Iowa City, Iowa Closes Vulnerable Wastewater Facility

Iowa City, IA was among the hardest hit communities from the 2008 Iowa River floods. Extensive flooding along the riverfront, including inundation of a major wastewater treatment plant located along the river, prompted the community to take action. Rather than restoring the vulnerable North Wastewater Treatment Plant, Iowa City decided to decommission the plant and expand service at a facility located outside the floodplain (average daily treatment of 9.7 million gallons with a design capacity of 24.2 million gallons per day). Although it did not quantify future climate risks explicitly, Iowa City consciously sought means to reduce the vulnerability of its wastewater services to future extreme storm events – which are projected to increase in the Midwest according to the 2014 National Climate Assessment.

Illustration of the riverfront restoration after removal of wastewater facility.

The process to decommission, demolish, and expand wastewater treatment services elsewhere is projected to cost $63 million. By decommissioning the vulnerable wastewater treatment plant and converting the surrounding area into a public greenspace, the city adapts to reduce the threat and impact of future extreme storm events.

How did they do it?

Applicable EPA Tools

Iowa City identified a long-standing vulnerability and adaptation opportunity

- Iowa City Public Works identified its wastewater treatment facilities as vulnerable to future extreme storm events.
- The city asked for EPA technical assistance to develop an overarching Riverfront Master Plan, including a Treatment Plant Restoration Plan.

Use the EPA Climate Resilience Evaluation and Awareness Tool (CREAT) to identify current and future flooding vulnerability.

EPA's CREAT Tool

Iowa City reduced current and future vulnerability

- The city consolidated wastewater treatment service in a low-risk area outside of the floodplain at a cost of $63 million and decommissioned a vulnerable facility thereby reducing future flood risk and the potential for untreated sewage releases.
- By adopting an approach that utilized both gray and green infrastructure, the city yields multiple benefits through a less vulnerable wastewater services, improved stormwater management and creation of a new public space for recreational opportunities.

Use the Adaptations Strategy Guide and the Flooding Resilience Guide to identify adaptation options for flooding concerns.

EPA's Adaptation Strategies Guide
Flooding Resilience Guide

Iowa City secured outside funding

- This project was partially federally funded -- $22 million from the Economic Development Administration and $13 million from Community Development Block Grants (CDBG) Supplemental Disaster Funds.

See how EPA is supporting climate-resilient investments in communities across the country by considering future climate changes in funding mechanisms.

Integrating Climate Adaptation into Financial Mechanisms

Similar Cases and More Information

Iowa City, IA decided to move their facility away from danger. See how Iowa City plans to manage stormwater along the riverfront using green infrastructure and smart growth. To see how a small community utilized EPA tools to determine vulnerability to flooding, view Manchester-by-the-Sea.

- Smart Growth Along the Riverfront Helps Manage Stormwater in Iowa City, Iowa
- Manchester-by-the-Sea, Massachusetts Assesses Climate Vulnerability