

U.S. ENVIRONMENTAL PROTECTION AGENCY



OFFICE OF ENFORCEMENT
AND COMPLIANCE ASSURANCE

Climate Change Adaptation Implementation Plan

OCTOBER 2022

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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SEP 12 2022



DEPUTY ADMINISTRATOR

Preface

Climate change is threatening communities across the nation. Millions of Americans feel the destructive effects of climate change each year when the power goes down, rivers and lakes go dry, homes are destroyed by wildfires and communities are flooded by hurricanes. Underserved communities are especially vulnerable to the climate crisis and are more likely to experience the negative health and environmental effects of extreme weather events.

The Biden-Harris Administration is actively confronting the climate crisis while also advancing environmental justice. As part of a whole-of-government approach, the U.S. Environmental Protection Agency is strongly committed to taking the actions necessary to protect human health and the environment and to increase the resilience of the entire nation, even as the climate changes.

The EPA's commitment to action is reflected in its FY 2022-2024 Strategic Plan and in the 2021 Climate Adaptation Action Plan. Both documents present priority actions the agency will take to ensure that its programs, policies and operations remain effective under future climate conditions while we work to support states, territories, tribes and communities in increasing their own adaptive capacity and resilience to climate change impacts.

From flooding at Superfund sites, to wildfires causing air pollution, to sea-level rise affecting water quality and infrastructure, the EPA will boldly address climate impacts in both its programs and the communities it serves. We recognize the importance of tribal, state and local government partnerships in efficient, effective and equitable implementation of climate change adaptation strategies. Our plans were informed and improved by input we received in listening sessions we held to engage these and other partners as we developed these plans.

To ensure we are addressing the climate crisis in a comprehensive way, each of our national program and regional offices has developed individual Climate Adaptation Implementation Plans that outline how the EPA will attain the agencywide goals described in the broader Climate Adaptation Action Plan. These plans describe how programs and regions will integrate climate adaptation into their programs, partnerships and operations. They also describe how they will help partners build their resilience and capacity to adapt, while delivering co-benefits, including curbing greenhouse-gas emissions and other pollution, and

promoting public health, economic growth and climate justice. Of course, the EPA has a major role to play on emissions reductions as well, though that is not the focus of these plans. Indeed, we must focus on both climate adaptation and mitigation to ensure our nation and communities thrive in an era of climate change.

As part of this effort, we will empower our staff and partners by increasing awareness of how climate change may affect our collective ability to implement effective and resilient programs. We will also provide them with the necessary training, tools, data, information and technical support to make informed decisions and integrate climate adaptation into our work.

The EPA will work to modernize its financial assistance programs to encourage climate-resilient investments across the nation. We will also focus on ensuring that investments funded by the Bipartisan Infrastructure Law, the Inflation Reduction Act and other government programs are resilient to the impacts of climate change. Finally, as our knowledge advances and as impacts continue to develop, our response will likewise evolve. We will work to share these developments to enhance the collective resilience of our nation.

The actions outlined in these implementation plans reflect the EPA's commitment to build every community's capacity to anticipate, prepare for, adapt to and recover from the increasingly destructive impacts of climate change. Together with our partners, we will work to create a healthy and prosperous nation that is resilient to the ever-increasing impacts of climate change — which is vital to the EPA's goal of protecting human health and the environment and to ensuring the long-term success of our nation.



Janet G. McCabe

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Executive Summary

The Agency will face many challenges due to the climate crisis; many of these challenges will be programmatically unique and will require a focus within EPA to identify leadership, vulnerabilities, barriers, and actionable opportunities to adapt our programs and processes to the impacts from climate change that are unavoidable and/or mitigate potential future changes that are unmanageable. Toward that goal, the Office of Enforcement and Compliance Assurance (OECA¹) has developed this Climate Adaptation Implementation Plan (OECA Plan) through the lens of the enforcement and compliance assurance program to support the Agency's and Administration's climate adaptation goals. It should be noted that this plan is a living and dynamic document that will be revisited and adjusted to accommodate the intricacies of OECA, its functions, and resource availability.

In addition, this plan goes beyond simply assessing the enforcement and compliance assurance program from a climate focus and identifying challenges to outlining concrete steps OECA will take in Fiscal Years (FY) 2022 and 2023 to advance the Agency toward its climate adaptation goals. These FY 2022 and FY 2023 Priority Actions include the capacity building and foundational work that in subsequent years we will utilize and build upon to further integrate climate change considerations into EPA's enforcement program nationally. For example, one of OECA's Priority Actions is the development of a Climate Adaptation Network, consisting of headquarters and regional enforcement staff that will help collaborate and share climate change adaptation-related solutions and experiences across all enforcement and compliance assurance programs. OECA will integrate climate change adaptation and mitigation considerations when developing and implementing national program priorities and provide national leadership on targeting and civil enforcement matters. Additionally, OECA will be developing a training module, programmatic guidance, and templates for staff to ensure consistency across the Agency's compliance and enforcement programs. Moreover, we will engage in discussions with the regional Enforcement and Compliance Assurance Divisions (ECADs) on how to develop and design a tracking system or modify existing tracking systems to better understand how compliance monitoring and enforcement activities contribute to the Agency meeting its climate change adaptation goals.

