NIH GREEN ZONE NEWSLETTER

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Water Conservation Initiatives at NIH

Water is widely recognized as the source of life. On planet Earth, the ever-increasing human population and the spread of industrialization places an unprecedented demand on this limited and valuable resource. Water conservation is imperative to ensure the long term availability of water. As an institution that uses billions of gallons of water each year, NIH has the opportunity, and the responsibility, to practice water conservation. In fact, Executive Order 13693 requires all federal agencies to conserve water by reducing water use. Water is used for various purposes at NIH, such as in drinking fountains, faucets and toilets, in addition to heating, cooling and much more. Listed below are a few NIH water conservation initiatives.

At the NIH Bethesda campus, the Central Utility Plant uses millions of gallons of water for its operation. Given this large water use, the Bethesda campus employs daily water monitoring. This monitoring provides a method for detecting water losses and other issues that could affect water conservation. Previously, a consistent water loss was detected in the campus' chilled water system. Based on this finding, a team was assembled to investigate the sources of potential chilled water loss. The team identified leaks and practices that could contribute to the loss, which were then amended. The results of this project created an estimated savings of 1.5 million gallons of water each month.

The NIH Animal Center (NIHAC) in Poolesville also has a major water conservation program. NIHAC uses its own wastewater treatment plant to recycle the campus' treated waste water (grey water), which is stored in tanks to be reused for industrial purposes. This activity reduces the water demand of NIHAC by 20%. The grey water usage helps NIHAC meeting its state-mandated monthly water withdrawal limit for its water-supply wells.

The NIEHS campus in Research Triangle Park (RTP) utilizes a reverse osmosis system for cooling tower water that allows for up to 70% of the water to be recycled. In addition, RTP conserves landscaping water by utilizing campus lake water for irrigation. RTP has practiced net-zero landscaping water consumption since FY 2010. The RTP campus currently has a project underway to reuse grey water from a local wastewater treatment plant and to recover air handling condensate water from neighboring campus facilities for use in the campus cooling towers. This project is expected to create an estimated water savings of 37 million gallons and a projected cost savings of $259,000 annually. The RTP campus is also in the process of replacing its vivarium cage wash system with a modern high throughput system that is projected to reduce water use by 90% and save an additional 550,000 gallons each year.

In 2004 and 2011, the NCI campus at Fort Detrick constructed two new facilities – the Vaccine Pilot Plant and the Advanced Technology Research Facility. Both facilities recover water and steam condensate to be reused in cooling towers. This practice can provide an annual water reduction of over 1.5 million gallons.

While these initiatives discuss the efforts of NIH to reduce water use, we explore how NIH staff can conserve water in this month's "Take Action" article. Please visit the NEMS website for more information on water conservation and direct any questions to Brian Kim for the Bethesda campus and Paul Johnson for the RTP campus.

TAKE ACTION

How Can You Conserve Water?

Do you want to contribute to the water conservation initiatives at NIH? Would you like to conserve water at your home? Follow these tips to do your part in reducing the amount of water you use!

LEARN MORE

EARTH DAY POSTER CONTEST

Announcing the 2018 HHS Kids' Earth Day Poster Contest!

This month we're featuring the children of NIH staff! Encourage them to demonstrate their environmental awareness by participating in the 2018 HHS Kids' Earth Day Poster Contest. Click the link below for the contest details!

LEARN MORE

NEMS TRAINING

Did you know? Although the Earth is nearly 70% water, only 2.5% is freshwater.[1] Even then, much of the freshwater is inaccessible, being trapped in glaciers and snowfields.[1] To learn more about water conservation initiatives at NIH, please visit the NEMS Training webpage to view a short (20 minute) NIH environmental awareness training video.

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