# Congress of the United States
## Washington, DC 20515

May 11, 2007

The Honorable Norm Dicks
Chairman
Subcommittee on Interior Appropriations
B-308 RHOB
Washington, D.C. 20515

The Honorable Todd Tiahrt
Ranking Member
Subcommittee on Interior Appropriations
1016 LHOB
Washington, D.C. 20515

Dear Chairman Dicks and Ranking Member Tiahrt,

Wet weather pollution is a large and rapidly growing source of pollution in U.S. rivers, lakes, and coastal waters. As a result, states and local governments will need to invest more than $140 billion over the next 20 years to upgrade sewage systems.

This is an incredible financial burden, and these communities are looking for creative and cost effective ways to reduce stormwater pollution, minimize combined sewer overflows, and ensure that there will be safe and clean water resources for the future. For this reason, we ask that you allocate some of the Environmental Protection Agency's funding in the Fiscal Year 2008 (FY 08) Interior Appropriations Bill for the implementation of green infrastructure, which EPA has recently recognized as a cost effective means of addressing water pollution and achieving other environmental, public health, economic, and community benefits as well.

Many communities recognize the benefits of using green infrastructure, water quality and habitat to urban and suburban watersheds, to control wet weather pollution at a lower cost than traditional approaches, and to restore the natural hydrology. However, existing regulations do not adequately encourage the use of these approaches and are not designed to consider the full range of benefits that they provide. For instance, federal regulators' lack of data, modeling tools, and familiarity with green infrastructure often stymie community efforts to implement these practices.

On April 19, 2007, the Environmental Protection Agency (EPA) made a significant first step to improve this situation. EPA signed an agreement (copy attached) with the Natural Resources Defense Council, the National Association of Clean Water Agencies, the Association of State and Interstate Water Pollution Control Administrators, and the Low Impact Development Center on behalf of any even broader array of supporting groups to establish a public-private partnership to promote green infrastructure approaches to control sewer overflows and stormwater pollution.

As you draft the FY08 Interior Appropriations bill, we hope that you will provide a directive to the EPA to use some of its appropriated funds to implement this partnership. This should include directing EPA to identify a full-time senior staff member to coordinate implementation of this initiative nationally, regional coordinators, and $10 million in grants for green infrastructure pilot projects.

Thank you for considering this request. We look forward to working with you to expeditiously implement this partnership, and to help our communities improve water quality in a sustainable manner. If you have any questions or would like to discuss this proposal further, please contact John Sherry with Representative Allyson Y. Schwartz at 202-225-6111 or john.sherry@mail.house.gov.

Sincerely,

ALLYSON Y. SCHWARTZ
Member of Congress

EARL BLUMENAUER
Member of Congress

WAYNE GILCHREST
Member of Congress

DAVID WU
Member of Congress

BILL PASCRELL
Member of Congress

DENNIS KUCINICH
Member of Congress

KEITH ELLISON
Member of Congress

NEIL ABERCROMBIE
Member of Congress

STEVE KAGEN
Member of Congress

ROBERT BRADY
Member of Congress

# Green Infrastructure
# Statement of Intent

U.S. Environmental Protection Agency (EPA)
and
National Association of Clean Water Agencies (NACWA)
Natural Resources Defense Council (NRDC)
Low Impact Development Center (LID)
Association of State and Interstate Water Pollution Control Administrators (ASIWPCA)

April 19, 2007

## Introduction

This Statement of Intent is entered into and between the U.S. Environmental Protection Agency (EPA) and the following organizations in recognition of the Statement of Support for Green Infrastructure (attached) and the efforts of all supporting organizations thereto: National Association of Clean Water Agencies, Washington, DC; Natural Resources Defense Council, Washington, DC; the Low Impact Development Center, Beltsville, MD; and the Association of State and Interstate Water Pollution Control Administrators, Washington, DC.

## Purpose

The purpose of this Statement is to formalize a collaborative effort among the signatory organizations in order to promote the benefits of using green infrastructure in protecting drinking water supplies and public health, mitigating overflows from combined and separate sewers and reducing stormwater pollution, and to encourage the use of green infrastructure by cities and wastewater treatment plants as a prominent component of their Combined and Separate Sewer Overflow (CSO & SSO) and municipal stormwater (MS4) programs. The Statement is intended to describe and facilitate cooperation, collaboration, coordination, and effective communication among the signatory organizations. We encourage other organizations that support green infrastructure to join us in this initiative.

## Background

Many communities in the United States are looking for ways to reduce overflows from sewer systems and stormwater discharges. Overflows occur when separate sewage and/or combined sewage and stormwater pipes overflow due to rainfall, other wet

weather events, or system deterioration. In the late 20th century, most cities that attempted to reduce sewer overflows did so by separating combined sewers, expanding treatment capacity or storage within the sewer system, or by replacing broken or decaying pipes. More recently, a number of cities and utilities have recognized that sewer overflows can also be reduced effectively by diverting stormwater from the sewer system and directing it to areas where it can be infiltrated, evapotranspirated 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 be used to reduce stormwater discharges and help to restore the natural hydrology, water quality and habitat of urban and suburban watersheds.

