

Connecting CSO abatement and sustainability planning: success stories

Background

Cities like Philadelphia and Cincinnati have made headlines in recent years for their innovative approaches to complying with federal Clean Water Act consent decrees. By using green infrastructure to help abate combined sewer overflows (CSOs), cities are saving money, reducing water pollution, and achieving an array of important social benefits.

Also making national headlines are the 150+ communities around the country that received Sustainable Communities Initiative (SCI) grants in 2010 and 2011. Many of these cities and regions are doing path-breaking work to make their communities more livable, with more transportation options, greater housing equity, cleaner environments, and more resilient economies.



Sustainable Communities Initiative grantees whose home communities are currently addressing a Clean Water Act consent decree.

As part of the Sustainable Communities Learning Network supporting SCI grantees, the Environmental Finance Center Network (EFCN) wanted to learn whether any cities are connecting these two efforts – CSO abatement and sustainability planning. Both initiatives involve a great amount of effort and creative energy, and both have the potential for community transformation. Linking them presents an opportunity for even greater benefit. As the following stories illustrate, bridging these efforts allows communities to realize enormous cost savings and synergies that advance their interrelated goals of improving water quality and creating more livable communities.

Emerging success stories

EFCN interviewed two dozen SCI grantees whose home cities are currently addressing a Clean Water Act consent decree, which requires them to abate CSOs (see map, above). What follows are some of the best examples of cities that are connecting their CSO work with the goals and projects identified through their livability and smart growth planning efforts (SCI-funded and otherwise). By sharing these stories, it is our hope that communities will be inspired by and learn from one another.

City of Indianapolis, IN | 2010 Community Challenge

New development regulations developed through SCI grant funds use Green Factor Scoring to provide developers with a credit for dual-purpose landscaping / stormwater mitigation, and a stream corridor setback was also added. While these efforts are not directly related to Indianapolis's consent decree

compliance efforts, they support the overarching [RebuildIndy](#) initiative to restore deteriorating thoroughfares, residential streets, sidewalks and bridges, and other community assets.

Contact: John Neal, Senior Planner, john.neal@indy.gov, 317-327-5265

East-West Gateway Council of Governments | St Louis, MO | 2010 Regional Planning

The [Metropolitan Sewer District \(MSD\)](#), which serves St Louis city and county, is in the midst of a major infrastructure project to eliminate CSOs. Of \$3-5 billion budgeted, about \$100 million is dedicated to green infrastructure. MSD and [East-West Gateway COG](#) have taken advantage of opportunities for collaboration: MSD participated in East-West Gateway's SCI regional planning

project [OneSTL](#), and David Wilson, environmental and community planner with East-West Gateway, serves on MSD's Project Clear Community advisory group.

As part of the OneSTL project, East-West Gateway developed a toolkit of sustainable solutions for local governments, which includes a number of green infrastructure strategies. OneSTL has also catalyzed several green infrastructure demonstration projects that, while not explicitly tied to the consent decree, are achieving water quality wins by incentivizing homeowners – and to a lesser extent government entities and businesses – to install green infrastructure on their properties.

Contact: David Wilson, Environmental and Community Planner, david.wilson@ewgateway.org, 314-421-4220

[Evansville Metropolitan Planning Organization | Evansville, IN | 2010 Regional Planning](#)

Evansville MPO led a collaborative effort to develop a [regional plan for sustainable development](#) covering Henderson, Vanderburgh, and Warrick Counties, which incorporates green infrastructure into new and redevelopment projects. Evansville MPO is also working with the Evansville Water & Sewer Utility to incorporate green infrastructure elements into their consent decree plan, which is currently being developed.

Contact: Vishu Lingala, Transportation Planner, vlingala@evansvillempo.com, 812-436-7836

[Memphis and Shelby County Government Office of Sustainability | Memphis, TN | 2011 Regional Planning](#)

Green infrastructure is the organizing principle behind Shelby County's [regional plan for sustainable development](#). The plan not only calls for an expanded network of trails and green spaces throughout the region; it also seeks to incorporate green infrastructure and low-impact development features wherever possible, to help manage stormwater and improve water quality in the region's streams. Memphis' CSO consent decree is a big driver for the city's emerging green infrastructure program, which is in the early stages of development. Memphis and Shelby County are beginning to refine their financing and implementation strategies in order to achieve their water management and sustainability goals.

