

## **2024 Final Addendum**

### **Office of Water 2022–2026 Climate Adaptation Implementation Plan**

***Advancing Climate Change Adaptation and Resilience  
through EPA's Water Programs***

**September 30, 2024**

The Office of Water (OW) provides this addendum to its 2022-2026 Climate Adaptation Implementation Plan (CAIP or 2022 Plan). In this document, we summarize our priority actions and measures for fiscal year (FY) 2024, organized by the goals described in our 2022 Plan. OW reorganized and expanded or added some priority actions and added a new Goal 4: Reduce Greenhouse Gas Emissions Through Water-related Statutes, described in full below. Expanded or new priority actions include additional detail.

## Goal 1: Improve Climate Resilience of America’s Water Infrastructure

### Objectives

- Deploy Grant and Loan Programs to Advance Climate Objectives
- Incorporate Climate Planning Resources into Technical Assistance Programs
- Promote Resilient Infrastructure Solutions

## Goal 2: Protect the Nation’s Waters from the Impacts of a Changing Climate

### Objectives

- Integrate Climate Considerations in Clean Water Act and Safe Drinking Water Act Actions and Programs
- Invest in Ecosystem Protection and Restoration
- Leverage Strategic Research

## Goal 3: Advance Adaptive Capacity of Water Sector and Climate Knowledge of All Communities and Decisionmakers

### Objectives

- Support Assessment of Climate Risks and Climate-Informed Decision Making
- Improve Availability of Data and Information to Support Climate-Informed Decisions

## Goal 4: Reduce Greenhouse Gas Emissions through Water-related Authorities

### Objectives

- Support Clean Water Act, Marine Protection Research and Sanctuaries Act, and Safe Drinking Water Act Regulatory Programs to Achieve Climate Mitigation

## Goal 1: Improve Climate Resilience of America’s Water Infrastructure

### Objective 1.A. Deploy Grant and Loan Programs to Advance Climate Objectives

**Priority Action 1.A.1. Fund climate adaptation projects in small and disadvantaged communities through the Water Infrastructure Improvements for the Nation (WIIN) Grant Drinking Water System Infrastructure Resilience and Sustainability Program.**

<b>Measures</b>	FY24: Track issuance of grants (\$19 million) and support recipients
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**Priority Action 1.A.2. Incorporate climate change adaptation and mitigation considerations into infrastructure grant and loan guidance and programs.**

<b>Measures</b>	FY24: Complete examination of updates needed for nearly \$50 billion in core grant and loan processes, criteria, or guidance over FY22-30. FY24: Provide technical support for states and Regions complying with the Federal Flood Risk Management Standard.
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	<p>FY24: Release fact sheets on Drinking Water State Revolving Fund (DWSRF) funding for climate adaptation.</p> <p>FY24: Release fact sheets on Clean Water State Revolving Fund (CWSRF) funding for flood and SRF and Federal Emergency Management Agency (FEMA) funding for disaster recovery assistance under the Memorandum of Understanding (MOU) between EPA and FEMA.</p> <p>FY24: Update the Green Project Reserve guidance to better incorporate and describe climate change and resiliency components for all 4 project categories.</p>
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**Priority Action 1.A.3. Collaborate with other federal agencies to demonstrate how federal funding can support small system resilience and improve the capacity of rural communities to respond more quickly from natural disasters.**

<b>Measures</b>	<p>FY24: Update the Federal Funding for Water and Wastewater Utilities in National Disasters (Fed FUNDS) tool to incorporate Bipartisan Infrastructure Law (BIL) funding, tribal mitigation funding across the federal family, as well as WIIN grant funding.</p> <p>FY24: Update the MOU between EPA and FEMA to enable EPA SRFs and FEMA to act quickly and deploy funds after a disaster occurs.</p> <p>FY24: Under the MOU, engage routinely with FEMA Federal Disaster Recovery Officials to provide education on the SRFs and EPA's capacity to provide community assistance, in partnership with FEMA, after a Presidential Disaster is declared.</p>
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**Priority Action 1.A.4. Encourage the use of Water Infrastructure Finance and Innovation Act (WIFIA) financing to support the planning and implementation of projects to mitigate the impacts of drought.** The WIFIA program can finance a broad range of projects to support long-term strategies to conserve water, promote water efficiency and reuse, and protect and diversify communities' sources of drinking water. These include aquifer storage and recovery, water reuse, green infrastructure, flood diversion and storage, water loss audits, meter replacement, groundwater replenishment, and nature-based solutions. To do this, OW will prioritize drought mitigation projects when selecting projects that receive WIFIA loans. This priority action is new since the publication of OW's CAIP.