While the plan focuses on actions OECA is planning on taking, it also makes note of resource, personnel, and scientific needs that may affect the timing of completing these actions and data availability as a result of these actions. Such needs are challenges that will impact OECA's ability to implement the climate change adaptation efforts outlined in this plan. Additional scientific study is also needed to track the quantification of the impact of resilience activities.

¹ Unless specified otherwise, references in this document to "OECA" refer to OECA's headquarters staff.

1. Leadership

The 2022 OECA Climate Adaptation Implementation Plan supports the EPA's Climate Adaptation Action Plan² and the Administration's government-wide efforts to tackle the climate crisis.³ The Principal Deputy Assistant Administrator for OECA, Larry Starfield, is designated as OECA's Senior Career Leader and will oversee the climate change adaptation activities described in the OECA Plan. The OECA Climate Adaptation Workgroup, consisting of representatives from each OECA office and several regional ECADs, will support OECA's Senior Career Leader.

2. Vulnerabilities Assessment

I. Background

The global climate is changing at a rate unprecedented in human experience and is affecting people in every region of the United States.⁴ Many consequences of climate change have already been identified, such as likely increases in ambient ozone levels and concentrations of particulate matter,⁵ which pose increased health risks especially for those facing disproportionate rates of exposure. Extreme weather events, such as more intense precipitation and increased drought, are occurring along with an increase in the intensity of fires, hurricanes, extreme temperature swings, and other natural disasters.⁶

Considering such changing conditions, the EPA Climate Adaptation Action Plan discusses the potential Agency vulnerabilities caused by the impacts from climate change. In particular, and as described in the Agency-wide plan, the Agency's personnel safety, facilities, and communications can be adversely affected by increased frequency and severity of extreme weather events.⁷ All EPA offices and regions, including OECA, share in the effort to address these vulnerabilities and the broad impact they could have on mission, facilities, and regular operations. OECA will continue to work with and follow guidance from the Office of Mission Support as the Agency takes steps to protect the safety and operational capability of all EPA employees and facilities.

In addition to Agency-wide vulnerabilities, other challenges to addressing climate change vulnerabilities are more specific to OECA. OECA, in partnership with authorized states, federally-recognized Indian tribes, territories and other co-regulators, plays an important role in protecting public health and the environment by monitoring compliance with environmental laws and ensuring that violations of those laws are promptly addressed and that cleanup obligations

2 See <https://www.epa.gov/system/files/documents/2021-09/epa-climate-adaptation-plan-pdf-version.pdf>.

3 See Executive Order 14008, Tackling the Climate Crisis at Home and Abroad, <https://www.govinfo.gov/content/pkg/FR-2021-02-01/pdf/2021-02177.pdf>.

4 See IPCC AR6 Chapter 1, Page 13; EPA, *Fiscal Year 2022 Top Management Challenges*, Page 5.

5 See IPCC AR6 Chapter 5, Pages 23, 25 (stating anthropogenic forcings, caused by greenhouse gases, have likely caused the warming in ozone levels); EPA, *Fiscal Year 2022 Top Management Challenges*, Page 5.

6 See IPCC AR6 Chapter 11, Page 6 (stating small increases in global warming have been linked to cause unprecedented weather events).

7 EPA, *Fiscal Year 2022 Top Management Challenges*, Page 7; FEMA, *2021 National Preparedness Report*, Page 3.

are honored. The impacts of climate change (e.g., wildfires, extreme heat and cold, droughts, floods, sea level rise and storm surge, and melting permafrost) are likely to result in increased noncompliance by regulated entities, cleanup challenges for EPA and responsible parties, and a corresponding increase in threats to public health and the environment. The Agency's compliance assurance and enforcement work may therefore be affected by climate change impacts directly (e.g., ability to effectively deploy monitoring resources) or indirectly (responding to impacts on the regulated community).

OECA recognizes that climate change will have more severe effects on vulnerable populations (such as low-income communities and communities of color, children, and the elderly), and on indigenous communities, Alaskan Native Villages, and Indian country.⁸ Identifying and understanding these communities' potential vulnerabilities to climate change will be critical to ensuring OECA is able to fulfill its mission. Without concerted focus and adequate tools to address noncompliance and cleanup impacts, the consequences of climate change will be borne disproportionately by these communities.⁹ OECA's climate adaptation efforts will overlap significantly with our efforts to promote environmental justice (EJ),¹⁰ and OECA will make addressing these areas of overlap a priority.