Contact: John Zeanah, Office of Sustainability Director, john.zeanah@memphistn.gov, 901-576-7167

[Mid-America Regional Council | Kansas City, MO | 2010 Regional Planning](#)

Mid-America Regional Council (MARC) is thinking progressively about how to institutionalize good integrated planning that both creates livable places and achieves Kansas City's water management goals. In particular, MARC is making available to communities in their region a newly-developed natural resources inventory, a GIS-based land cover dataset that enables data-driven planning at local and regional scale for green infrastructure, watershed management, land use and transportation. In addition, MARC is building their internal capacity to do scenario-based land use planning using Envision Tomorrow+, which they anticipate could be deployed to support sustainable redevelopment in the areas subject to consent decrees. As Tom Jacobs, director of environmental programs at MARC, put it, "While the consent decrees focus on clean water, if water infrastructure investments could catalyze broader sustainability-focused community revitalization, there might be multiple wins to be achieved, among them substantially increased community support for the overall program."

Contact: Tom Jacobs, Director of Environmental Programs, tjacobs@marc.org, 816-701-8352

[Montachusett Regional Planning Commission | Fitchburg, MA | 2011 Community Challenge](#)

Montachusett RPC received an SCI grant to conduct a comprehensive study of the area surrounding a new transit station to be built along the [Wachusett Extension](#) light rail (a project funded by a TIGER grant). Fitchburg, where the new station will be located, is under a CSO consent decree. Montachusett RPC worked with the city's Conservation Commission to design a parking lot at the station that will capture 100% of rainfall through swales and other green infrastructure practices. This allows Fitchburg to accommodate the new station and comply with its CSO abatement plan.

Contact: John Hume, Planning & Development Director, jhume@mrpc.org, 978-345-7376

[Northeast Ohio Areawide Coordinating Agency | Cleveland, OH | 2010 Regional Planning](#)

Cleveland is a national leader in using green infrastructure to improve water quality and provide other community benefits such as new public park lands. [Northeast Ohio Regional Sewer District](#) is in the process of spending \$100 million to eliminate at least 44 million gallons of overflows with green

infrastructure techniques in environmental justice neighborhoods. These projects – which include a bioretention basin in a public park and a new urban agricultural zone – are helping revitalize a 26-acre portion of the city. Cleveland has worked closely with EPA to determine how green infrastructure investments like these can count toward the city's CSO remediation requirements.

Contact: Hunter Morrison, [Vibrant NEO 2040](#) Director, hmorrison@neoscc.org, 216-241-2414

Pioneer Valley Planning Commission | Springfield, MA | 2010 Regional Planning

As part of its HUD-funded Sustainable Knowledge Corridor regional planning project (lead grantee: Capitol Regional Council of Governments), [Pioneer Valley Planning Commission](#) developed a Regional Brownfields Plan, which uses an existing inventory of brownfields and contaminated sites to consider site clustering, land use history, and environmental justice factors to identify neighborhoods where the Commission will focus brownfields assessment and cleanup resources.

In a related effort, the City of Chicopee (located in the heart of the Pioneer Valley) has eliminated 10 CSOs over the past two decades and abated all dry weather overflows. Chicopee is a member of the Connecticut River Cleanup Committee (CRCC), a consortium of five municipalities in the region working together to abate CSOs. Chicopee recently developed a brownfields areawide plan for its West End neighborhood, an area of the city with a strong industrial presence. Background on the planning process can be found [here](#), and planning documents can be found [here](#). Chicopee's experience was showcased during EPA's recent webinar [Brownfields Area-Wide Planning Grants: Opportunities to Align and Leverage Partnership Investments](#).

Contact: Andrew Lowe, Senior Planner, aloew@pvpc.org, 413-781-6045

Southeast Michigan Council of Governments | Detroit, MI | 2010 Regional Planning

[Detroit Water and Sewer District](#) is investing \$3 million per year for green infrastructure components of their CSO separation project, after renegotiating the contract with the state. By incorporating green infrastructure as an integral component of the CSO remediation project's design, they are saving more than \$500 million overall. [Southeast Michigan COG](#) helped the Water and Sewer District secure additional grant funding for tree plantings. In a related effort, SEMCOG commissioned a major green cover analysis as part of their SCI regional planning grant; this is helping them articulate a cohesive vision for green infrastructure in the region.

Contact: Jody Egelton, Finance Manager, egelton@semcog.org, 313-324-3423

Upper Valley Lake Sunapee Regional Planning Commission | Lebanon, NH | 2010 Community Challenge

[Upper Valley Lake Sunapee RPC](#) has played an important role in coordinating Lebanon's CSO abatement program (which has been ongoing for quite some time) with state-level transportation planning. By bringing together the city and the state, the RPC has helped align construction schedules so that roadway repairs can be conducted simultaneously with CSO construction. This has resulted in efficiencies and millions of dollars of savings and has been very well received by both the city and NH DOT.

