

I. Introduction

Protecting the quality of the Nation's water resources, and the recreational, ecological and environmental values that water resources support, is an important goal for the country. The growing understanding of climate change is leading to the recognition that a changing climate will affect the protection of the quality of water resources. This ***National Water Program Strategy: Response to Climate Change*** outlines how the National Water Program plans to respond to climate change.

The National Water Program

The National Water Program is a cooperative effort by Federal, State, Tribal, and local governments to implement core laws, including the Safe Drinking Water Act and the Clean Water Act, to protect and improve the quality of the Nation's waters. Key elements of this effort are intended to:

- assure that water provided by public water systems is safe to drink;
- protect and restore the quality of rivers, lakes, and streams;
- improve the quality of estuarine, coastal, and ocean waters;
- protect wetlands; and
- restore the quality of large aquatic ecosystems around the country such as the Chesapeake Bay, the Great Lakes, and the Gulf of Mexico.

For over thirty-five years, EPA has worked with other Federal agencies and State, Tribal, and local governments to implement a wide range of programs to protect the Nation's waters. EPA works closely with other Federal agencies, such as the Department of Agriculture, Department of Interior, and Department of Commerce. Many of the Federal water quality programs authorized by Congress are now delegated to States and Tribes that implement the programs with the support of grants from EPA. Local governments play a critical role in this effort as the managers of the drinking water and waste treatment infrastructure and are supported with financing assistance through the State Revolving Fund (SRF) loan programs.

Climate Change and Water

Over the past several years, new information about climate change has emerged from the scientific community. First, recent reports of the United Nations Intergovernmental Panel on Climate Change (IPCC) and the interagency U.S. Climate Change Science Program (CCSP) express a growing consensus on climate change.

Second, it is increasingly clear that climate change may have impacts on water resources and affect the programs designed to protect the quality of these resources. Not all of the near-term impacts of climate change, however, are expected to be disruptive, and this ***Strategy*** focuses on impacts that are of concern for water programs. Some of the primary consequences of climate change for water resources include rising sea levels, warming water temperatures, and changes in the amounts and location of rain and snow.

Purpose and Structure of this Document

The purpose of this **Response to Climate Change** is to describe the effects of climate change on water resources and define goals for the National Water Program in responding to the challenges posed by climate change.

“Clean energy and climate change” has been identified by EPA Administrator Stephen Johnson as a top Agency priority, and EPA national and Regional offices are working to define strategies and actions in this area. This **Response to Climate Change** is intended to support the Administrator’s priority as well as complement the EPA Office of Air and Radiation’s leadership of climate change policy and program development and the Office of Research and Development’s management of climate change–related research.

Following this Introduction, Section II of the document describes the primary impacts of climate change on water resources including:

- air and water temperature increases;
- changes in levels and distribution of rainfall and snowfall;
- storm intensity increases;
- sea level rise; and
- changes in coastal/ocean characteristics.

Section III of the document describes five general goals for the National Water Program response to climate change impacts on water resources:

Goal 1: Water Program Mitigation of Greenhouse Gases: use water programs to contribute to greenhouse gas mitigation;

Goal 2: Water Program Adaptation to Climate Change: adapt implementation of core water programs to maintain and improve program effectiveness in the context of a changing climate;

Goal 3: Climate Change Research Related to Water: strengthen the link between EPA water programs and climate change research.

Goal 4: Water Program Education on Climate Change: educate water program professionals and stakeholders on climate change impacts on water resources and programs; and

Goal 5: Water Program Management of Climate Change: establish the management capability within the National Water Program to engage climate change challenges on a sustained basis.

Each of these five goals is supported by a series of objectives and Key Actions that the National Water Program will implement in cooperation with partners. Although the Key Actions defined in this **Strategy** are a blueprint for accomplishing the five goals described above; in a larger sense, the success of the **Strategy** depends on water program staff taking responsibility for understanding climate change impacts and helping adapt their programs to address these impacts.

Process of Developing this Document

This **Response to Climate Change** was developed by a Climate Change Workgroup established by the Assistant Administrator for Water at the EPA. The Workgroup is chaired by the Deputy Assistant Administrator for Water and includes senior water program managers from national and Regional offices of EPA, including the Office of Air and Radiation and the Office of Research and Development.

The Workgroup began meeting in April 2007 and conducted a series of “listening sessions” with a range of stakeholders in May, June, and August. A draft version of the **Strategy** was available for public comment in the Spring of 2008, and the comments from almost one hundred individuals and organizations were considered in the development of this final document.

Next Steps

With the publication of this **Response to Climate Change** document, the National Water Program will affirmatively implement the Key Actions described in Section III and will monitor the implementation of these actions, provide periodic public reports of progress, and review and revise the document as needed over time.

Throughout this process, the EPA Office of Water will continue to work to strengthen linkages with other EPA offices; EPA Regional offices; other Federal agencies; State, local, and Tribal partners; and others to continue to improve the understanding of both the impacts of climate change on water resources and the range of actions that might further improve the National Water Program response to climate change. In addition, EPA Regional Offices may supplement this **Strategy** with actions designed to address the most significant climate change impacts in the Region.