OECA is also committed to ensuring that the Plan considers and protects tribal treaty and reserved rights in order to meet the Agency's legal and statutory obligations and policy priorities as we work to combat the climate crisis. Under the United States Constitution, treaties with tribal nations are part of the supreme law of the land and establish unique sets of rights, benefits, and conditions for the treaty-making tribes.¹¹ As a practical matter, this means that under this Plan, OECA plans to engage in consultation with federally recognized Indian tribes consistent with EPA's [Policy on Consultation and Coordination with Indian Tribes: Guidance for Discussing Tribal Treaty Rights](#), which complements the [Policy on Consultation and Coordination with Indian Tribes](#). OECA's Plan is guided by an interagency [Memorandum of Understanding](#) that committed EPA and other federal agencies to identify and protect tribal treaty rights early in our decision-making and regulatory processes, Agency and interagency approaches to identifying and using, as appropriate traditional ecological knowledge, and enforcement-specific documents, including OECA's [Guidance on the Enforcement Principles Outlined in the 1984 Indian Policy](#) and the [Restrictions on Communication with Outside Parties Regarding Enforcement Actions](#).

II. OECA Challenges in Addressing Climate Change Vulnerabilities

A. OECA's Mission

OECA is charged with ensuring compliance with environmental requirements, including taking enforcement actions to protect communities disproportionately affected by pollution and a

8 EPA. 2021. Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts. U.S. Environmental Protection Agency, EPA 430-R-21-003; FEMA, *2021 National Preparedness Report*, Page 3.

9 EPA, *Fiscal Year 2022 Top Management Challenges*, Page 13.

10 EPA Press Release, [New Enforcement Strategy Advances President Biden's Environmental Justice Agenda](#), May 5, 2022.

11 Treaty rights and reserved rights can include the recognition of property rights in land and resources as well as federal protections. Treaty and reserved rights, including but not limited to the rights to hunt, fish and gather, may be found both on and off-reservation lands.

changing climate.¹² OECA interacts extensively with EPA Program Offices, EPA Regions, other federal agencies, state, territorial, tribal, and local government agencies and the regulated community, to gather information, provide guidance and assistance, require compliance, and resolve violations. Many enforcement and compliance assistance activities are conducted by our regional partners and by authorized state, territorial, tribal, and local government partners, with OECA playing an oversight and coordination role. Our unique challenges relate primarily to these functions.

B. OECA Challenges

We have already seen a wide range of impacts associated with human-induced climate change; however, the complete effects of climate change may not become apparent for some time. Therefore, the following list of potential challenges to addressing climate change vulnerabilities is not exhaustive. This list gives a snapshot of the challenges we anticipate OECA will face in accomplishing our mission and suggests opportunities for adaptation to ensure OECA can continue to fulfill its mission.

i. Civil Enforcement and Compliance Assurance:

- The likely increased demand for compliance monitoring and enforcement response support during emergency/disaster situations (e.g., hurricanes, tornadoes, floods, drought, wildfires)¹³ may be difficult to meet in a timely manner or at all, given limited resources.
- If the impacts from climate change make it difficult for facilities to comply with environmental laws and with obligations in existing consent decrees and orders, it will be more difficult for OECA to ensure compliance with laws intended to protect public health and the environment. For example, to comply with their legal obligations, facilities may need to assess changes to contingency plans and risk management plans for facilities processing, treating, or storing chemicals and pesticides in areas prone to the adverse impacts of climate change (e.g., along coasts affected by sea-level rise, floodplains, or near wild-fire zones). More intense flooding and coastal storms, as well as sea level rise, can endanger hazardous waste treatment, storage, and transportation facilities and lead to contamination by releases from containers, landfills, underground storage tanks, and contaminated areas. Remedies at Superfund sites also may be vulnerable to the impacts of climate change and extreme weather events. Inundation and flooding may transport waste and hazardous constituents out of containment sites, while increased salinity of aquifers from sea level rise can degrade clay liners.¹⁴ And, as exhibited by the impacts from hurricanes Harvey, Irma, Maria, and Ida, an increase in extreme weather events can do significant and potentially long-term damage to drinking water facilities and sewage treatment plants, resulting in contaminated drinking water and the discharge of untreated sewage in violation of applicable requirements and to the detriment of public health. These impacts in turn may lead to an increased need for enforcement activity, particularly where conditions present an immediate threat to human health and the environment.

¹² EPA, *Fiscal Year 2022 Top Management Challenges*, Page 13.

¹³ IPCC AR6 Chapter 11, Pages 6, 7, 9.

¹⁴ IPCC AR6 Chapter 11, Pages 25, 51-63 (discussing the increased potential of severe flood events).

