A narrative method for analyzing transitions in urban water management: The case of the Miami-Dade Water and Sewer Department

Jan 28, 2017

Author:
Galen Truer, Elizabeth Koebele, Aaron Deslatte, Kathleen Ernst, Margaret Garcia, and Kim Manago

Abstract

Although the water management sector is often characterized as resistant to risk and change, urban areas across the United States are increasingly interested in creating opportunities to transition toward more sustainable water management practices. These transitions are complex and difficult to predict – the product of water managers acting in response to numerous biophysical, regulatory, political, and financial factors within institutional constraints. Gaining a better understanding of how these transitions occur is crucial for continuing to improve water management. This paper presents a replicable methodology for analyzing how urban water utilities transition toward sustainability. The method combines standardized quantitative measures of variables that influence transitions with contextual qualitative information about a utility's unique decision making context to produce structured, data-driven narratives. Data-narratives document the broader context, the utility's pretransition history, key events during an accelerated period of change, and the consequences of transition. Eventually, these narratives should be compared across cases to develop empirically-testable hypotheses about the drivers of and barriers to utility-level urban water management transition. The methodology is illustrated through the case of the Miami-Dade Water and Sewer Department (WASD) in Miami-Dade County, Florida, and its transition toward more sustainable water management in the 2000s, during which per capita water use declined, conservation measures were enacted, water rates increased, and climate adaptive planning became the new norm.

Read the full article in Water Resources Research. [1]

Associated Project:
Water: Miami, Vegas, LA. [2]

DOI for citing:
DOI: 10.1002/2016WR019658

Source URL:

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