



Preparing for Climate Change at New England Drinking Water Utilities

U.S. EPA | CLIMATE CHANGE OUTREACH AT EPA NEW ENGLAND

WATER RESOURCES: Future changes to temperature and precipitation patterns will have a significant effect on the way we manage our water resources. Based on the Northeast Climate Impacts Assessment report from 2006, New England will experience the following over the next century: longer, hotter, drier summers; shorter, warmer winters; fewer rain events with more frequent and intense storms; and, rising sea level.



INTRO:

Climate change is already occurring and is expected to have a wide range of consequences on drinking water treatment in New England. By considering the potential effects of climate change, we can make improvements today to decrease our risks in the future. The following information is intended to assist New England drinking water utilities in preparing to effectively anticipate and respond to the relevant issues that they can expect to face in the coming century.

IMPACTS ON WATER UTILITIES:

Drinking water utilities should be aware of the following impacts that climate change will have on their sector:

- Increased risk of drought
- Increased water demand
- Increased risk of flooding
- Declining quality of source waters
- Higher risk of inundation and storm damage for coastal facilities

WHAT DRINKING WATER UTILITIES CAN DO:

Preparing for the impacts of climate change begins by first identifying the particular risks and concerns for your utility (e.g., increased water demand, insufficient treatment capacity for more polluted source waters, heightened risk of flooding, etc.). You can find models that work on small geographic scales (i.e., downscale models) at <http://northeastclimatedata.org>. Once this is done, there are certain cost-effective measures that you can take to minimize those risks while providing additional benefits to your utility.

You can use opportunities such as periodic larger-scale system evaluations and the contemplation of planned upgrades or new construction to incorporate climate change considerations into your facility design. Examples include: building additional storage capacity, installing

protective devices or structures to stop flood waters, or elevating critical infrastructure components to levels above those at risk for flooding.

Compiling an inventory of utility assets (i.e., any component with an independent physical and functional identity and age, such as pumps, motors, intakes, tanks, or mains) can help you determine the location, importance and condition of each asset. This knowledge will ultimately lead to an improved response in emergency situations, more predictable maintenance and capital replacement budgets, and improved security of your system.

Encouraging water efficiency can minimize or delay the need for system expansion and can reduce energy use, thereby saving utilities money. It can also help reduce the overall water demand during peak demand and drought periods and works to conserve available water resources for long-term use.

Climate change impacts can stress natural ecosystems and compromise their ability to provide valuable ecosystem services, such as flood protection, clean water, and water storage. Managing ecosystem quality and sensitive areas in your watershed can protect water quality and minimize flood risks. Consider partnerships with local conservation organizations or land trusts that may be able to assist in the planning and financing of source water protection activities.

KEY CONTACT:

JACKIE LeCLAIR

Manager
Municipal Assistance Unit
U.S. EPA New England
(617) 918-1549
leclair.jackie@epa.gov

GENERAL INFO:

EPA NEW ENGLAND

1 Congress Street
Boston, MA 02114-2023
www.epa.gov/ne/

TOLL-FREE CUSTOMER SERVICE:

1-800-EPA-7341