- It may be physically more difficult to conduct compliance evaluations and inspections in the field due to harsher weather conditions and extreme weather events.¹⁵ The weather conditions could have an adverse effect both on the physical well-being of inspectors, as well as on equipment used to monitor and test compliance. Weather conditions and the aftermath of extreme weather events may affect our ability to collect samples and determine compliance.
- Hurricane and flood damage to petroleum refineries and the fuel distribution infrastructure (fuel terminals, pipelines, etc.), may result in both violations and fuel shortages in storm-impacted areas as well as areas served by damaged refineries.¹⁶ In the absence of built-in regulatory mechanisms to address such situations, processing requests for enforcement discretion (e.g., requests for fuel waivers, requests for no action assurances, coordination with DOE in use of its emergency authority under the Federal Power Act) in the aftermath of climactic events such as hurricanes, floods and wildfires, and periods of extreme heat or cold, could strain enforcement resources.¹⁷

ii. Criminal Enforcement:

- Extreme weather can both incentivize criminal violations of environmental law and complicate subsequent investigations. EPA criminal investigations have addressed facilities where facility managers intentionally discharged pollutants during an extreme weather event, which they hoped would conceal their illegal conduct. Disruptions to transportation infrastructure and governmental operations after events like major hurricanes can delay investigators' ability to respond to potential crime scenes. Flooding, fires, or other climate-related disruptions can also complicate efforts to collect environmental samples or other forensic evidence.

iii. Data and Reports:

- Regulatory revisions in response to a more extreme climate may require data development due to additional required monitoring/sampling/testing, and new reporting requirements.¹⁸ It will be critical to develop regulations and recordkeeping requirements that ensure compliance can be demonstrated and compliance status can be determined in the most efficient manner under adverse conditions.

15 See IPCC AR6 Chapter 11, Page 6; FEMA, *2021 National Preparedness Report*, Page 16.

16 See generally IPCC AR6 Chapter 11, Page 110 (discussing the 2015-16 Amazon drought which prevented access to food, medicine and fuels).

17 FEMA, *2021 National Preparedness Report*, Page 28.

18 See generally IPCC AR6 Chapter 11 (stating the increased severity of specific types of storms throughout the chapter).

iv. Staffing and Resources:

- There may be an increased need to revise existing compliance and enforcement policies or develop new ones to address climate-related issues. Close coordination with authorized state, territorial, tribal, and local government agencies will be required.
- Rapidly changing and more extreme weather conditions may require additional efforts to achieve and determine compliance.¹⁹ There may be an increased burden on compliance and enforcement staff to provide support and ensure that new regulations or revisions to existing ones are enforceable and have adequate record-keeping, reporting, data collection, and monitoring requirements sufficient to demonstrate and determine compliance.²⁰
- There may be an increased need for more frequent compliance determinations, including a greater field presence to conduct site evaluations and monitor performance tests. Continuing budgetary constraints at the state, territorial, tribal, and local government levels will place a greater burden on EPA to respond to the increased need. Unless the need is met, information on the compliance status of facilities may not be accurate or reliable. In turn, the likelihood of identifying new, unpermitted sources and/or facilities in noncompliance may be reduced.
- The need for the Agency to respond to emergency/disaster situations may have an adverse impact on the Agency's ability to consistently and effectively implement core EPA compliance and enforcement activities (e.g., direct implementation programs,²¹ oversight of state/local programs), and invest in national compliance and enforcement priorities.²²

III. Efforts to Address Challenges and Barriers to Action

OECA's Plan formalizes OECA's ongoing efforts to address challenges resulting from climate change vulnerabilities by increasing understanding and consideration of climate change impacts on OECA's day-to-day work. While climate change is, by definition, a global problem, the impacts of climate change disproportionately affect certain communities, namely those already overburdened by environmental stressors and those with less access to resources to adapt to and recover from climate change impacts. It is therefore imperative that OECA consider these inequities in pursuing its climate change strategy and engage communities to understand their needs and impacts. Addressing the disproportionate impacts of climate change also requires

19 See IPCC AR6 Chapter 11, Page 6; EPA, *Fiscal Year 2022 Top Management Challenges*, Page 11 – 12; See generally FEMA, *2021 National Preparedness Report*, Page 5 (stating staffing and human health concerns caused by simultaneous disasters).

20 EPA, *Fiscal Year 2022 Top Management Challenges*, Pages 44-47.

21 EPA directly implements the vast majority of federal environmental programs in Indian country.

22 FEMA, *2021 National Preparedness Report*, Pages 5, 16.

acknowledging the unique role of tribes, including how our policies and activities may impact treaty and reserved rights.²³

OECA is beginning to build climate resiliency into our enforcement case resolutions; for example, by considering relevant climate risks in resolution of water enforcement matters, raising the issue of climate risks to regulated entities early in negotiations, and including, where suitable, injunctive relief that will be resilient to projected impacts of climate change. In appropriate circumstances, injunctive relief and Supplemental Environmental Projects (SEPs) can also be important tools to help address climate change adaptation and mitigation, and deliver protections for people in local communities that are disproportionately impacted by the effects of climate change.²⁴ OECA is also taking steps to integrate climate adaptation and resiliency into our cleanup work through modification of model orders, settlement tools and enforcement policy documents.

OECA is also taking concrete steps to enhance adaptation and resilience within the regulated community; for example, by providing technical assistance to drinking water and wastewater systems to help them return systems to compliance, build operator capacity, and provide ongoing support for sustainable, clean, and safe water. As these and other compliance assistance tools are rolled out along with climate adaptation resources from other parts of EPA, OECA is working to increase external parties' awareness and use of these climate adaptation tools. Increasing use of all adaptation tools, available through the EPA Climate Change Adaptation Resource Center (ARC-X) website,²⁵ will help ensure regulated entities have the ability to achieve and sustain compliance with environmental laws despite the impacts from climate change. Through these actions OECA is carrying out its mission to ensure compliance with environmental laws while actively addressing the continual concern and increasing challenge of climate change.

