



# INSTITUTE OF HEALTH SCIENCES

(A Unit of Margdarsi)

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## 7.1.5 Maintenance of water body Open Well / Bore Well/Drinking Water

Water is one of the most essential resources required to sustain life and support day-to-day activities in any environment, including college campuses. Proper maintenance of water bodies, open wells, bore wells, and drinking water systems is crucial for ensuring that students, faculty, and staff have a reliable supply of clean, safe, and accessible water. Proper management of these water sources not only ensures public health but also contributes to sustainability and environmental conservation.

### 1. Maintenance of Water Bodies

Water bodies, such as ponds, lakes, or artificial tanks within a college campus, serve multiple purposes, from aesthetic enhancement to water conservation. These water bodies can also help recharge groundwater levels and provide recreational spaces for the campus community.

#### Key Maintenance Practices:

- **Regular Cleaning and De-silting:** Accumulation of silt, debris, and algae can block water flow and affect water quality. Periodic cleaning, de-silting, and removal of debris are essential to maintaining the water body's health.

**Water Quality Testing:** Regular water quality checks ensure that the water remains free from contaminants. Testing for parameters like pH, dissolved oxygen, turbidity, and bacteria helps identify potential issues before they become health hazards.

### 2. Maintenance of Open Wells/Bore Wells

Open wells and bore wells are critical for groundwater extraction, particularly in regions with limited access to municipal water systems. These wells serve as a reliable water source for both drinking water and other campus needs like gardening and sanitation. However, like any infrastructure, they require consistent maintenance to ensure their functionality and longevity.

#### Key Maintenance Practices:

- **Regular Inspection:** Periodic inspections of open wells and bore wells are essential to check for structural integrity and signs of wear and tear, such as cracks, contamination, or sediment buildup.
- **Cleaning and De-silting:** Over time, sediment and silt can accumulate at the bottom of wells, affecting water quality and extraction efficiency. Regular cleaning ensures that water flows freely and remains safe for use.
- **Water Level Monitoring:** It's important to monitor the water levels in wells and bore wells to prevent over-extraction, which can lead to a drop in groundwater levels. Sustainable water extraction practices should be adopted, such as limiting the use of well water to non-drinking purposes when necessary.

### 3. Maintenance of Drinking Water Systems

Drinking water systems on campus are the most vital **infrastructure**, directly affecting the health and well-being of everyone on campus. Ensuring the supply of safe and potable water is paramount, and proper maintenance is essential to prevent waterborne diseases.

#### Key Maintenance Practices:

- **Water Filtration and Purification:** Installing and maintaining water filtration systems (e.g., UV purifiers, reverse osmosis systems) ensures that water supplied to drinking fountains, taps, and water coolers is free from pathogens and contaminants. These systems must be cleaned and serviced regularly to maintain their effectiveness.
- **Piping and Plumbing Maintenance:** Regular checks of pipes, joints, faucets, and valves are necessary to detect leaks or blockages that can result in water wastage or contamination. Leaks should be repaired promptly to avoid water loss and damage to campus buildings.
- **Storage Tank Cleaning:** Water storage tanks should be cleaned periodically to prevent contamination from algae, dust, or other foreign substances. Cleaning and disinfecting the tanks at regular intervals ensure that water quality is maintained.
- **Water Pressure Monitoring:** Maintaining the right water pressure across the campus ensures that water flows effectively to all parts of the campus. Low pressure or inconsistent water flow can disrupt water supply, particularly in areas with higher elevation or distance from the main supply.



The range of 80-150 (ppm) is considered ideal

Between 50-150 (ppm)      Excellent for drinking

150-250 (ppm)      Good

More than 250 are not good for health



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