Green infrastructure approaches currently in use 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. Green infrastructure is most effective when 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. These approaches can be used to keep rainwater out of the sewer system so that it does not contribute to a sewer overflow and also to reduce the amount of untreated stormwater discharging to surface waters. Green infrastructure also 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.

## Objectives

The objectives of this Statement are to:

- Affirm the belief by the signatory organizations in the value of green infrastructure as both a cost effective and an environmentally preferable approach to reduce stormwater and other excess flows entering combined or separate sewer systems in combination with, or in lieu of, centralized hard infrastructure solutions;

- Establish a framework for working together to advance an understanding of green infrastructure as a tool for reducing overflows from sewer systems and stormwater discharges and to encourage and promote their wider application;

- Identify partnership opportunities between the signatory organizations; and

- Develop strategies to promote the use of green infrastructure by cities and utilities as an effective and feasible means of reducing stormwater pollution and sewer overflows such as:

- Developing models for all components of green infrastructure and make them available nationwide.

- Exploring opportunities and incentives for the use of green infrastructure provisions in MS4 permits and CSO Long Term Control Plans (LTCPs), including as a component of injunctive relief provisions of enforcement actions;

- Developing memoranda and guidance materials, including language for the NPDES permit writer's manual, that would explain how regulatory and enforcement officials should evaluate and provide appropriate credit for the use of green infrastructure in meeting Clean Water Act requirements;

- Recognizing the most effective and innovative uses of green infrastructure to meet Clean Water Act goals through EPA awards or recognition programs;

- Providing technical assistance, training, and outreach to potential users of green infrastructure, including states, cities, counties, utilities, environmental and public health agencies, engineers, architects, landscape architects, planners and nongovernmental organizations;

- Establishing a web-based green infrastructure resource center at EPA to assist communities in complying with requirements for combined sewer overflows and municipal stormwater permits and evaluating the multiple environmental benefits that green infrastructure can provide; and

- Developing tools to assist local green infrastructure programs with outreach, training, model development and application, planning and design, monitoring, and plan review.

**Recognition**: The signatory organizations intend to develop strategies to identify, encourage, and recognize innovative and effective use of green infrastructure.

**Communication**: The signatory organizations intend to communicate widely about this Statement with their constituencies and encourage them to focus increased attention to green infrastructure development.

Note: All actions that EPA may take in furtherance of this statement are subject to the availability of appropriated funds and the parties to this agreement will not submit a claim to EPA for compensation solely on the basis of this agreement. In signing this statement, none of the organizations listed above, including EPA, are obligating funds nor making any commitment to provide funding to any organization or individuals in the future. Further, EPA cannot endorse the sale or purchase of products or services developed by the participating organizations. This Statement does not create any right or benefit, substantive or procedural, enforceable by law or in equity against the other Signatory organizations or EPA, their officers or employees, or any other

person. This Statement does not apply to any person outside of the other Signatory Organizations and EPA. Nothing in this Statement of Intent creates an exception to EPA policies on competition for assistance agreements or procurement contracts.

STEPHEN L. JOHNSON
Administrator
U.S. Environmental Protection Agency

4/19/07
Date

DICK CHAMPION
National Association of Clean Water Agencies

4/19/07
Date

NANCY STONER
Natural Resources Defense Council

4/19/07
Date

NEIL WEINSTEIN
Low Impact Development Center

4/19/07
Date

DANA AUNKST
Association of State and Interstate
Water Pollution Control Administrators

4-19-07
Date

# Stakeholder Statement of Support for Green Infrastructure
(Signatories as of 4/12/07)

**Purpose**

To bring together organizations that recognize the benefits of using green infrastructure in mitigating overflows from combined and separate sewers and reducing stormwater pollution and to encourage the use of green infrastructure by cities and wastewater treatment plants as a prominent component of their Combined and Separate Sewer Overflow (CSO & SSO) and municipal stormwater (MS4) programs.

**Goals**

Green infrastructure can be both a cost effective and an environmentally preferable approach to reduce stormwater and other excess flows entering combined or separate sewer systems in combination with, or in lieu of, centralized hard infrastructure solutions. The undersigned organizations support:

- Use of green infrastructure by cities and utilities where it is an effective and feasible means of reducing stormwater pollution and sewer overflows;

- Development of models to quantify stormwater detention, retention, and filtration potential of green infrastructure to better identify opportunities to successfully use green infrastructure in CSO, SSO, MS4 and nonpoint source programs;

- Monitoring to verify the amount of CSO, SSO, and stormwater discharge reduction that cities obtain through using green infrastructure;

- Measurement of economic and environmental benefits realized from the use of green infrastructure in sewer systems and quantification of its life-cycle costs;

- Increased federal, state, and local funding for green infrastructure initiatives;

- Elimination of barriers to the incorporation of green infrastructure in stormwater and sewer system programs;

- Development and funding of a plan to identify research needs to further green infrastructure;

- Preparation of guidance documents to assist cities and wastewater treatment plants in developing green infrastructure initiatives in their CSO, SSO, and MS4 programs; and

- Development of 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.