Resource constraints are and will continue to be a significant barrier for not only OECA but also our state, territorial, tribal, and local government partners. Resource constraints limit not only OECA's capacity to ensure compliance and assist our partners and impacted communities, but also limit the ability of impacted communities to plan and achieve more resilient infrastructure and systems.

3. OECA Activity

The OECA Plan focuses attention on priority actions OECA will take to fulfill our mission and increase human and ecosystem resilience to the impacts from climate change. OECA is responsible for setting national enforcement policy and priorities, and works with EPA regional offices and in partnership with authorized state, tribal and territorial governments to enforce the nation's environmental laws. The priority actions identified for FY 2022 and FY

23 See *Memorandum of Understanding Regarding Interagency Coordination and Collaboration for the Protection of Tribal Treaty Rights and Reserved Rights* (Aug. 4, 2021) and EPA's *Tribal Treaty Rights in Consultation with Tribes*.

24 See *2015 Update to the 1998 U.S. EPA Supplemental Environmental Projects Policy* (Mar. 10, 2015).

25 See EPA, Climate Change Adaptation Resource Center (ARC-X) <https://www.epa.gov/arc-x>. Specifically, the *Tools for Climate Change Adaptation* website with links to specific EPA tools, <https://www.epa.gov/arc-x/tools-climate-change-adaptation>.

2023 reflect OECA's role in providing national program leadership and will help integrate climate adaptation into all programs and activities. These actions are intended to complement climate adaptation activities being undertaken by regional enforcement programs, and to develop the organizational infrastructure needed to expand climate adaptation efforts in future years. All of OECA's proposed actions support EPA's Strategic Goal 1: Tackle the Climate Crisis, and Strategic Goal 3: Enforce Environmental Laws and Ensure Compliance.²⁶ In addition to the priority actions listed in Section I, below, OECA is also undertaking additional climate adaptation activities as described in Section II, below.

I. Priority Actions

This section highlights priority actions OECA is committed to implementing during FYs 2022 and 2023, consistent with our legal authority and contingent upon adequate available resources. These priority actions are designed to address immediate climate adaptation needs and to lay the groundwork to support future activities. OECA has identified five priority actions we intend to implement during FY 2022 and six priority actions we intend to implement in FY 2023. Additional priority actions will be developed for future fiscal years. The proposed priority actions will help address anticipated challenges to OECA's ability to identify and react to noncompliance and regulated entities' ability to achieve and sustain compliance with environmental laws in light of the changing climate.

Each of the proposed priority actions will support the EPA-wide priority action to integrate climate adaptation into all programs, policies, and operations.²⁷ OECA has not received any additional resources to implement the priority actions so we will need to reallocate staff time to complete these priority actions. While these priority actions are important to help EPA's enforcement program adapt to the climate crisis and ensure compliance with environmental laws, absent additional resources, we may not be able to fully implement all of the priority actions as described and may adjust activities to fit available resources. We do not plan to reallocate resources if it would reduce OECA's substantive work to protect communities.

A. FY 2022 Priority Actions

i. Complete OECA's Climate Adaptation Implementation Plan:

Pursuant to the October 2021 EPA Policy Statement and EPA Climate Adaptation Action Plan, OECA will, for the first time, develop and begin implementing an OECA Plan. Development and implementation of the OECA Plan organizes OECA's climate adaptation activities under a coordinated structure that will help identify, direct, and build needed capacity throughout the national program over the next several years. The OECA Plan reflects OECA's commitment towards achieving the Agency-wide climate adaptation goals while also ensuring OECA's programs continue to take the necessary steps to prepare for a changing climate.

²⁶ Draft FY 2022-2026 EPA Strategic Plan, (Oct. 1, 2021). <https://www.epa.gov/system/files/documents/2021-10/fy-2022-2026-epa-draft-strategic-plan.pdf>

²⁷ EPA, *Climate Adaptation Action Plan*, October 2022, pages 7-11. <https://www.epa.gov/system/files/documents/2021-09/epa-climate-adaptation-plan-pdf-version.pdf>

OECA's Office of Administration and Policy (OAP) is coordinating the development of the OECA Plan. This work is supported by the OECA Climate Change Workgroup which is composed of representatives from each OECA office and several regional ECADs. The workgroup structure ensures all relevant OECA interests are considered in setting national climate priorities for the enforcement and compliance assurance programs.

