Economic impact of climate resiliency for wastewater utilities

- An early cost assessment of adaptations to address some of the likely impacts of climate change on U.S. wastewater and drinking water utilities through 2050.
- Cost to utilities could range from $448 to $944 Billion

- **Northeast:** Wastewater Utilities: Increased demand for maintaining quality and quantity of discharges to rivers and streams for environmental purposes.
- **Southwest:** Wastewater Utilities: Anticipated increased regulation for many treatment components; increased issues with results of increased concentration of sewage, creating odor and treatment process problems; increased demand for maintaining quality and quantity of discharges to rivers and streams for environmental purposes.
  - Aligns with drinking water utility challenges: supply reductions and increased uncertainty; increased focus on conservation and reuse
Encouraging climate resilient federal investments

- **Integrated Planning** - EPA: *a comprehensive and integrated planning approach to a municipal governments CWA waste- and storm-water obligations offers the greatest opportunity for identifying cost-effective and protective solutions and implementing the most important projects first.*
  - A potential framework for coastal utilities to consider climate change

- **Federal government proactively incentivizing holistic thinking**
  - Flexibility to innovate (e.g. Hampton Roads Sanitation District) – requires changes in consent decree – an opportunity for site-specific discussion between federal government and unique utilities
  - Combination of prioritizing resilient investments and direct federal investment
  - Water reuse; stormwater capture; green infrastructure

- **Energy-Water Nexus**
  - Incentives for harnessing and generating energy
  - Black & Veatch findings - research need on capturing thermal energy