

Brownfield Coalition of the Northeast (BCONE)
Northeast Sustainable Communities Workshop
Alexander Hamilton US Custom House
April 15, 2015
Presentation Write-up

Breakout 2C – Building Resilient Communities: The (Un)intended Consequences of Water Quality Actions on Resiliency

Moderator: Colleen Kokas, Water Resources Direction, NJDEP

Panelists: Khris Dodson, Associate Director, Environmental Finance Center, Syracuse; Adam Zellner, President, Greener by Design

Audience: 10

Note Taker: Lucinda Bryant, EWMA

- I. **Colleen Kokas:** Long-term control plans and Combined Sewer Outfalls (CSO) Communities—Explore how requirements of the Clean Water Act's requirement to address CSO can pull double-duty in terms of improving water quality, spurring economic growth and creating sustainable communities.
 - a. CSO is the meeting of waste water and storm water into an outfall that is not treated. There are 217 CSO in New Jersey, 937 in New York, and 1500 in Pennsylvania
 - b. The federal Clean Water Act requires states to reduce and eventually eliminate CSO
 - c. New Jersey approach is through permitting that requires a long term control plan to meet the federal objective of reducing and eliminating CSO. The new CSO permit issued in March of this year and become effective July 1, 2015. NJDEP is creating teams within the department with the water quality, monitoring & standards, enforcement and coordination programs to assist permittees and municipalities in developing acceptable long term control plans. There are nine parts of long term control plans that need to be addressed in the permit application including:
 - i. Characterization, Monitoring & Modeling
 - ii. Public Participation
 - iii. Consideration of Sensitive Areas
 - iv. Evaluation of CSO Control Alternatives
 - v. Cost/Performance Considerations
 - vi. Operational Plan
 - vii. Maximization of Treatment At POTW
 - viii. Implementation Schedule
 - ix. Post Construction Compliance Monitoring
 - d. NJDEP emphasizing advantage of reducing and eliminating CSO to the public. It costs municipalities a great deal of money to build and operate a treatment plant. Municipalities are looking at the development impacts on water quality because water issues are a concern in economic growth of the community.

- II. **Khris Dodson:** Full life cycle costs (and benefits) of green infrastructure for stormwater management. Doing a cost-benefit analysis seems like the job of an economist. But, when managing millions of dollars of wastewater and stormwater assets comparing costs and benefits of alternative management solutions is important. Maintaining the status quo can actually be a higher cost alternative!
 - a. EPA has created ten Environmental Finance Centers located in each EPA region to work with communities. They provide managerial and financial expertise to promote sustainable management of environmental infrastructure including planning, cost avoidance, grants and loans.
 - b. Case Study: City of Syracuse
 - i. History: Onodaga Lake abuts Syracuse and provided water, fish, and recreation for many years. Unfortunately, pollution of the lake from the growing city and industries reduced its use as a resort. Swimming was banned in 1940 and fishing was banned in 1970. Because of mercury contamination, the lakes' bottom was listed as a Superfund site in 1994. Unregulated sewage outflow added to the problem. The state initiated a national resources damages claim in 1989. A Consent Judgment was reached settling litigation in connection with alleged violations of state and federal water pollution control laws. Some progress was made under the original Consent Judgment, then in 1998 an Amended Consent judgment was approved and improvements to reduce the combined

sewer system were advanced. A new approach occurred in 2008 and green infrastructure solutions were put into place in 2009.

- ii. Solution: The County planned to build four regional treatment centers for a cost of nearly \$300,000,000. In comparison a green infrastructure alternative plan which would capture 95% of the stormwater water cost about \$125,000,000. The first step was to build public acceptance by outlining the advantage of the green approach. Publicity of the plan included pointing out the ancillary benefits despite a 25% rate increase when comparing future operation and maintenance (O&M) of traditional treatment plant versus green O&M. The new storm water infrastructure created jobs, controlled flooding, recovered Onodaga Lake for recreation and fishing, increased public health and quality of life. Additionally a youth component was built in for job skill training “at risk” youth to create and maintain the systems. Funding came from collaborating across departments, private, and public sources. Today the lake is once again an asset for the community.

- III. **Adam Zellner:** Water Consideration in Green Design. Explore the uses of water in high performance development as an economic driver for a project.
 - a. A new emphasis for developers is Environmental Asset Management which determines the cost of building operations. Things to consider as part of the “go forward cost analysis” include:
 - i. Dealing with waste water and storm water up front
 - ii. Compliance requirements of a stormwater plan
 - iii. Energy master plan
 - iv. Solar, wind, and hydro power, e.g., solar cover on a reservoir provides two benefits 1. solar power and 2. reduced evaporation
 - v. Micro-grids to reduce impact of power outages
 - vi. Sound testing of underground pipe conditions and future repair costs. Sound testing is recommended for perforated pipes which are hard to recognize and this provides 3D map.
 - b. Funding comes from public and private partnership which improves the economic development of the community.
 - c. Reactive development can cost five times as much as proactive development.