SUSTAINING SCIOTO PLANNING STUDY
COLUMBUS, OHIO

Background

In 2011, the Mid-Ohio Regional Planning Commission (MORPC), along with the U.S. Geological Survey (USGS), the City of Columbus, Del-Co Water Company, Inc., Brown and Caldwell, and the Ohio Water Development Authority (OWDA) began a multi-year and multi-phase water resource adaptive management plan study titled "Sustaining Scioto." The Sustaining Scioto study area focused on the water resources available within the Upper Scioto Basin and Scioto River in Central Ohio, covering an area of eight counties that provides drinking water to roughly 2 million people for a total of over 169.8 million gallons of surface water per day (MGD).

Challenges

Development of Sustaining Scioto was prompted by record-setting droughts and precipitation levels in Central Ohio between 2011 and 2013. Plan developers identified and grouped areas of concern into two categories: temperature-related challenges and extreme weather-related challenges. These challenges also include potential population growth in the region, which could raise the demand for surface water to over 358.6 MGD.

Plan developers were concerned with the effects of rising temperatures and increased risk of drought on surface water supplies, exacerbated by "increased water demand, lower water quality, increased waterborne and heat related illnesses, [and] increased energy cost." Extreme weather may similarly lead to impacts on water sector utility operations and service provision, including "damage to infrastructure, loss of power, increased burden on economy to repair damages, [and] highly variable and overall lower water quality."

Planning Process

The scope of Sustaining Scioto and size of the river basin in general requires cooperation and communication across multiple entities in a variety of service sectors, nine in total, ranging from traditional water sector utilities to public health officials and agricultural producers. The potential impacts of temperature-related and extreme weather-related events were assessed for severity on each sector, helping prioritize action and resilience strategies while also selecting "no regrets" measures that benefit the sector regardless of whether such events occur. Moving forward, regional collaboration will be key to implement the Sustaining Scioto Adaptive Management Plan as effectively as possible.

Resilience Strategies and Priorities

The Sustaining Scioto Adaptive Management Plan divides potential resilience measures into three categories, prioritized by time frame and urgency – one with actions for the short-term 2015-2025 range; one for the mid-term 2026-2045 range; and a final category for the 2046-2090 range. Examples of the resilience measures in each category are shared in the table below. The Plan calls for additional monitoring and analysis of the watershed and water use patters to better understand how extreme events and population change are affecting water resources in the basin, raising the potential for additional or modified resilience measures in the mid- and long-term as understanding evolves.

TYPE	RESILIENCE STRATEGIES
Short-term strategies	Establish regional collaborative forum
	Expand emergency preparedness capacities
	Enhance operational procedures
	Conduct nutrient/pollution reduction planning
	Assess flooding vulnerabilities for critical infrastructure
	Implement non-structural best management practices and resource protection
Mid-term strategies	Conduct water supply planning and groundwater supply planning
	Conduct water reuse planning
	Conduct reservoir capacity planning
	Implement nutrient/pollutant reduction
Long-term strategies	Reevaluate effects of extreme events and population change
	Refine long-term resilience strategies

Contact Information

For more information regarding Sustaining Scioto resilience planning, contact Amelia Costanzo, Planning Manager, Mid-Ohio Regional Planning Commission, at acostanzo@morpc.org.

Case Study Citation Information

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