



Climate Change and the CWA Section 303(d) Program

Dylan Laird

US EPA

Laird.Edward@epa.gov

Session Outline

Review activities to-date

- Executive Orders
- EPA National Strategic Plan
- Past Training Workshops
- 2022 Vision Climate Focus Area

2024 IR Memo

Draft Climate/TMDL White Paper

Questions

Executive Orders

- [Executive Order on Tackling the Climate Crisis at Home and Abroad](#)
- [Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis](#)

Priority Actions ([EPA Climate Adaptation Action Plan, October 2021](#))

- 1) Integrate climate adaptation into EPA programs, policies, rulemaking processes, and enforcement activities.
- 2) Consult and partner with Tribes, states, territories, local governments, environmental justice organizations, community groups, businesses, and other federal agencies to strengthen adaptive capacity and increase the resilience of the nation, with a particular focus on advancing environmental justice.
- 3) Implement measures to protect the Agency's workforce, facilities, critical infrastructure, supply chains, and procurement processes from the risks posed by climate change.
- 4) Measure and evaluate performance.
- 5) Identify and address climate adaptation science needs

EPA 2022 -2026 Strategic Plan



Goal 1:

Tackle the Climate Crisis

- **Obj 1.1:** Reduce Emissions that Cause Climate Change
- **Obj 1.2:** Accelerate Resilience and Adaptation to Climate Change Impacts
- **Obj 1.3:** Advance International and Subnational Climate Efforts

Goal 1: Climate	Obj 1.1	Promulgate final rules to reduce greenhouse gas emissions from light duty, medium-duty, and heavy-duty vehicles; electric utility generating units; and the oil and gas industry. EPA's climate partnership programs will reduce expected annual GHG emissions by 545 million metric tons of carbon dioxide equivalent.
	Obj 1.2	Implement all priority actions in EPA's Climate Adaptation Action Plan and the 20 National Program and Regional Climate Adaptation Implementation Plans to account for the impacts of the changing climate on human health and the environment. Assist at least 400 federally recognized Tribes to take action to anticipate, prepare for, adapt to, or recover from the impacts of climate change. Assist at least 450 states, territories, local governments, and communities, especially communities that are underserved and disproportionately at risk from climate change, to take action to anticipate, prepare for, adapt to, or recover from the impacts of climate change.
	Obj 1.3	Implement at least 40 international climate engagements that result in an individual partner commitment or action to reduce greenhouse gas emissions, adapt to climate change, or improve resilience in a manner that promotes equity.

- Implement all priority actions in EPA's Climate Adaptation Action Plan and the 20 National Program and Regional Climate Adaptation Implementation Plans to account for the impacts of the changing climate on human health and the environment.
- Assist at least 400 federally recognized Tribes to take action to anticipate, prepare for, adapt to, or recover from the impacts of climate change.
- Assist at least 450 states, territories, local governments, and communities, especially communities that are underserved and disproportionately at risk from climate change, to take action to anticipate, prepare for, adapt to, or recover from the impacts of climate change

2022-2026 OW Climate Adaptation Plan



GOAL 1

IMPROVE CLIMATE
RESILIENCE OF
AMERICA'S WATER
INFRASTRUCTURE

OBJECTIVES

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



GOAL 2

PROTECT NATION'S
WATERS FROM THE
IMPACTS OF A
CHANGING CLIMATE

OBJECTIVES

- A** Integrate Climate Considerations in CWA and SDWA Actions and Programs
- B** Invest in Ecosystem Protection and Restoration
- C** Leverage Strategic Research



GOAL 3

ADVANCE ADAPTIVE
CAPACITY OF WATER
SECTOR AND CLIMATE
KNOWLEDGE OF ALL
COMMUNITIES AND
DECISIONMAKERS

OBJECTIVES

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

OW 2022-2026 Climate Adaptation Plan

- **Priority Action 2.A.3. (pg. 31):** Advance a “Climate-Ready” CWA section 303(d) assessment, listing, and TMDL program.
- FY22:
 - Complete 303(d) Vision Climate Focus Area
 - Develop draft 2024 Integrated Reporting Memorandum.
 - Develop draft document to support the consideration of climate change in developing and implementing TMDLs.
 - Hold national training and stakeholder meeting covering multiple climate-related section 303(d) topics.
- FY23:
 - Issue 2024 Integrated Reporting Memorandum, including discussion of climate change considerations.
 - Issue document to support the consideration of climate change in developing and implementing TMDLs.

2022 Vision Climate Focus Area

- Consider impacts of climate change on water quality in **identifying impaired and threatened waters**;
- Identify and utilize **tools/resources that support prioritization** of waters that may be particularly susceptible to changing climate conditions for protection and restoration;
- Consider the impact of changing environmental conditions when **developing and implementing TMDLs**, and other restoration and protection plans; and the ability of plans to achieve and maintain water quality standards;
- Build program capacity to highlight or develop products and/or approaches (including TMDLs, modeling methods, reasonable assurance, implementation plans, etc.) that are robust and adaptive when facing **uncertain conditions**;
- Target program resources and staff capacity towards areas and **communities most impacted by changing climate conditions**; and
- **Engage the public** and other stakeholders using available public processes to inform, solicit feedback, and enable constructive discourse to address impacts of climate change on CWA Section 303(d) program activities transparently and clearly.

2024 IR Memo Climate Change

- Climate change impacts on attainment of WQS (criteria and uses)
- Vulnerable communities and populations
- Coordination with monitoring programs
- Assembling Data and Information
- Evaluating/Weighting Data and Information
- Appropriate Use of Category 4c
- Identifying Priorities for TMDL Development

Draft Climate Change in TMDLs Whitepaper

- Development process completed to-date
 - [Climate Change and TMDLs: Theory and Practice EPA Staff Considerations -- James Hogan \(EPA HQ\)](#)
 - Review of TMDLs up to 2017 (express reference to climate in TMDL) and also sought to uncover more recent TMDLs referencing climate change
 - Worked with regional TMDL modelers to understand modeling approaches used to evaluate climate change impacts
 - EPA Regional Review
 - Small-group state review for specific examples
- Organizational changes, additional detail, resources, and examples added
- Next step: Full State and Tribal Review

Draft Climate Change in TMDLs Whitepaper

Prioritization

- 2022-2032 Vision
- TMDLs, ARPs, Protection Plans, and TMDL Revisions
- Models and Tools

TMDL Development

- Establishing the Total Allowable Load
 - Critical Conditions
 - Technical Approaches
- Pollutant Source Loadings and Allocations
- MOS
- Adaptive Management

Implementation

- Implementation Approaches
- Monitoring/BMPs/Adaptive Management

Public Engagement

Reference

- [US EPA's Climate Adaptation Plan: October 2021](#)
- [FY 2022-2026 EPA Strategic Plan](#)
 - [Overview](#)
- [Office of Water \(OW\) 2022-2026 Climate Adaptation Implementation Plan](#)
- [National and Regional Climate Adaptation Implementation Plans](#)
- [The Compendium of Approaches to Incorporating Climate Change into the CWA 303\(d\) Program \(ELI Product\)](#)
- [2022-2032 CWA Section 303\(d\) Vision](#)
- [Information Concerning 2024 Clean Water Act Sections 303\(d\), 305\(b\), and 314 Integrated Reporting and Listing Decisions](#)