## Background

Many communities in the United States are looking for ways to reduce overflows from sewer systems and stormwater discharges. Overflows occur when combined sewage and stormwater pipes overflow due to rainfall or other wet weather events. In the late 20th century, most cities that attempted to reduce sewer overflows did so by separating combined sewers, expanding treatment capacity or storage within the sewer system, or by replacing broken or decaying pipes. More recently, a number of cities and utilities have recognized that sewer overflows can also be reduced effectively by diverting stormwater from the sewer system and directing it to areas where it can be infiltrated, evapotranspirated 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 be used to reduce stormwater discharges and help to restore the natural hydrology, water quality and habitat of urban and suburban watersheds.

## Green Infrastructure Benefits

Green infrastructure approaches currently in use 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. Green infrastructure is most effective when 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. These approaches can be used to keep rainwater out of the sewer system so that it does not contribute to a sewer overflow and also to reduce the amount of untreated stormwater discharging to surface waters. Green infrastructure also 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.

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

- *Cleaner Water* – Vegetation and green space reduce the amount of stormwater runoff and, in combined systems, the volume of combined sewer overflows.

- *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. High temperatures are linked to higher ground

level ozone concentrations. 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 helps lower ambient temperatures and, when incorporated on and around buildings, helps shade and insulate buildings from wide temperature swings, decreasing the energy needed for heating and cooling.

- *Community Benefits* – Trees and plants improve urban aesthetics and community livability by providing recreational and wildlife areas. Studies show that property values are higher when trees and other vegetation are present.

- *Cost Savings* - Green infrastructure may save capital costs associated with digging big tunnels and centralized stormwater ponds, operations and maintenance expenses for treatment plants, pumping stations, pipes, and other hard infrastructure; energy costs for pumping water around; cost of treatment during wet weather; and costs of repairing the damage caused by stormwater and sewage pollution, such as streambank restoration.

**Supporting Organizations**

The undersigned organizations hereby endorse this *Statement of Support* and commit to its implementation.

AMERICAN INSTITUTE OF ARCHITECTS (www.aia.com)

AMERICAN PUBLIC WORKS ASSOCIATION (www.apwa.net)

AMERICAN RIVERS (www.americanrivers.org)

AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS (www.asla.org)

AMIGOS BRAVOS (www.amigosbravos.org)

ASSOCIATION OF ENVIRONMENTAL AUTHORITIES of NJ (www.aeanj.org)

ASSOCIATION OF STATE AND INTERSTATE WATER POLLUTION CONTROL ADMINISTRATORS (www.asiwpca.org)

BAY AREA CLEAN WATER AGENCIES (www.bacwa.org)

CALIFORNIA ASSOCIATION OF SANITATION AGENCIES (www.casaweb.org)

CENTER FOR NEIGHBORHOOD TECHNOLOGY (www.cnt.org)

CITIZENS CAMPAIGN FOR THE ENVIRONMENT (www.citizenscampaign.org)

CLEAN WATER ACTION (www.cleanwateraction.org)

COALITION FOR ALTERNATIVE WASTEWATER TREATMENT

THE CONSERVATION FUND (www.conservationfund.org)

ENVIRONMENTAL INTEGRITY PROJECT (www.environmentalintegrity.org)

GULF RESTORATION NETWORK (http://healthygulf.org)

HEAL THE BAY (www.healthebay.org)

HEALING OUR WATERS (www.healingourwaters.org)

HUDSON RIVERKEEPER (http://riverkeeper.org)

INTERNATIONAL SOCIETY OF ARBORICULTURE (www.isa-arbor.com)

THE LOW IMPACT DEVELOPMENT CENTER (www.lowimpactdevelopment.org)

NATIONAL ASSOCIATION OF CLEAN WATER AGENCIES (www.nacwa.org)

NATIONAL AUDUBON SOCIETY (www.audubon.org)

NATURAL RESOURCES DEFENSE COUNCIL (www.nrdc.org)

NY/NJ BAYKEEPER (www.nynjbaykeeper.org)

OREGON ASSOCIATION OF CLEAN WATER AGENCIES (www.oracwa.org)

SANTA MONICA BAYKEEPER (www.smbaykeeper.org)

SIERRA CLUB (www.sierraclub.org)

TENNESSEE CLEAN WATER NETWORK (www.tcwn.org)

WATERKEEPER ALLIANCE (www.waterkeeper.org)

WET WEATHER PARTNERSHIP (www.csop.com)