<b>Timeframe</b>	FY24–FY25
<b>Lead</b>	Office of Wastewater Management
<b>Partners</b>	Office of Ground Water and Drinking Water
<b>Vulnerabilities Addressed</b>	Critical water infrastructure; Availability of water for human use; Overburdened, underserved, and disadvantaged communities
<b>Benefits</b>	Infrastructure resilience; Community resilience; Climate mitigation
<b>Resource Need</b>	Existing
<b>EPA CAAP Goals Supported</b>	1, 2
<b>Measures</b>	FY24: Annually, include drought mitigation as a priority in the Notice of Funding Availability

## Objective 1.B. Incorporate Climate Planning Resources into Technical Assistance Programs

**Priority Action 1.B.1. Highlight climate resilience tools and resources in EPA’s water infrastructure technical assistance programs.**

<b>Measures</b>	FY24: Award grants to Technical Assistance (TA) providers FY24: Connect communities to assistance from EPA community technical assistance initiatives and Environmental Finance Centers available through BIL and annual funding. FY24: Help connect disadvantaged communities with Water Infrastructure and Cyber Resilience Division (WICRD) TA/BIL TA.
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**Priority Action 1.B.3. Expand access to climate risk assessment through the Creating Resilient Water Utilities Program.**

<b>Measures</b>	FY24: TA: Provide direct climate change risk assessment technical assistance to an individual or a regional group of drinking water, wastewater, or storm water utilities, with a focus on small or underserved communities. FY24: Training Workshops: Provide outreach, training, and workshops to water sector utilities and stakeholders, with a focus on outreach to utilities in small or underserved communities.
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## Objective 1.C. Promote Resilient Infrastructure Solutions

**Priority Action 1.C.1. Advance green infrastructure and nature-based solutions across nearly \$2.5 billion in investments to improve climate resilience, water quality, and public access to natural spaces.**

<b>Measures</b>	FY24: Leverage the Green Infrastructure Federal Collaborative, an EPA OW-led interagency community of practice, to share expertise and coordinate resources and TA to promote the equitable implementation of green infrastructure. FY24: Conduct a workshop with federal agencies on successful methods of collaboration to advance green infrastructure.
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## Goal 2: Protect America’s Waters from Impacts of a Changing Climate

### Objective 2.A. Integrate Climate Considerations in CWA and SDWA Actions and Programs

**Priority Action 2.A.1 Advance a “Climate-Ready” National Pollutant Discharge Elimination System (NPDES) program.**

<b>Measures</b>	FY24: Implement at least 40 climate-related permit language examples for regional and state permit authorities in the NPDES permit clearinghouse to showcase examples and best practices.
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**Priority Action 2.A.2. Advance strategies for permitting innovative wastewater management practices and water reuse through the NPDES program.**

<b>Measures</b>	FY24: Hold an expert workshop and publish a report on innovative permitting strategies to support potential permit writer training.
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**Priority Action 2.A.2. Advance the adoption of nonpoint source water quality actions that provide climate resilience and adaptation benefits under the CWA section 319 Nonpoint Source Grant program.**

<b>Measures</b>	FY24: Support at least 500 on-the-ground projects that provide climate adaptation and resilience co-benefits as reported by CWA Section 319 Nonpoint Source grant recipients in the Grants Reporting and Tracking System. FY24: Release updated program guidance to include support for including climate resilience and consideration of future climate conditions in state and territory nonpoint source programs.
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**Priority Action 2.A.3. Advance a “Climate-Ready” CWA section 303(d) assessment, listing, and TMDL program.**

<b>Measures</b>	FY24: Work on building connections across 303(d) programs and hazard mitigation programs to help identify areas for integration and collaboration related to water quality restoration, protection, and nature-based solutions (e.g., host a workshop). FY24: Provide outreach, training, workshops, and share best-practices on multiple climate-related CWA section 303(d) topics.
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**Objective 2.B. Invest in Ecosystem Protection and Restoration**