The OECA target for FY 2022 is to issue a final OECA Plan by the end of the fiscal year. The OECA Plan will be updated as needed in future years, while new priority actions will be developed for each subsequent fiscal year in accordance with the EPA FY 2022-2026 Strategic Plan. Monitoring and tracking implementation of priority actions, future revisions to the OECA Plan, and the annual development of new priority actions will continue to require a reallocation of staff resources on an ongoing basis, a resource need that is expected to increase over time as OECA continues to integrate climate adaptation into all programs.

ii. *Create an OECA Climate Adaptation Network:*

In FY 2022, OECA will establish an OECA Climate Adaptation Network (Climate Network) composed of headquarters and regional enforcement staff that other enforcement practitioners can turn to for assistance relating to consideration of climate adaptation-related solutions in their respective offices. As OECA builds climate adaptation capacity within our staff, a designated Climate Network will be essential to identifying available climate adaptation resources and facilitating the spread of climate adaptation knowledge and practice across all program functions. Initially the Climate Network will compile a roster of contacts and subject matter experts available to help case teams, identify existing climate adaptation tools and policies and, as expertise develops, this role may expand to provide specific technical assistance to case teams.

Completion of this priority action in FY 2022 is a foundational activity on which OECA can build in future years and is vital to supporting the agency-wide priority action to integrate climate adaptation into all programs, policies, and operations. By fostering a community of practice focused on addressing the impacts of climate change, OECA will help to educate staff and ensure consistent application of program policies nationwide. As experience implementing climate adaptation activities builds within both headquarters and regional enforcement staff, a regular forum for asking questions and sharing lessons learned will speed the integration of climate adaptation across all aspects of our program.

OAP will coordinate and organize the Climate Network. As additional resources become available to support staff development and to dedicate additional time to support climate adaptation activities, OECA will be able to further integrate climate adaptation principles into all programs.

For FY 2022, OECA will measure implementation of this priority action as the creation of the Climate Network and holding at least one meeting before the end of the fiscal year. Regional enforcement staff will be key partners as the network develops and expands both in size and knowledge base. Broad-based staff participation will be essential to building a community of practice over time, but resource availability will remain a significant challenge as

staff will have to reallocate time from existing activities to support the activities of the Climate Network.

iii. Climate Adaptation Training:

Before climate adaptation can be integrated into OECA's programs and activities, we must ensure staff have an understanding of climate change and how climate change is likely to impact our mission. In FY 2022, OECA will develop a new training module focused on how climate change is likely to impact OECA's mission and how climate adaptation can be considered and integrated into OECA's program activities. The training will help build capacity within OECA by increasing the climate literacy of OECA employees to better understand projected climate-related impacts and the suite of existing climate adaptation tools available to incorporate climate adaptation into decision making processes.

This training module is intended to build on existing climate adaptation training available from EPA's Office of Policy, with OECA specific content added to address our existing activities and commitments. This OECA training will provide a foundation for staff on which future program and media specific training modules could be developed, as necessary, by the individual OECA offices to help staff incorporate climate change adaptation into daily activities.

OAP will have the lead for developing the training module during FY 2022. The training module will be developed using existing technology resources to host and record the training. Additional resources may be needed in the future to support development of program specific trainings.

OECA will measure implementation of this priority action based on completion of the training module during FY 2022. Going forward, OECA's objective is for at least 50% of headquarters enforcement and compliance staff to complete the training module during FY 2023 with the remainder completing the training during FY 2024. Future climate change continuing education will be made available, as appropriate.

iv. Initiate Discussions to Track Climate Components of Enforcement and Compliance Activities:

Being able to accurately track and report on the climate components of OECA's enforcement and compliance activities is essential for measuring OECA's impact in addressing the climate crisis. During FY 2022, OECA will engage in discussions with the regional ECADs to develop requirements for a reporting solution that will be used to accurately identify, track and measure compliance monitoring and enforcement matters with climate change-related components; for example, climate-related injunctive relief and SEPs. Having accurate and reliable data will allow OECA to demonstrate to the public and to our state and tribal partners the role environmental enforcement and compliance activities can have in helping communities increase resilience to the impacts from climate change. Increasing awareness of the role of environmental enforcement in addressing the climate crisis will help the public and the regulated community understand the connection between complying with environmental laws and increasing resilience, which is especially important for addressing risks to vulnerable communities.

OECA's Office of Compliance (OC), in close coordination with OECA's Office of Civil Enforcement (OCE), will lead discussions among all OECA offices and appropriate regional staff who will ultimately be the primary users of the reporting solution that is developed through these efforts. OC and OCE will work with the regions to develop the requirements for the reporting solution and identify any new data needs, while remaining cognizant of the need to minimize reporting burdens. During FY 2022, implementation of the priority action will be measured based on a new workgroup being formed and holding initial discussions to define the scope of what will be tracked by the reporting solution. A critical consideration when defining the scope will be ensuring we do not divert resources from the substantive enforcement work performed by OECA and the ECADs. The result of the initial discussions will seed further discussions and additional activities in FY 2023.

