

## **PUBLIC HEALTH ENGINEERING GUIDELINE: CLEANING AND DISINFECTING SMALL DRINKING WATER STORAGE TANKS**

This Guideline is intended for use with small tanks that do not have an entry hatch<sup>1</sup>. Ensure all materials used for storage tanks are intended for use with potable water (safe for human consumption). If materials not suitable for potable water contact are used, harmful chemicals could leach into your drinking water. Storage tanks should be sealed and kept insect-proof to prevent on-site contamination.

Delivered water must be potable and obtained from an approved source. Surface water and shallow ground water may be vulnerable to contamination at any time from wildlife, aquatic life, domestic animals and humans. All surface water for domestic use must be disinfected to ensure a safe supply. Approved water haulers are required to disinfect water for your safety.

Storage tanks should usually be cleaned and disinfected twice a year (spring and fall). This is to remove algae (plant growth which may produce unpleasant tastes & odours), sediment, and harmful bacteria.

### **PROCEDURE**

1. Drain water from tank.
2. Physically scrub or pressure-wash the interior walls to remove sediment and grime. If the tank is very dirty, scrubbing with mild abrasive like baking soda is preferred over using chemical solvents or detergents. In all cases, be sure to rinse cleansing agents very well.
3. Rinse the inside surfaces of tank with clean potable water. Drain wash water.
4. Fill tank with clean potable water.
5. Add the required amount of unscented household bleach to the water in the storage tank (see table below). Mix well.
6. To disinfect the plumbing lines and fixtures, open all taps in distribution system until chlorine smell is apparent at each outlet. Close taps.
7. Let chlorine solution sit in the water system for at least 12 hours. Do not consume this highly concentrated solution.
8. Drain the water tank, but not into a septic system or fish-bearing stream.
9. Refill with fresh potable water.
10. Open valve to distribution lines. Run water from the taps until there is no smell of chlorine.

Dosage of unscented household bleach (5 - 6% sodium hypochlorite) for disinfecting water storage tanks				
Tank Size		Volume of bleach to obtain 50 ppm Free Chlorine		
Litres	Gallons	Litres	Ounces	Cups
225	50	0.2	8	1
450	100	0.5	18	2
900	200	0.9	32	4
1150	250	1.2	40	5
2300	500	2.3	80	10
4500	1000	4.5	160	20
6800	1500	6.8	240	30
9000	2000	9.1	320	40
11400	2500	11.5	400	50

<sup>1</sup> For larger water reservoirs which can be entered by maintenance staff for periodic cleaning, please refer to *PHE Guideline: Disinfection of Water Storage Facilities*.