**Priority Action 2.B.1. Leverage the BIL’s historic funding of OW’s Gulf Hypoxia Program, geographic programs, and the National Estuary Program (NEP) to enhance ecosystem and community resilience to climate change.**

<b>Measures</b>	FY24: Gulf Hypoxia Program grantees will identify nutrient reduction actions with climate benefits. FY24: EPA’s NEP will track the percent of NEP BIL funding each year to projects that expand the community resilience to climate change.
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**Priority Action 2.B.2. Release and implement the “Interagency Coastal Wetlands Workgroup Recommendations for Reducing Wetland Loss in Coastal Watersheds of the United States.”**

<b>Measures</b>	FY24: Produce regional protocol to support removal of tidal restrictions.
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**Objective 2.C. Leverage Strategic Research**

**Priority Action 2.C.1. Incorporate climate considerations into EPA’s Water Quality Standards (WQS) program and handbook.**

<b>Measures</b>	FY24: Publish draft WQS Handbook for public comment.
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**Priority Action 2.C.3. Develop CWA Water Quality Criteria recommendations that protect aquatic life from an imbalance of salts in water due to climate change.**

<b>Measures</b>	FY24: Develop draft criteria for internal review.
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### **Goal 3: Advance Adaptive Capacity of Water Sector and Climate Knowledge of Communities and Decisionmakers**

#### **Objective 3.A. Support Assessment of Climate Risks and Climate-Informed Decision-Making**

**Priority Action 3.A.1. Support and provide the opportunity for tribes to integrate Indigenous Knowledge (IK), often referred to as Traditional Ecological Knowledge (TEK), into decision-making tools.**

<b>Measures</b>	FY24: Convene tribal officials and national water program staff to discuss potential needs, opportunities, and concerns for supporting the use of IK in water program decision-making.
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**Priority Action 3.A.2. Leverage the Urban Waters Federal Partnership (UWFP) to address climate adaptation in urban communities.**

<b>Measures</b>	FY24: Issue white paper study of climate resilience programs in UWFP locations
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**Priority Action 3.A.3. Advance coastal climate resilience and adaptation through EPA's Climate Ready Estuaries (CRE) Program.**

<b>Measures</b>	FY24: Publish a sea level rise scenarios guide for agency staff and water community.
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**Priority Action 3.A.4. Update OW's guides and technical assistance on hazard mitigation to address the more immediate impacts of climate change.**

<b>Measures</b>	FY24: Follow up on California drought mitigation project and document successful drought mitigation efforts. FY24: Conduct drought mitigation project to utilities in Colorado. FY24: In South Carolina, using Hazard Mitigation Guide for Natural Disasters, provide technical assistance and funding advice for "all hazards" mitigation specifically for disadvantaged communities with environmental justice concerns.
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**Priority Action 3.A.5. Communicate with the public about the safety of water reuse to increase its use as a tool for climate resiliency.**

<b>Measures</b>	FY24: Create webinar for medical schools on water reuse. FY24: Publish public health issue papers about emerging public health topics of interest to water reuse stakeholders.
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## Objective 3.B. Improve Availability of Data and Information to Support Climate-Informed Decisions

### Priority Action 3.B.1. Improve the accessibility and transparency of water and climate data through How's My Waterway.

<b>Measures</b>	FY24: Complete inventory and incorporate prioritized climate data and information into How's My Waterway.
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### Priority Action 3.B.2. Update and maintain the EPA website, "Climate Change in the Water Sector."

<b>Measures</b>	FY24: Update website. FY24: Add climate mitigation information and establish standard operating procedures for future website updates.
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### Priority Action 3.B.3. Provide water focused climate training resources.

