

Water Efficiency

Water quality standards were developed to comply with regulations specified in the Clean Water Act. The goal of the Clean Water Act is to restore all waters of the U.S. to their fishable and swimmable conditions. These standards define the goals for a water body by designating the appropriate use based on its current use and value. Criteria are then set to protect those uses against pollutants and toxins that may have negative effects on humans, wildlife and natural habitats.

There are four major categories of water users in the United States: domestic, power plant, agricultural, and industrial and mining users. Domestic water includes residential, commercial, industrial, and public uses withdrawn either from publicly or self supplied sources. Power plants use water during the production of energy from fossil fuels, nuclear, or geothermal sources. Agricultural applications include irrigating crops and providing water for livestock. Industrial and mining water is used to cool factories and to wash and rinse during the manufacturing process.

Excessive water use creates the need to make withdrawals from natural bodies of water. Using too much water can alter stream flow, cause saltwater to intrude in freshwater aquifers, and increase the amount of polluted runoff water that flows into natural water supplies. This runoff water can contain sediments, high levels of nutrients, salts, and other pollutants. Excessive water use can also create the need to build dams, which can contribute to nonpoint source pollution by trapping sediment and other pollutants. This affects water quality upstream and downstream.

By using water efficiently, we can prevent sewage system failures, depleted natural pollution filters, water contamination, additional construction of dams and reservoirs, construction of water and wastewater treatment facilities, and excessive surface water withdrawals. Efficient water use will also help preserve natural streams and other bodies of water as well as natural habitats and recreational areas.

<http://www.epa.gov/waterscience/standards/about/>

<http://www.epa.gov/owm/water-efficiency/index.htm>

Sports facilities use water in many ways, such as landscape and field irrigation, as well as in restrooms, kitchens and other facilities. Some of the ways sports facilities can reduce their water usage include using high-efficiency filtration systems, constructing wetlands, capturing rainwater, recycling wastewater and greywater, or treating water for nonpotable uses. This nonpotable water can then be used for landscape and field irrigation and to convey sewage. Water conserving fixtures, such as efficient bathroom sink faucets, high-efficiency toilets, urinals, showerheads, and weather or sensor based irrigation control technology, can reduce the use of both potable and nonpotable water.

Teams that have implemented water conservation include the Philadelphia Phillies, New York Mets and Washington Nationals. The Phillies have been reusing rain runoff water for landscape and field irrigation. The New York Mets will conserve millions of gallons of water a year by using metered, hands-free faucets, toilet flush-o-meters, and waterless urinals. The Washington Nationals have installed water conserving plumbing fixtures that save about 3.6 million gallons of water per year. The landscape plant materials that have been used are drought resistant and require no irrigation.

http://philadelphia.phillies.mlb.com/news/press_releases/press_release.jsp?ymd=20080430&content_id=2614303&vkey=pr_phi&fext=.jsp&c_id=phi

<http://yosemite.epa.gov/opa/admpress.nsf/d10ed0d99d826b068525735900400c2a/d87469e9e29de0238525740b004fc02c!OpenDocument>