

Rainwater Harvesting Reference Sheet

Requirements:

(1) Only potable water is to be supplied to all fixtures used for human consumption, food preparation or sanitation (not including toilet /urinal flushing).

(2) A potable water system must not be directly connected to a non-potable water system and an approved backflow prevention device or an air gap must be in place.

Vancouver Coastal Health presently does not have any specific guidelines with respect to rainwater harvesting systems; however proposals have been reviewed with the following recommendations.

- Ideally, it is best to avoid aerosolizing non-potable water to avoid inhalation of biologic or chemical based contaminants.
- Water should not be collected from non-roof areas to minimize the introduction of chemical or biological contaminants.
- If water is aerosolized, the temperature of water storage should be below 20°C (to prevent growth of Legionella bacteria). Otherwise, water will need to be treated to potable water standards.
- CSA Standards B128.1 – 06/B128.2/06 should be followed with respect to the portion of the system relating to non-potable water use.
- Inert and non-toxic roofing materials should be used e.g., no lead based roofing products.
- Rainwater should pass through a first flush diverter so as to exclude the most contaminated water upon first rainfall prior to storage in the water holding tank.
- There should be gutter screens to screen out debris such as leaves and twigs.
- Filtration of water should be sufficient to provide for proper functioning of fixtures and valves.
- It is recommended that there should be no hose bibs that provide non-potable water so as to prevent members of the public from inadvertently drinking non-potable water from a hose that cannot be clearly marked.
- Fixtures and pipes which are served by non-potable water should have clear signage indicating that water is non-potable.
- Any exposed inlet or outlet must be covered or screened to discourage: (1) entry by rodents, (2) mosquito or other insect breeding, (3) introduction of foreign substances or objects.
- The overflow from water holding tank should be indirectly connected to the storm water system through an approved air gap.
- The rainwater should ideally be disinfected by chlorine injection, reverse osmosis or UV or a similarly effective system to a recreational water quality standard (for toilet flushing).
- A written plan for ongoing maintenance of the rainwater system is to be produced for reference by maintenance personnel, to include issues dealing with potential system failure.
- If water is used for irrigating food crops, the water should meet BC Ministry of Farming, Natural Resources and Industry's Good Agriculture Practices, Water Quality standards.