Stormwater Management

Approved by the National Energy and Environmental Policy Committee on February 19, 2004
Approved by the National Water Policy Committee on March 9, 2004
Approved by the Policy Review Committee on March 12, 2004
Adopted by the Board of Direction on May 14, 2004

Policy

The American Society of Civil Engineers (ASCE) supports and encourages coordinated local, state and regional programs to manage the quantity of and improve the quality of stormwater entering streams, lakes and estuaries.

ASCE supports stormwater management techniques that prevent and mitigate the effects of urbanization and other land use changes on surface runoff, including detention and retention methods, innovative stormwater drainage systems and other techniques needed to reduce, to the maximum extent practicable, the impact on ecosystems and stability of receiving water.

ASCE supports increased funding, the required level of control, the guidance for developing control options and strategies, the need for consideration of cost versus performance, and the flexibility afforded to the states to adapt local and regional water quality standards to reflect site specific conditions.

Issue

Failure to effectively manage stormwater runoff from urbanization and other land use changes increases downstream runoff and erosion, stream degradation, loss of and changes in aquatic habitat and water-quality deterioration. This growing problem, including jurisdiction conflicts, can be overcome by the development and implementation of practical stormwater management methods and technology consistent with the principles of sustainable development.

ASCE Policy Statement 395, Control of Combined Sewer Discharges, supports the Environmental Protection Agency's (EPA) national policy statement for combined sewer overflows which represents the consensus of states, environmental groups, municipalities and other interested parties.

Rationale

Civil engineers are typically the lead professionals involved in the design, construction, operation and maintenance of stormwater systems. The availability and the development of stormwater system evaluation and design technology can lead to improved systems that manage the quantity and quality of stormwater runoff and meet the goals to minimize its impacts on receiving waters.

ASCE has in the past developed guidelines for the design, construction and operation of urban stormwater management systems. These guidelines are contained in the joint ASCE Manual of Professional Practice Number 77 and Water Environment Federation Manual of Practice FD-20, entitled "Design and Construction of Urban Stormwater Management Systems" and the joint ASCE Manual and Report on Engineering Practice Number 87 and Water Environment Federation Manual of Practice Number 23 entitled "Urban Runoff Quality Management."

Best Management Practices for the control of storm water can enhance the built environment. These practices should be included in any design of new stormwater facilities or rehabilitation of existing facilities. They include: preventative soil erosion measures on disturbed areas, reasonable recharge of storm runoff into the groundwater where soil infiltration rates permit, adequate storage of excess stormwater to minimize impacts downstream, use of grass filter strips and other natural filter areas including wetlands to minimize pollution, adequate sizing of pipes and culverts to minimize flooding and other measures.