

Retrofitting Public Buildings for Water Conservation

Situation



Nothing is more essential to life on earth than water. Every living animal and plant requires an adequate supply of high quality water, and throughout human history there has been a clear, direct relationship between the abundance of clean water, population density, and quality of life. As New Jersey's population continues to grow and water sources are further constrained, more must be done to safeguard a sustainable water supply. It is estimated that the average New Jersey resident uses 100 gallons of water per day (gpd), a number which in some cases reaches 185 gpd during the summer months.

Even in areas where water seems abundant, water conservation is important. In addition to saving money on utility bills, water conservation helps prevent water pollution in nearby lakes, rivers, and local watersheds. Conservation can also save water utilities and the State considerable capital expenditures over the long term by delaying or even eliminating the need to develop new or expanded water supply systems and wastewater treatment plants. Today our society is concerned about running out of gasoline to power our vehicles; tomorrow we will be worried about having an adequate supply of water to sustain life. Water conservation is needed, and it is needed now.

Action

The Rutgers Cooperative Extension Water Resources Program, in partnership with the New Jersey Department of Environmental Protection (NJDEP), received a grant from the U.S. Environmental Protection Agency to develop a Water Conservation Pilot Program for New Jersey. As part of this effort, a water conservation program is being developed to help reduce municipal expenditures and capital investments including retrofits of public buildings. As demonstration projects, several public buildings will be retrofitted with water saving devices. Older inefficient toilets and urinals will be replaced along with water fountains and faucets. Additionally, smart controls will be installed on irrigation systems to better control the watering of lawn areas. Finally, cisterns will be installed to capture stormwater for non-potable uses.



Impact

The public buildings that are being retrofitted will be monitored to determine changes in water use. The overall goal of the Water Conservation Pilot Program is to reduce water use by 10% in five pilot communities: Belmar Borough, Monmouth County; East Greenwich, Gloucester County; Egg Harbor Township, Atlantic County; Livingston, Essex County; and Rahway City, Union County. The lessons learned from the pilot program will be disseminated throughout New Jersey by Rutgers Cooperative Extension and the NJDEP so other communities can follow these examples. Hopefully residents in these municipalities will incorporate many of the components from the water conservation measures taken in the public buildings and in their own homes.

