AKALYA

1. Meter/Measure/Manage
Metering and measuring facility water use help to analyze saving opportunities. This also assures the equipment is run correctly and maintained properly to help prevent water waste from leaks or malfunctioning mechanical equipment.

2. Optimize Cooling Towers
Cooling towers provide air conditioning for laboratories and are large consumers of water. Cooling tower operations can be optimized by carefully controlling the ratio of water discharged (blowdown) to water evaporated. The ratio of evaporation to blowdown is called the cycle of concentration. For maximum water efficiency, cooling towers should be operated at six or more cycles of concentration. Metering water makeup and blowdown from the cooling tower ensures the cooling tower is operating properly and can help identify leaks or other malfunctions.

3. Replace Restroom Fixtures
The U.S. Department of Energy established federal water-efficiency standards in the 1990s. Prior to that, most EPA facilities had inefficient sanitary fixtures. For example, toilets used 3.5 gallons per flush . Nearly all EPA laboratories have since installed water-efficient fixtures, many of which have earned EPA's Water Sense® label for efficiency and performance.

4. Eliminate Single-Pass Cooling
Single-pass cooling circulates a continuous flow of water just once through the system for cooling purposes before it goes down the drain. EPA strives to eliminate single-pass cooling in its laboratories. Instead, facilities have air-cooled or recirculating chilled water systems.

SANTHIYA

1. Use Water-Smart Landscaping and Irrigation
lanting native and drought-tolerant plant species minimizes the need for supplemental irrigation. Landscape water use can also be reduced 10 to 20 percent by having an irrigation water audit. EPA selects audit professionals certified through a WaterSense labeled program. WaterSense labeled weather-based irrigation controllers or soil moisture sensors are used to water only when plants need it.

2. Control Steam Sterilizer Water
Steam sterilizers use cooling water to temper steam condensate discharge from the sterilizer to the laboratory drain. Many older sterilizers discharge a continuous flow of tempering water to the drain, even when it is not needed. EPA has retrofitted sterilizers with a tempering water control kit or replaced old steam sterilizers with models that only apply tempering water when needed.

3. Reuse Laboratory Culture Water
Several EPA laboratories require water for aquatic culture research. In some cases, culture water is pumped into laboratory specimen tanks from local bodies of water, such as lakes or bays. It is then discharged into the sewer or treated and returned to the body of water.

4. Recover Rainwater
Recovery systems capture rainwater from the roof and redirect it to a storage tank. This water is used for flushing toilets, supplying cooling towers and irrigating the landscape.

SOWMIYA

1. Control Reverse Osmosis System Operation
Up to 10 percent of a laboratory's water consumption can be related to the multi-step process of generating deionized (DI) purified water through reverse osmosis (RO). Water savings can be achieved by carefully regulating purified water generation rates to meet laboratory demand and making sure that systems are sized accordingly.

2.Recover Air Handler Condensate
Air conditioning units produce condensate water from the cooling coils. Many EPA laboratories are capturing this water for use as cooling tower make-up water.

3.Recycle wastewater
Reuse the wastewater from RO water purifiers for washing cars or watering your plants. You can also use this water for mopping or pre-rinse laundry. Do not drain the leftover water in water bottles. It can be used for watering plants or filling up water bowls for birds.

4. Do not use running water for cleaning food items
Avoid using running water for cleaning vegetables. Instead, soak the vegetables in a bowl of water for some time and wash it later. Do not defrost frozen foods with running water. You can keep frozen things outside overnight, for defrosting them

SRIVIDHYA

1. Turn off the water when cleaning the dishes

If you have to wash a few vessels by hand, turn off the water while you are not rinsing.

2. Rainwater harvesting
Rainwater harvesting is a very effective method of conserving natural water and replenishing the groundwater level. In this method of conservation of water, the rain water is collected and allowed to percolate into a deep pit or a reservoir, so that it seeps down and improves the ground water table.
Farmers can contribute to the water management efforts using the drip irrigation method where plants are watered with the help of narrow tubes. This water is delivered directly at the base of the plant, thus conserving water.

3. Pressure reducing valves
A pressure reducing valve basically controls the amount of pressure in a hydraulic system. These valves ensure a pre-set level of water that is to be used. In this way, downstream components used in the water system last longer and water consumption is also reduced. This is a very efficient solution for water conservation in industrial, residential, commercial and institutional buildings.

4. Watching the Quality of River Water
A solution from Ericsson and AT&T monitors water quality for the city of Atlanta, Georgia, where four million citizens get drinking water from the Chattahoochee River. IoT helps authorities check the quality of water, while sensors measure its conductivity, turbidity, temperature, and thermometry.

RAJAYALAKSHMI

1. 1. Solar Powered Water Filtration
In many places of the world, the problem isn't that there is not enough water but that the water is contaminated. In developing countries, 80 percent of sewage is discharged untreated into waterway

2. Fog Catchers
In some places, groundwater supplies have been used up and entire villages and regions have a severe water shortage including the Sidi Ifni region of Morocco.

3. Desalination - Water from the Sea
Israel is a county that is made up of 50 percent desert and has been experiencing drought conditions for many years. It is no wonder that desalination – the process that removes salt and minerals from seawater – was pioneered there.

4. The Drinkable Book
The nonprofit Water is Life in partnership with researchers at Carnegie Mellon created an education and water filtration tool in the form of a drinkable book. Every page contains basic water and sanitation advice that is printed on scientific coffee filter paper that can be used to purify water and reduce 99.9 percent of bacteria. Each book – distributed in Ghana, Kenya, Ethiopia, and Haiti – can provide clean water for four years for a single person.