

Current EPA Climate Change Projects for Wastewater Utilities

- **Climate Resilience Evaluation and Awareness Tool (CREAT)** is an interactive tool designed for water and wastewater utilities to assess the risk of potential climate change impacts on their assets, operations, and missions by guiding users through a flexible, systematic assessment process. CREAT also provides regional climate change information that includes a list of potential impacts to utilities, and directs users to a library of adaptation measures. Users can draw from this library to develop their own adaptation plans which can include their custom-designed adaptation measures as well. CREAT can be downloaded at <http://water.epa.gov/infrastructure/watersecurity/climate/creat.cfm>.

Antonio Quintanilla, Metropolitan Water Reclamation District of Greater Chicago, and Dave White, King County Department of Natural Resources and Parks, are participating in the workgroup to develop next version of CREAT.

- The **Utility Climate Change Adaptation Measures Guide** is being developed to provide information on existing and suggested adaptation measures. This guide will leverage climate science information in CREAT, as well as provide regional climate information and associated adaptation measures.

Peter Ruffier, Clean Water Services, volunteered to assist with the development of this Guide.

- The **CRWU Toolbox** is a searchable web-based database that contains climate-related resources that assist utilities at all stages of the planning and decision making process, from raising general awareness to implementing mitigation and adaptation measures. Please see <http://www.epa.gov/safewater/watersecurity/climate/toolbox.html> for more information.
- **Tabletop Exercise Tool for Water Systems: Emergency Preparedness, Response, & Climate Resiliency (TTX Tool)** assists users in planning, customizing, and conducting water sector-specific tabletop exercises on five climate change scenarios. Background technical information included in the tool provides a brief introduction to climate science and how climate impacts may affect utility operations. Download the tool at http://yosemite.epa.gov/ow/SReg.nsf/description/TTX_Tool. EPA will be looking for volunteers this summer to help develop an updated tool.
- **Adaptive Response Framework Guide** - In order to help drinking water and wastewater utilities use the Adaptive Response Framework as described in the NDWAC Climate Ready Water Utilities report, EPA has begun development of the **Adaptive Response Framework Guide**. The goal of this guide is to provide additional descriptions of potential climate change activities that will support climate resilience at a utility and identify specific resources to support each activity.
- **Water Health and Economic Analysis Tool (WHEAT)** is an intuitive desktop software tool that assists drinking water utility owners and operators in quantifying public health impacts, utility financial costs, and regional economic impacts of an accidental or adverse event. Currently, WHEAT generates consequence results based on two scenarios for drinking water utilities: 1) release of a hazardous gas and 2) loss of operating assets. There are future plans to develop similar wastewater utility modules. Users can easily import consequence results from WHEAT into VSAT to better refine consequence assessments that support overall risk assessments.

Antonio Quintanilla, Carol Adams of ALCOSAN, and Khai Luu of the Los Angeles County Sanitation District are on the WHEAT wastewater module review group.