

New Factors for Management of Urban Water Systems

We have a 19th-century technology that was designed to address a 20th-century problem, and now we're facing a series of 21st-century challenges.

Urban water systems were designed at a time of low population, unlimited energy, and a lack of complete understanding of the public health and environmental consequences.

-- *David Sedlak, professor of civil and environmental engineering, U-California, Berkeley*

The public utilities that supply water, process wastewater, and manage stormwater face a new set of concerns—climate preparedness, new goals for sustainability, GHG reduction, energy costs, urban economic development, mounting demands from stakeholders, and more. And they are not well prepared to handle these emerging issues. A year-long learning process involving sustainability directors in 14 cities focused on four of these new management factors: adaptation, emerging performance standards for sustainability, the “energy-water nexus,” and the water-based urban economic development in the form of corporate location decisions and the development of water-technology business clusters. The process resulted in a set of reports and a final summary report prepared by the Innovation Network for Communities (INC) and was featured in a USDN monthly topic seminar in August 2014. INC summarizes key advice to sustainability directors below:

Sustainability Directors should recognize that urban water systems are increasingly integral to cities' sustainability goals. They:

- Impact carbon mitigation efforts (system energy use)
- Impact community climate resilience (infrastructure and system performance)
- Impact cities' economic development (business and population growth)
- Face new management challenges that affect performance, costs, and rates

Sustainability Directors can seek to influence their cities' water systems to:

- Recognize the drivers changing the landscape of water system management
- Adopt measurable sustainability goals for water systems and implement them
- Regularly analyze and publicize the performance of water systems (i.e., use a scorecard)
- Identify and undertake best practices for adaptation planning and sustainable development

Read the full summary report ([PPT](#)).