 1 and multiply the amount of bleach by four (4), using full tank volume.
- Only chlorine or other water treatment chemicals should be stored near or in the same room as the tank. No other types of chemicals should be stored nearby.
- Other acceptable methods for disinfecting storage tanks are found in the AWWA C652 standard.

**Table 1-Chlorine Concentrations per Storage Tank Size  
Approximate Amount of Bleach to Obtain 50 ppm Chlorine**

Size of Tank (gallons)	Household Bleach (5%)	Ultra Bleach (6%)	Commercial Bleach (10%)
250	4 cups	3½ cups	2 cups
500	½ gallon	6¾ cups	4 cups
750	¾ gallon	10 cups	6 cups
1000	1 gallon	13¾ cups	½ gallon

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*To obtain this information in a different format, call:  
 651-201-4700.*