

Overflow Action Days

Background Information and Key Facts and Figures

Stormwater and CSOs negatively impact the Chicago River system throughout the year. On occasion, sewage is released through the locks into Lake Michigan. The current patterns and projections for climate change make the *Overflow Action Days* initiative even more urgent. We cannot solve flooding and CSOs without individuals playing a role and simply conserving water at home.

Currently, TARP can store 10.55 billion gallons of stormwater in its 109 miles of tunnels and two functioning reservoirs. Unfortunately, available data shows that extreme rain events are steadily increasing throughout the Midwest. Scientists agree that climate change is the culprit.

What About Climate Change?

Climate change is making it harder to manage stormwater and prevent CSOs in the Chicago metropolitan area. Heavy isolated rains and 100-year storms now occur every couple of years and can overwhelm the system.

- A number of Chicago metropolitan area precipitation records have been broken in the last three years, leading to widespread flooding, property damage, massive amounts of CSOs, and even a state of emergency:
 - June 2015: Early June saw record breaking precipitation and, on June 15, a Chicago weather station recorded 2.56 inches of rain. This massive multi-day rain event caused flash flooding and sewage overflows at nearly every point on the Chicago River.
 - April 18, 2013: Government officials declared a state of emergency after the second-rainiest April day in Illinois history, 3.53 inches. The two-day total of 5.53 inches of rainfall is about the amount that typically falls over a two month period.
- Climatologists label rain events based on their probability:
 - A 100-year rain event has a probability of occurring once every 100 years – or 1% chance of occurring in a year. Similarly, a ten-year rain event has a probability of occurring once every ten years – or a 10% chance of occurring in a year.
 - From 2009-2015, the city had four ten-year rain events.
 - Weather data shows that the number of 100-year rain events has nearly doubled over the past century due to a rapidly changing climate. The increase in 100-year rain events necessitates that we increase capacity in our sewer system, demanding both water conservation and water storage (TARP and on site storage)

The Chicago metropolitan area cannot rely solely on MWRD's tunnel and reservoir system to solve flooding and sewer overflows. Climate change forces us to act collectively and to support multi-pronged approaches to reduce the environmental and economic damages of these extreme rain events. Urban areas need to include innovations like green stormwater infrastructure as well as initiatives like *Overflow Action Days*, asking citizens to conserve water at home through simple actions like taking a shorter shower. For more ideas on how to conserve water at home, refer to Friends' "Citizen Guide to Water Conservation."

Key Abbreviations and Terms:

TARP: Tunnel and Reservoir Plan

CSO: A combined sewer overflow happens when a rain event overwhelms the sewer system and excess water and waste are released into the Chicago River and sometimes into the lake.

Stormwater: Stormwater is water that originates during precipitation events and snow/ice melt. Stormwater can soak into the soil (infiltrate), be held on the surface and evaporate, or runoff and end up in nearby streams, rivers, or other water bodies (surface water).

Green infrastructure: Green infrastructure uses vegetation, soils, and natural processes to manage water and create healthier urban environments. At the scale of a city or county, green infrastructure refers to the patchwork of natural areas that provides habitat, flood protection, cleaner air, and cleaner water. The City of Chicago put forth a green stormwater infrastructure vision that prioritizes permeable pavement and green roofs, adding 85 million gallons of annual stormwater capacity.

Overflow Action Days is an initiative of Friends of the Chicago River.

www.chicagoriver.org/overflowaction