<b>Measures</b>	FY24: Office of Wastewater Management, as part of training to permit writers, will emphasize the need to re-evaluate stream flows and mixing zones due to changes from historic conditions in developing permit limits. FY24: Integrate concepts from climate change policy documents into existing EPA CWA section 303(d) training materials. FY24: Finalize OW training plan. FY24: Finalize and publish updated training module, "Understanding Climate Change Impacts on Water Resources" to the EPA Watershed Academy.
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## Goal 4: Reduce Greenhouse Gas Emissions through Water-related Authorities

There are many opportunities within the National Water Program to mitigate climate change through the reduction of greenhouse gas emissions and support the goals of the Inflation Reduction Act. Under existing authorities, several OW programs can permit projects that are designed to reduce atmospheric carbon through sequestration, and others are working to incorporate mitigation and advance nature-based solutions that have both adaptation and mitigation benefits. With the addition of this new Goal to OW's Climate Adaptation Implementation Plan, the Plan captures more fully the breadth of climate activities occurring throughout OW.

## Objective 4.A. Support CWA, MPRSA, and SDWA Permitting Programs to Achieve Climate Mitigation

**Priority Action 4.A.1. Develop permitting program for ocean-based carbon dioxide removal (CDR) and solar radiation management (SRM) under the MPRSA.** The research and potential deployment of safe and effective land- or ocean-based carbon dioxide removal approaches is increasingly seen by many scientific assessments as necessary to meet climate goals. Ocean-based carbon dioxide removal activities, including research, that involve the transportation and disposition of material into the ocean environment may require an MPRSA permit issued by EPA.

<b>Timeframe</b>	FY23-25
<b>Lead</b>	Office of Wetlands, Oceans and Watersheds

<b>Partners</b>	Office of Wastewater Management, EPA Coastal Regions, Office of General Counsel, Office of Policy, EPA CDR Workgroup, National Oceanic and Atmospheric Administration, Department of Energy
<b>Vulnerabilities Addressed</b>	Climate Justice; Climate Change Impacts
<b>Benefits</b>	Climate change mitigation
<b>Resource Need</b>	Combination
<b>EPA CAAP Goals Supported</b>	N/A
<b>Measures</b>	FY24: Respond to all permitting inquiries and process applications for ocean-based CDR and SRM activities.

**Priority Action 4.A.2. Highlight climate mitigation efforts that support carbon capture and storage.** Class VI injection wells are essential for geologic sequestration deployment that is protective of underground sources of drinking water and human health. Geologic sequestration relies on injection wells to store carbon dioxide beneath the earth’s surface that has been captured from an emissions source or the atmosphere. Geologic sequestration—when used as a part of carbon capture and storage (CCS)—is a promising tool for reducing the amount of carbon dioxide in the atmosphere.

<b>Timeframe</b>	FY24-25
<b>Lead</b>	Office of Ground Water and Drinking Water
<b>Partners</b>	EPA Regions
<b>Vulnerabilities Addressed</b>	Impacts to the Availability of Water for Human Use; Transportation and Energy Infrastructure Interfacing with Water
<b>Benefits</b>	Climate mitigation, Ecosystem Protection, Economic Resilience
<b>Resource Need</b>	Existing
<b>EPA CAAP Goals Supported</b>	N/A
<b>Measures</b>	FY24: Provide resources and tools to support regional Class VI permit determinations and track annual progress of regional Underground Injection Control (UIC) Class VI permit determinations.

**Priority Action 4.A.3. Support state and tribal climate mitigation efforts by providing funding that assists state and tribal agencies in developing and implementing Class VI UIC programs.** EPA has announced that it is developing a new \$50 million grant program through the BIL that will support states, Tribes, and territories in developing and implementing UIC Class VI programs. These programs regulate the geologic sequestration of carbon dioxide (CO2) into UIC Class VI wells. Geologic sequestration is a key component of carbon capture and storage, which reduces CO2 emissions to the atmosphere and mitigates climate change.

<b>Timeframe</b>	FY24
<b>Lead</b>	Office of Ground Water and Drinking Water
<b>Partners</b>	EPA Regions, states, tribes
<b>Vulnerabilities Addressed</b>	Impacts to the Availability of Water for Human Use; Transportation and Energy Infrastructure Interfacing with Water; Tribal Nations and Indigenous Peoples
<b>Benefits</b>	Climate mitigation, Ecosystem Protection, Economic Resilience



<b>Resource Need</b>	Existing
<b>EPA CAAP Goals Supported</b>	N/A
<b>Measures</b>	FY24: Allocate UIC Class VI State and Tribal Assistance Grants (\$50 million).