This priority action will be a new activity for OECA and, as a result, additional resources will be needed. It is anticipated this work will have a broad impact since every statutory compliance and enforcement program within OECA will be a stakeholder. We also recognize that the regions have a significant role in implementing the reporting and tracking activities; therefore, they must be heavily involved in developing the requirements, but we do not expect regions to allocate resources otherwise used to perform work to protect communities through enforcement. In addition to supporting the agency-wide priority number one, to integrate climate adaptation into all programs, this priority action will also support agency-wide priority number four, to measure and evaluate performance.

The long-term success of this action will depend on overcoming several challenges, as developing measures that are accurate and reliable is a complicated undertaking. Decisions about how to measure the consideration of climate change mitigation and adaptation in enforcement and compliance activities will require extensive stakeholder engagement and re-evaluation of existing methodologies before making changes to reporting tools or adding new reporting processes to our existing tracking programs.

v. *Update OSRE Model Language for Remedial Investigation/Feasibility Study (RI/FS) Agreements:*

Given the breadth of statutory programs OECA is tasked with enforcing, integrating climate adaptation considerations into existing OECA programs must be considered separately based on each program's unique statutory and regulatory requirements. Within the broader CERCLA enforcement program, OECA's Office of Site Remediation Enforcement (OSRE) will draft updated language for the model Remedial Investigation/Feasibility Study (RI/FS) administrative settlement agreement and statement of work (SOW) with new climate language.

Model documents are a critical tool for OECA's enforcement program and help ensure nationally consistent and efficient enforcement of our environmental cleanup laws. The development of model language for RI/FS agreements will ensure climate adaptation considerations are consistently included for all RI/FS agreements in the future, further integrating elements of climate adaptation, as appropriate, into the operation of our program.

OSRE will have the lead completing this priority action and will develop the model language during FY 2022 with a target completion date by the end of FY 2022. Upon completion

of the model language, OSRE and Regional staff will begin utilizing the model language, as appropriate, and OSRE will work with regional enforcement staff as they begin using the new model language.

B. FY 2023 Priority Actions

i. Incorporate Consideration of Climate into OECA's Enforcement Priority-Setting Activities:

OECA focuses its enforcement and compliance assurance resources on the most serious environmental violations by developing and implementing national program priorities, called National Compliance Initiatives (NCIs). Through implementation of the NCIs, OECA provides national leadership in addressing complex and intractable environmental compliance issues. The NCIs are in addition to OECA's core enforcement work and advance the Agency's Strategic Plan objective to improve compliance with our nation's environmental laws in partnership with states, territories, and federally-recognized Indian tribes with authorized environmental programs.

NCIs are adopted on a four-year cycle aligned with the EPA Strategic Plan, with the current cycle spanning FYs 2020-2023. While OECA began evaluating opportunities to incorporate environmental justice and climate change in its implementation of the current NCIs in 2021, under this plan OECA will for the first time integrate climate change adaptation and mitigation considerations into the selection of NCIs for the upcoming cycle. Selection of the next round of NCIs will be completed in FY 2023, with implementation of these initiatives to begin in FY 2024. Selection of the new NCIs will involve coordination with EPA's regional offices and outreach to states, territories, and tribes.²⁸ Through this collaborative process, OECA will work to spotlight pressing climate concerns that can be addressed through enforcement and compliance activities and to develop coordinated strategies to work toward their resolution. OECA will also continue to integrate climate change considerations into the implementation of these initiatives once selected (e.g., when developing targeting lists within a given sector, prioritizing facilities that are more vulnerable to natural disasters and are located in overburdened and underserved communities).

OCE and OC will jointly lead this activity in collaboration with the other OECA offices and regional offices. The outcome of this action is that the NCI Executive Board, responsible for selecting NCIs for the FY 2024-2027 cycle, will consider climate change as part of the selection process. This action will be completed in FY 2023 when OECA finalizes the NCI selection for the FY 2024-2027 NCI cycle.

ii. Track and Report Climate Components of Enforcement and Compliance Activities:

In FY 2023 OECA will establish the requirements within the agreed upon scope for the reporting solution that will be used to identify, track and measure compliance monitoring and enforcement matters with climate change-related components; for example, climate change-related injunctive relief addressing climate change adaptation or mitigation. Building in the mechanisms for EPA staff to consistently and accurately report climate change-related

²⁸ EPA's interactions with tribes are guided by the [EPA Policy on Consultation and Coordination with Indian Tribes](#) (May 4, 2011).

compliance monitoring and enforcement information will further OECA's long-term objective to be able to track and report the impact of enforcement and compliance assurance activities on climate change, including the ability to reliably demonstrate the benefits of our programs for those at the greatest risk from the impacts of climate change.

Prior to any development of a solution, OC will perform an assessment of the level of effort needed to implement the requirements for the reporting solution. This will include an evaluation of current capabilities to identify requirements that can be completed in the near term versus those that will be completed in the long term. Effectively, OECA will prioritize the list of requirements. Additionally, OC in coordination with OCE, other OECA offices, and regional staff, will finalize necessary definitions and reporting guidance to ensure accurate and consistent data. The long-term benefit of this action will be to support the capacity for OECA to track and measure enforcement and compliance actions with climate-change related components. This capability will allow us to measure and report on the effectiveness of our enforcement and compliance activities at addressing climate change and its effects and to strategically invest in areas where our efforts can have the most impact. In addition to supporting the agency-wide priority number one, to integrate climate adaptation into all programs, this priority action will also support agency-wide priority number four, to measure and evaluate performance.

