



## **Statement of Principles In Support of Green Infrastructure Solutions to Stormwater Pollution**

The U.S. Environmental Protection Agency (EPA) announced it intends to update the nation's stormwater regulations by November 2012. The outcome of this regulatory reform process has the potential to prevent a major and growing source of pollution in our nation's waters.

While there are many complex components to these proposed stormwater regulations, the U.S. Water Alliance endorses clear guidance and support of green infrastructure approaches that reduce runoff and manage stormwater on-site. Widespread adoption of green infrastructure can:

1. Improve the health and livability of our communities;
2. Expand employment opportunities;
3. Reduce municipal expenses; and
4. Improve the safety and security of our water resources.

In recognition of these benefits, to our communities, our waters, and our members, the U.S. Water Alliance joins with American Rivers and other organizations in endorsing the following Green Infrastructure Principles and encouraging EPA to adopt regulations which reflect these values.

### **Statement of Support:**

EPA's upcoming stormwater rule should include clear, achievable, and flexible standards and provisions that encourage the adoption and use of green infrastructure practices and help advance a broader green infrastructure strategy, combining regulatory and nonregulatory tools such as financial, technical, and research-related assistance.

We urge EPA to:

- Develop regulations based on the use of green infrastructure as an effective and feasible means of reducing stormwater pollution and sewer overflows;
- Fully measure and account for the economic and environmental benefits realized from the use of green infrastructure;
- Focus increased federal funding for green infrastructure initiatives;
- Prepare and distribute educational documents, technical resources and training materials to assist cities, wastewater treatment plants, and others in developing green infrastructure initiatives in CSO, SSO, and MS4 programs;
- Develop model provisions to incorporate green infrastructure into CSO and MS4 permits; SSO capacity, management, operations, and maintenance plans; and consent decrees and other enforcement vehicles;
- Integrate and coordinate potentially competing and conflicting policies and practices among EPA programs and offices and other federal programs;
- Embrace innovative green infrastructure strategies and practices through the use of compliance assistance and enforcement policies and mechanisms that reduce risks to permittees and practitioners; and

- Encourage that all dischargers of stormwater to reduce pollution, particularly by including green infrastructure practices in areas of new growth and urban reconstruction projects, as appropriate.

### **Background**

Many communities in the United States are looking for ways to reduce stormwater pollution of local waters and precipitation related overflows from sewer system. Over the past several years, a number of cities and utilities have recognized that water pollution and sewer overflows can be reduced effectively by directing stormwater to areas where it can be infiltrated, evapotranspired or re-used. These approaches are often referred to as “green infrastructure” because soil and vegetation are used instead of, or in addition to, pipes, pumps, storage tunnels, and other “hard infrastructure” that is traditionally used to store and treat the combined sewage and stormwater. Green infrastructure can also help to restore the natural hydrology, water quality and habitat of urban and suburban watersheds.

### **Green Infrastructure Benefits**

Green infrastructure approaches include green roofs, trees and tree boxes, rain gardens, vegetated swales, pocket wetlands, infiltration planters, vegetated median strips, reforestation, and protection and enhancement of riparian buffers and floodplains. Green infrastructure can be used almost anywhere where soil and vegetation can be worked into the urban or suburban landscape. The effectiveness of these approaches can be supplemented with other decentralized storage and infiltration approaches, such as the use of permeable pavement and rain barrels and cisterns to capture and re-use rainfall for watering plants or flushing toilets. Green infrastructure allows stormwater to be absorbed and cleansed by soil and vegetation and either re-used or allowed to flow back into groundwater or surface water resources. These approaches can diminish flows into sewer systems, reducing sewer overflows and the amount of pollution discharged to our waters.

Green infrastructure and urban forests have a number of other environmental and economic benefits in addition to reducing the volume of sewer overflows and stormwater discharges.

- ✓ *Enhanced Water Supplies* – Most green infiltration approaches involve allowing stormwater to percolate through the soil where it recharges the groundwater and the base flow for streams, thus ensuring adequate water supplies for humans and more stable aquatic ecosystems.
- ✓ *Cleaner Air* – Trees and vegetation improve air quality by filtering many airborne pollutants and can help reduce the amount of respiratory illness.
- ✓ *Reduced Urban Temperatures* – Summer city temperatures can average 10°F higher than nearby suburban temperatures. Vegetation creates shade, reduces the amount of heat absorbing materials and emits water vapor – all of which cool hot air.
- ✓ *Increased Energy Efficiency* – Green space and urban trees lower ambient temperatures when incorporated on and around buildings, and help shade and insulate buildings from wide temperature swings -- decreasing the energy needed for heating and cooling.
- ✓ *Community (Social) Benefits* – Trees and plants improve urban aesthetics and community livability in multiple ways ranging from increased property values to documented mental and physical health benefits stemming from access to trees and green space in urban areas.
- ✓ *Cost Savings* - Green infrastructure may save capital costs associated with digging tunnels and centralized stormwater ponds, operations and maintenance expenses for treatment plants, pumping stations, pipes, and other hard infrastructure; energy costs for pumping water; cost of treatment during wet weather; and costs of repairing streambank and infrastructure damage caused by high volumes of stormwater.

**This statement of principles was developed by:  
*American Rivers and the U.S. Water Alliance***