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USE OF BIODETENTION FACILITIES FOR BIOLOGICAL IMPROVEMENT OF WATER QUALITY

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Abstract

Constructed wetlands have similar beneficial characteristics as a natural wetland and can be designed to remove pollutants from storm water run-off. By the use of bioretention facilities, the combination of proper plant selection and design and construction techniques, water quality enhancements can occur. The water quality is enhanced by emergent plants filtering sediments, uptaking and incorporating nutrients (*e.g.* nitrogen and phosphorus) into plant tissues, creating litter when they die and decay, and transferring gases between the atmosphere and sediments. Furthermore, these constructed communities provide essential habitat important for microbial components involved in nutrient cycling. Native species should be used because they are adapted to the local climate, soils, and surrounding plant and animal communities. Some emergent plants in the class Liliopsida are used in the uptake of nutrients because of their ability to grow fast and form dense colonies.