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## Federal Agency Support for the Green Infrastructure Collaborative

July 16, 2014 (Amended October 8, 2014)

Green infrastructure investments can play a unique and valuable role in building more sustainable and resilient communities. Investments in green roofs, roadside rain gardens, increased tree canopy and other forms of green infrastructure -- often referred to as low impact development, or green stormwater infrastructure -- can support the mission of a range of Federal programs. For example, roadside rain gardens and trees can improve walkability while also reducing stormwater run-off from streets. In turn such green amenities can also help attract private investments that revitalize corridors and neighborhoods. Additionally, strategic greening of land or rooftops in a community can also be instrumental in managing flooding, providing opportunities for growing food locally and improving energy efficiency. Green infrastructure can be used as an important tool for building resilience to climate change impacts such as increased heavy rainfall and heat island effect.

Given this potential of green infrastructure to support such a range of purposes, Federal agencies that support sustainable and resilient communities also support those principles that align with the Green Infrastructure Collaborative. The agencies that make up the Partnership for Sustainable Communities – U.S. Environmental Protection Agency (EPA), U.S. Department of Transportation (DOT), and U.S. Department of Housing and Urban Development (HUD) – along with U.S. Department of Agriculture (USDA), U.S. Department of Interior (DOI), U.S. Department of Defense (DOD) and U.S. Department of Energy (DOE) -- are each offering unique expertise and resources that can be harnessed to help communities plan for, design and implement green infrastructure.

### Agency Commitments

EPA is committing to:

- Providing 25 communities with assistance aimed at the creation of integrated green stormwater management and hazard mitigation plans. Ideally, such assistance would bring together key local stakeholders (water utility; city planning, environment, transportation and housing departments; economic development agency, etc.). These local coalitions could also be engaged (through mapping and other analytical tools) in a process that identifies places and projects for shared investment in green infrastructure.

- Convening a state level engagement that brings key agencies to the table around green infrastructure and hazard mitigation plans.
- Recognizing innovative green infrastructure efforts in communities around the country.
- Continuing the Campus RainWorks Challenge, a design challenge created to engage college and university students in reinventing our water infrastructure and developing innovative green infrastructure systems to reduce stormwater pollution and build resilience to climate change.
- Managing the network by facilitating ongoing information-sharing between partners, organizing activities, and continuing to seek new alliances.

DOT is committing to:

- Publicize results of adaption and resilience pilot projects upon completion of current research. The Federal Highway Administration (FHWA) has already made available the results of pilot projects in five locations, as well as its Climate Change & Extreme Weather Vulnerability Assessment Framework. In ongoing research, FHWA is partnering with States, planning organizations and Federal Land Management Agencies to pilot approaches to conduct climate change and extreme weather vulnerability assessments of transportation infrastructure and to analyze options for adapting and improving resiliency. The results of these pilot projects will enhance analysis capabilities for transportation planners and communities, and would also be useful to transportation agencies to meet the resiliency planning requirements proposed in the GROW AMERICA Act.
- Work with States to implement integrated ecosystems and transportation planning through implementation of the Eco-Logical interagency collaboration. Ecosystems planning includes water resources planning, and one example of available tools available for water resources planning is Maryland's Water Resources Registry. Ecosystem-based and landscape-scale mitigation and integrated planning can be used to make necessary infrastructure more sensitive to terrestrial and aquatic habitats, and make mitigation of unavoidable impacts more effective. Ecosystem and landscape-scale protection and mitigation can often be more effective than project-level mitigation. DOT will also publicize results of FHWA-sponsored ecosystems and stormwater best practices research.
- Coordinate with other member agencies of the Steering Committee on Federal Infrastructure Permitting and Review Process Improvement established by Executive Order 13604 and the Interagency Infrastructure Permitting Improvement Center to identify barriers to landscape-scale mitigation and provide solutions to overcome those barriers.
- Through DOT's Transportation Investment Generating Economic Recovery, or TIGER Discretionary Grant program, DOT will invest in road, rail, transit and port projects that promise to achieve critical national objectives and have a significant impact on the Nation, a region or a metropolitan area. Applicants must detail the benefits their project would deliver for five primary and two secondary long-term outcomes: safety, economic competitiveness, state of good repair, livability, environmental sustainability, innovation, and partnership; these outcomes include stormwater and resilience considerations. Applications for the 2014 TIGER funds are currently under review.

HUD is committing to:

- Sharing resources that have emerged out of our Sustainable Regional Planning Grant and Community Challenge Grant programs that have a particular emphasis on green infrastructure through a HUD-based web portal.
- Revise and issue a summary of grantee work on the topic entitled, “Green Infrastructure and Water”, and post to the Partnership and/or HUD website.
- Connect HUD regionally-based Sustainability Officers with training on green infrastructure offered by EPA and other federal agencies.

