

Case Study: Water-Efficient Fixtures Reduce Water Consumption

The U.S. Railroad Retirement Board headquarters in Chicago reduced potable water use nearly 18 percent in one year by replacing 31 of the 91 toilets in the building with water-efficient units.

Until recently, RRB's building had toilets that used three gallons of water per flush. The agency needed to upgrade its fixtures to fulfill Executive Order 13514 for Federal Leadership in Environmental, Energy, and Economic Performance, which mandates that federal agencies reduce potable water use two percent annually through 2020. Using this mandate as a goal, as well as the results of a comprehensive water and energy analysis completed in 2010, RRB's facilities and acquisitions teams worked together on a focused plan that detailed the requirement for specific makes and models of toilets.



The Railroad Retirement Board is in the Lipinski Federal Building in Chicago.

A challenge for RRB was finding funds to replace the toilets. It did so by diverting discretionary funds that might have otherwise been used for maintenance activities such as repainting or replacing carpeting.

The agency initially purchased 31 auto-flush toilets. The fixtures, which use 1.28 gallons per flush, were installed one floor at a time and typically after hours to minimize the disturbance to building operations.

Key Topics

- Water conservation.
- Plumbing fixture retrofits.
- Communicating with employees.

Results

- 18 percent reduction in water used.

Facility at a Glance

- Housed in a 12-story building located on a city block in downtown Chicago.
- Primary federal tenant in a GSA owned building maintained by RRB, with businesses leasing space on the first floor.
- Small, independent agency, headquartered in Chicago with a staff of 940.
- Participant since 2011 in the FGC water and electronics categories.
- Recipient of two 2012 EPA Region 5 FGC Awards: Water and Electronics.

Federal Green Challenge

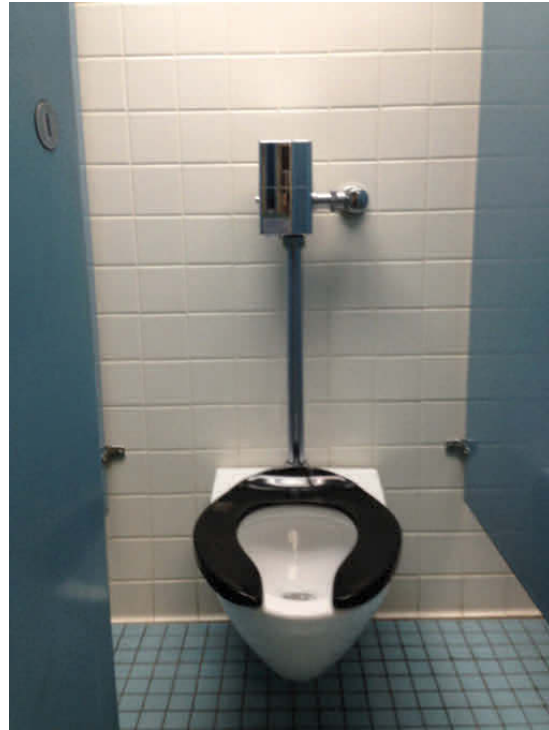


CHANGING HOW WE THINK ABOUT OUR RESOURCES FOR A BETTER TOMORROW

Water Use Reduced

RRB plans to continue replacing the remaining toilets as funding becomes available, and take the extra step of replacing the existing 1.5-gallon-per-flush urinals with the more efficient 0.5-gallon-per-flush equipment. RRB is able to track water use by reviewing water bills, which document water meter readings on each of the building's 12 floors.

Another challenge was calibrating the new auto-flush devices. The agency found that it took some time to properly calibrate them and for employees to get accustomed to them, but the facilities staff was active in communicating with employees until the new devices were fully integrated into the building. Calibrating the auto-flush devices was important to ensure no unnecessary flushes which would negate the value of the reduced gallon per flush equipment.



Railroad Retirement Board recently installed water-efficient toilets in its headquarters office building.

About the Federal Green Challenge

The Federal Green Challenge, part of EPA's Sustainable Materials Management Program, is designed to challenge federal agencies throughout the country to lead by example in reducing the federal government's environmental impact. It helps agencies meet obligations under Executive Orders 13514 and 13423.

In 2012, nearly 300 federal agencies, representing more than 500,000 employees participated in the Federal Green Challenge. Their combined efforts resulted in an estimated cost savings of more than \$31 million to U.S. taxpayers.



For More Information

RRB contact:

Sally Mui
312-751-4711
sally.mui@rrb.gov

Federal Green Challenge:

<http://epa.gov/fgc>