Contact: Nate Miller, Executive Director, nmiller@uvlsrc.org, 603-448-1680

Resources

In this ground-breaking work of bridging water management goals and sustainability planning, cities may find that their best resources for inspiration and ideas are *other cities*, and we hope SCI grantees will use the above contact information to reach out to one another. In addition, below are links to several reports, webinar recordings, and other resources containing information about taking a green infrastructure approach to CSO abatement as well as about the ways smart growth can help protect water resources.

[A Triple Bottom Line Assessment of Traditional and Green Infrastructure Options for Controlling CSO Events in Philadelphia's Watersheds.](#) Stratus Consulting. 2009. Presents a triple bottom line (TBL) study commissioned by the Philadelphia Water Department to help analyze options for controlling combined sewer overflows (CSOs). The options include combinations of traditional infrastructure and green infrastructure approaches. A key finding is that green infrastructure approaches provide a wide array of important environmental and social benefits to the community that are not typically provided by traditional infrastructure approaches.

Enhancing Sustainable Communities with Green Infrastructure. US EPA. 2014. This guide is designed to help community leaders and stakeholders incorporate green infrastructure strategies into transformative plans for their communities. By highlighting strategies that help manage stormwater while also achieving other environmental, public health, social, and economic benefits, the guide provides a framework for communities to make the most of their limited investments.

EPA's Healthy Watersheds Program Promotes Planning for Green Infrastructure at the Landscape Scale – A Case Study for New York. US EPA. 2014. Webinar introduced a landscape scale approach toward green infrastructure planning, highlighting New York State's new green infrastructure planning guide. Webinar slides, transcript and recording available.

Growing Toward More Efficient Water Use: Linking Development, Infrastructure, and Drinking Water Policies. US EPA. 2006. Focuses on the relationships among development patterns, water use, and the cost of water delivery, and includes policy options for states, localities, and utilities that directly reduce the cost and demand for water while indirectly promoting smarter growth.

Implementing Green Infrastructure Under Enforcement Orders. US EPA. During this webinar, representatives from the Northeast Ohio Regional Sewer District and Kansas City Water Services presented case studies on integrating green infrastructure into EPA enforcement agreements in order to meet regulatory requirements, better manage CSOs and stormwater runoff, and meet other community goals. Webinar slides and transcript available.

Kentucky Wet Growth Tools For Sustainable Development: A Handbook on Land Use and Water for Kentucky Communities. Environmental Finance Center, University of Louisville. 2009. Provides a variety of tools for cities, counties, watershed groups, and other interested members of the public to manage or control growth and development for water resource protection.

Maryland Clean Water State Revolving Fund Sustainable Communities Pilot Project Report. US EPA. 2012. Describes how EPA worked with Maryland's Clean Water State Revolving Fund program to consider ways to focus public wastewater infrastructure resources in existing communities and infrastructure systems to leverage past investments and support sustainable communities.

More Bang for the Buck: Integrating Green Infrastructure into Existing Public Works Projects. US EPA. This webinar featured presentations from the City of Lancaster PA and Onondaga County NY on lessons learned from integrating green infrastructure into "business as usual" city, state, and regional public works projects. Webinar slides and transcript available.

Opportunities to Advance Sustainability in California's Clean Water State Revolving Fund Program. US EPA. 2012. Describes a pilot project to help California direct Clean Water SRF resources to projects that support sustainable communities.

Protecting Water Resources with Higher-Density Development. US EPA. 2006. Helps communities better understand the impacts of higher and lower density development on water resources. Findings indicate that low-density development may not always be the preferred strategy for protecting water.

Protecting Water Resources with Smart Growth. US EPA. 2004. Suggests 75 policies that communities can use to grow in the way that they want while protecting their water quality. Intended for audiences already familiar with smart growth concepts who seek specific ideas on how techniques for smarter growth can be used to protect water resources.

Smart Growth for Clean Water: Helping Communities Address the Water Quality Impacts of Sprawl. NALGEP. 2003. Offers five strategies to improve water quality: land conservation, waterfront brownfields revitalization, urban and community forestry, low impact development, and watershed management. Profiles several local partnerships that have successfully used these approaches.

Using Smart Growth Techniques as Stormwater Best Management Practices. US EPA. 2005. Reviews nine common smart growth techniques and examines how they can be used to prevent or manage stormwater runoff.

Water Quality Scorecard: Incorporating Green Infrastructure Practices at the Municipal, Neighborhood, and Site Scale. US EPA. 2009. A program evaluation tool that local governments can use to collaboratively identify the barriers to green infrastructure in local codes and ordinances. The scorecard guides municipal staff through 230 policies, codes, and incentives that could be adapted to promote sustainable stormwater management. Also provides extensive references and case studies.