



SUSTAINING SCIOTO

Ensuring that Central Ohio has clean and secure water resources for current and future residents, today and tomorrow.



Climate models predict Ohio will experience temperature increases and greater weather variability. Overall temperature in Ohio has steadily increased across all seasons, and more extreme storms and droughts in Ohio are predicted in the long-term.

WEATHER is a specific event or condition that happens over a short period of time, such as a thunderstorm or daily temperature.

CLIMATE is the average weather conditions in a place over a long period of time.

So even though weather may not seem consistently more severe, Ohio's temperatures are rising and weather patterns are becoming increasingly more variable...

Increasing air temperatures.

Warmer air holds more water.

Increasing variability in amounts and intensity of precipitation.

Extreme weather events.

This will change the amount and quality of water we have available for our communities.

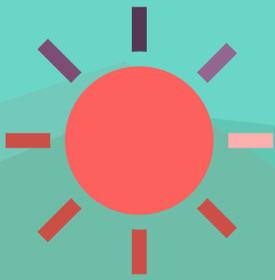
ABOUT THIS STUDY

The Upper Scioto Basin provides drinking water for close to 2 million people.

Surface water from the Scioto River and its tributaries provide almost 85% of the region's water supplies.

This study was conducted to proactively identify risks to the region's water resources due to climate change. The project brings together technical data, climate modeling and stakeholder input. The end result will be an adaptive management plan to respond to impacts resulting from climate change.

The study uses United States Geological Survey watershed modeling to assess the impacts of changing weather patterns and regional development on water resources within the Upper Scioto watershed. Vulnerabilities to water resources, public health, the economy and other sectors within the region were identified and prioritized. Adaptive strategies were developed to address these vulnerabilities both now and in the future.



INCREASE IN TEMPERATURES AND HEAT WAVES

- Reduced water volumes coupled with increased water demand
- Lower water quality
- Increased waterborne and heat-related illnesses and deaths
- Increased energy costs

INCREASE IN EXTREME STORMS/WEATHER

- Damage to infrastructure or infrastructure failure
- Loss of power
- Increased burden on economy to repair the damage
- Lower water quality



ADAPTIVE MANAGEMENT STRATEGIES

If the past can no longer be relied upon to predict the future, municipalities need to also consider system function with more extreme droughts and storms. Developing infrastructure is expensive and takes time, so planning now is important!

The basic approach to adaptive management includes understanding and prioritizing risks, developing strategies to reduce risks, implementing strategies, and reevaluating strategies as more information becomes available.

SHORT TERM 2015 - 2025

Conditions similar to today

MID TERM 2026 - 2045

Slightly increased annual average temperature but higher seasonal temperatures; more variability in stream flow and precipitation

LONG TERM 2046 - 2090

Increased temperature; more variability in stream flow; Update plans on actual climate conditions

Regional Collaborative Forum
Focus on Public Education
Expand Emergency Preparedness Capacities
Enhance Operational Procedures
Implement Resource Protection

Water Supply Planning
Groundwater Supply Planning
Water Reuse Planning
Reservoir Capacity Planning
Nutrient/Pollutant Reduction Planning
Re-evaluate Climate Conditions

Re-evaluate Climate Conditions
Refine Long Term Adaptive Strategies