American Society of Adaptation Professionals

Institute for Sustainable Communities

American Society of Adaptation Professionals
PRIZE FOR PROGRESS
2017

LEAD ORGANIZATION
Huron River Watershed Council

STATE
Michigan

TYPE OF ADAPTATION
Watershed

SNAPSHOT

Climate Resilient Communities Project

IMPACT AREAS

Built Environment, Built Infrastructure, Water, Natural Resources, Engagement, Stormwater Management

Challenges

In southeast Michigan's Huron River Watershed, seasonal rain and snowfall patterns have become erratic and unreliable. Fluctuations in water resources—from low supply in dry conditions to significant flooding in wet conditions—threaten natural areas, wildlife, and property in the region. Natural and built infrastructure are vulnerable to more dramatic cycles of drought and deluge, and the people that manage these systems are unfamiliar with the ways the climate is expected to change and the strategies needed to curb the resulting damage.

CHALLENGES

Stakeholders lacked tools to assess precipitation changes or implement resilience measures.

CHALLENGES

The built and natural water systems could not accommodate climatic changes.

Solutions

The Huron River Watershed Council brought together local government staff, elected officials, natural resource managers, and climate experts to increase capacity, set goals, and build resilience in the Huron River Watershed's natural and built systems. The Climate Resilient Communities Project paired climate scientists with resource managers in three sectors: water infrastructure, in-stream flows, and natural infrastructure. Practitioners and climate scientists engaged in sustained dialogue to build a greater understanding of how climate change will impact each sector, laying the foundation for co-production of products supporting the implementation of high-priority climate adaptation strategies. The result was a cadre of climate-informed decision-makers, tools to implement adaptation strategies, and a framework for risk-reduction efforts in other regions.

SOLUTIONS

Revised stormwater rules require updated precipitation data and on-site infiltration.

SOLUTIONS

Flow management recommendations help mitigate climate change impacts.

SOLUTIONS

Updated street tree lists include trees that will favor future climate conditions.

Results

Water Infrastructure

The water infrastructure team improved the accuracy of the rainfall data used to make stormwater management decisions and produced a handbook for practitioners on incorporating climate change into stormwater management. Promoted by local governments, this handbook informed updates to stormwater management requirements for new developments. The new rules increase onsite infiltration and require the use of new planning baselines with rainfall volumes that reflect the storms of today, rather than the storms of the past. One county has adopted the new requirements and several others are in the process of following suit.

In-Stream Flows

The many dams along the Huron River were operated independently with limited communication among operators, making communities along the river—and the river system itself—more vulnerable to catastrophic events. The Huron River Dams Network was formed to facilitate communication and develop a holistic understanding of the Huron River. The network coordinates flow management, is prepared to respond in times of crisis, and is making progress on watershed scale issues, such as access to flow data and conflict among various water users.

Natural Infrastructure

The natural infrastructure team created a guide—*Primer on Climate Impacts and Resiliency Strategies to Tree Species of the Huron River Watershed*—outlining climate effects on watershed vegetation. The guide was accompanied by a training presentation for natural resource managers to educate community members about the regional effects of climate change and risk mitigation. Regional leaders utilized these products to develop urban forestry planting recommendations, land protection plans, and natural area monitoring protocols.

Upcoming Projects

The Huron River Watershed Council conducted two post-project surveys to measure the project's impact on watershed conditions and community engagement. The surveys identified a continuing need for up-to-date climate data and predictive data, as well as a continued desire to advance adaptation strategies across sectors and throughout nearby communities.

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