Hisaar Foundation
a foundation for water, food and livelihood security

GUIDELINE 5: CONSERVING WATER IN INDUSTRY

Do You Know?

- Industrial water requirements can range from almost negligible up to millions of liters per day, depending on the nature of the industry
- Regardless of the volume of water consumed, water savings and plugging leaks will lead to reducing the cost of operations and an overall improvement in the city's water supply
- Water saved in this way may be used by families for drinking and domestic purposes and that bucket is enough for one family's daily cooking and drinking requirements

How to Save Water in Office Areas:

- Post a sign in the sink area asking users to turn off the faucets completely after each use
- Check all water outlets for leaks and fix each leak as soon as possible
- Install economizer flushes that have both half or full flush options, and post a sign in the washrooms to educate employees on its use, or insert a one-liter bottle of water into each regular flush tank to reduce the amount of water used for each flush
- Make sure the washroom flushes are not overflowing, dripping or leaking and fix each leak
- Keep all floors clean and dry so that any leaks can be noticed immediately
- Collect air-conditioning condensate as this is a great source of clean water. This water (the quantity of which varies with hours of use and size of air conditioner) can be collected in buckets, germy cans or drums. The condensate can be used for general washing or irrigation, or can be put back into the water supply tank
- Collect all sewage water and treat it in a small-scale Sewage Treatment Plant. This water can be treated and reused for irrigation, general washing, or added back into the process water stream for industrial use or for cooling tower make-up water
- Each application will need to be evaluated for its appropriateness to the environment of the factory, plant, manufacturing or processing areas

How to Save Water in Plant/Manufacturing/Process Areas:

- Collect and reuse steam condensate. With a small investment in condensate traps and a small pipeline, all condensate can be collected and reused in boilers. This not only saves water but also energy. The boilers will run more efficiently and will require fewer cleanings.
- Collect and reuse cooling tower and boiler blow-down. If chemicals are not used in the water, it can easily be used for irrigation, general area washing or bathroom flush tanks. In case there is an existing water treatment system, this water can be put through the treatment system for reuse.
- Collect and reuse bearing cooling and pump sealing water. This water often contains oil and grease and sometimes product, but with simple grease traps, a substantial proportion can be separated out and reused.
- Check for leakages in the valve body or stem and check to see whether it shuts off completely. In order to detect a leaking valve, especially if a pipe-line is not being used on a regular basis, leave it open at one end. If the valve is leaking, the line will drip from that point. Alternatively, install a blind flange or a plug at the point nearest to the source instead of depending on a valve to shut off completely.
- In case of a large consumer of water, consider whether it makes sense to reuse process water. In most cases, 90 percent of industrial wastewater can be treated and reused, minimizing the load on fresh water.
- In conducting the evaluation, consider the alternatives; in most cases it is cheaper to treat wastewater than it is to install a desalination system or purchasing fresh water by tankers.

Advantages of Reuse and Recycling

- Reduction in demand and saving money on buying water.
- Reduction in disposal requirements as only solid matter will need disposal collected from the process.
- Reduction in the load on the wastewater network and treatment plants.
- Reduction in the pollution caused by wastewater in cases where the industrial area does not provide treatment.
- Release of water for others to use.

For further details please visit

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