USDA is committing to:

- Forest Service will provide guidance materials to enhance current EPA water-focused green infrastructure efforts to include land use planning and land conservation to help communities, throughout the rural to urban spectrum, balance environmental and economic goals and improve sustainable land uses. Forest Service will also encourage, through technical assistance and technology transfer, strategically planned and managed networks of natural lands, working landscapes and other open spaces that conserve ecosystem values and functions and provide associated benefits to human populations.
- Forest Service will facilitate discussions with EPA on the integration and development of i-Tree Hydro to help evaluate the impact of green infrastructure in meeting Clean Water Act requirements.
- The Rural Utilities Service, a part of USDA-Rural Development, will collaborate with EPA to provide web-based training to Technical and Training Assistance Providers who serve rural America on best practices and benefits of green infrastructure.
- USDA will continue participation as one of the charter members of the Urban Waters Federal Partnership.
- USDA will collaborate on an inter-agency partnership (Local Food, Local Places) to provide targeted technical assistance to communities which are developing local food strategies on rural main streets and urban neighborhoods. Green infrastructure approaches can be encouraged for relevant projects that may emerge from these public engagements over the coming year.

DOI is committing to:

- DOI will engage with other agencies and other stakeholders to develop metrics and evaluate the performance of their \$300 million Sandy Supplemental resilience investments (including \$100 million in external grants for green infrastructure and other nature based solutions). The goal of the evaluation is to facilitate the use of proven green infrastructure approaches.
- The U.S. Fish and Wildlife Service will design and construct an Office and Visitor Center at Detroit River International Wildlife Refuge in Michigan that highlights green infrastructure. The new building will be an environmental education center for thousands of visitors from a diverse urban population constructed on an undeveloped reclaimed and restored brownfield site. The LEED Silver rated building will feature:
  - Rainwater harvesting and low-flow plumbing fixtures to reduce water use;
  - Hundreds of trees to provide wind blocking and shading;
  - A rain garden, bioswales, and pocket wetland to treat and retain stormwater; and

- Large tracts of undeveloped land to help restore the natural environmental function of the site.
- The U.S. Fish and Wildlife Service will also implement large-scale, hydrologic restoration and management at the Great Dismal Swamp National Wildlife Refuge in Virginia to improve the health of the Swamp and make lands and communities more resilient to the effects of climate change. This project will improve wetland hydrologic function in the Refuge by installing approximately 15 water control structures into an existing ditch network. Increasing the water storage of the drained forested peatlands will help to provide Refuge and community resiliency to storms, wildfires, and drought.

DOD is committing to:

- Develop and distribute guidance on how to operate and maintain green infrastructure on our military bases in the United States.
- Provide training and awareness on green infrastructure tools and implementation.
- To further increase pervious surfaces, we commit to removing site building pads for all demolition projects that are not for replacement structures.
- We will be updating the Unified Facilities Criteria on Landscape Architecture (3-201-02), to clarify guidance on green infrastructure. This update will also address our policy areas of interest to the White House, such as the President's recent memorandum on creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators, as well as sustainable development and conserving the use of potable water.

DOE is committing to:

- Implement the stormwater requirements of the Energy Independence and Security Act Section 438 across the DOE complex with site projects including: Oak Ridge National Laboratory (ORNL), Pacific Northwest National Laboratory (PNNL), the Stormwater Pollution Prevention Plan, National Renewable Energy Laboratory (NREL), Argonne National Laboratory, and the National Energy Technology Laboratory (NETL). These projects expand stormwater infrastructure by reducing storm water runoff, creating green spaces, installing pervious pavement, promoting best management practices, improvements to drainage swale, direction and filtration of runoff, rainwater harvesting systems, and other sustainable practices.
- Continue to work with stakeholders and promote best management practices, including green infrastructure, through its work on the Department's Water Energy Technology Team which recently published a Water Energy Nexus Report.
- Assist with integrating community water efficiency through DOE's Water Energy Technology Team's tools, including an examination of systems design of wastewater treatment plants and larger wastewater collection systems to reduce overall energy requirements and better collect and filtrate stormwater runoff.

On October 8, 2014 Federal leaders met with external groups to kick-off the Green Infrastructure Collaborative and the U.S. Department of Interior made additional commitments:

DOI is committing to:

- Continue working with partners through the Fish and Wildlife Service Partners for Fish & Wildlife Program and Coastal Program to implement on-the-ground restoration projects that incorporate green infrastructure principles and practices. Program projects attenuate the effects of high stormwater events through habitat restoration practices including culvert repair and replacement, stream & wetland restoration, and enhancing green corridors through tree and grassland plantings.
- Rivers, Trails and Conservation Assistance (RTCA) Program: The National Park Service's Rivers, Trails, and Conservation Assistance Program works with community groups, nonprofits, tribes, and state and local governments and other federal agencies to advance green infrastructure projects through training, technical assistance, and identifying funding opportunities.
- Everglades Tamiami Trail: The National Park Service will continue work to restore the natural sheet flow of the Everglades along the 20 mile Tamiami Trail. Canals and a land bridge constructed in the early 1900s formed a dam that limited fresh water flow across Everglades National Park. The National Park Service will continue to work with the state of Florida and other federal and private partners to restore the natural sheet flow through this multi-year, multi-million dollar project.