This priority action will be a new activity for OECA and, as a result, additional resources will be needed. It is anticipated this work will have a broad impact since every statutory compliance and enforcement program within OECA will be a stakeholder. We also recognize that the regions have a significant role in implementing the reporting and tracking activities; therefore, they must be heavily involved in developing the requirements and testing any solution. Because regional input into the tracking system will be critical, regional resources may be needed, but we do not expect regions to allocate resources otherwise used to perform work to protect communities through enforcement.

The long-term performance of this priority action will have to overcome several challenges as developing measures that are accurate and reliable is complicated. Decisions about how to measure climate change mitigation and adaptation impacts from enforcement will require extensive stakeholder engagement and re-evaluation of existing methodologies before making changes to reporting tools or adding new reporting processes to our existing tracking programs. Additionally, as the scientific community develops methodologies to accurately quantify the impact from activities that increase resilience, OECA will consider what ongoing modifications are needed to keep up with scientific advancements to accurately report on the breadth and scope of benefits that result from our enforcement and compliance activities. Implementation of this priority action will be measured based on a prioritized set of requirements for the reporting solution that will be used to identify, track and measure compliance monitoring and enforcement matters with climate change-related components.

iii. Continue Development of OSRE Enforcement Guidance:

As part of its mission to protect human health and the environment, OECA works to inform and educate the public about its policies and activities. Guidance documents are an essential tool the agency uses to inform the public as well as to ensure consistent nationwide

application of our enforcement program. During FY 2022, OSRE will continue to develop guidance about incorporating climate change into cleanup enforcement cases, as appropriate.

OSRE will have the lead completing this priority action and implementation will culminate in the issuance of a Sustainability Resource Library for internal use by EPA staff by the end of December 2022.

iv. Modify Additional OSRE Model Orders, Settlement Tools, and Enforcement Policy Documents to Incorporate Climate Adaptation:

Enforcement tools such as model orders and policy documents help ensure nationally consistent and efficient enforcement efforts. Model documents, in particular, increase efficiency in negotiations. OECA should update its enforcement tools to ensure nationally consistent application of policies allowing OECA to clean up hazardous sites in a way that considers likely climate impacts to the site so remedies are resilient and continue to be protective of the surrounding communities.

Building on prior actions to update language for the model RI/FS administrative settlement agreement and SOW, OSRE will work with the Superfund program office to consider whether and how to incorporate climate adaptation considerations, as appropriate, into the language of additional model settlement agreements, statements of work, and cleanup enforcement policies and guidance documents.

OSRE will have the lead completing this priority action utilizing support from the regions, which will be a new activity that builds on the FY 2022 activity. Implementation of this priority action, contingent on coordination with OLEM, will be measured based on the number of draft enforcement documents that are created or updated during FY 2023 to include climate adaptation considerations. OSRE's target is to create or update at least one enforcement document (i.e., policy or model) as appropriate. Upon completion or after being updated, OSRE and regional staff will begin utilizing the enforcement tool, as appropriate, and OSRE will provide guidance for regional enforcement staff as necessary.

v. Ensure Adequate Financial Assurance Coverage for Cleanup Response Costs:

Financial assurance requirements in CERCLA enforcement instruments help ensure that responsible parties provide adequate financial resources to cover anticipated response costs in the event EPA has to take over the response action. The financial assurance serves to minimize the cost borne by taxpayers at sites where potentially responsible parties default on their cleanup obligations. Financial assurance amounts are based on the cost estimate of the cleanup work as provided in the Record of Decision. OSRE will work to ensure that financial assurance amounts consider climate change vulnerability costs that are a part of the cost estimate of the cleanup work, as applicable (e.g., RCRA corrective action facilities or Superfund sites that are at risk from flooding or sea level rise), as an additional factor.

In FY 2023, OSRE will continue its ongoing work to ensure adequate financial assurance is obtained in CERCLA enforcement instruments. In particular, OSRE will draft revisions to the 2015 Guidance on Financial Assurance in Superfund Settlement Agreements and Unilateral

Administrative Orders to ensure that financial assurance amounts consider climate change vulnerability costs as appropriate.

vi. *Link Agency Climate Adaptation Resources to Online Portals:*

OECA's federal facility program ensures that federal facilities comply with environmental laws, take actions to prevent, control and abate pollution, and fosters environmental stewardship within the federal community. OECA's Federal Facility Enforcement Office (FFEO) will add to EPA's climate adaptation resources, as appropriate, and link those EPA resources to FFEO's compliance assistance center (FedCenter). Providing accessible online information increases external Federal agency awareness and builds capacity by providing access to available climate adaptation tools.

Providing access to additional information on FedCenter will help OECA engage in outreach with Federal agencies to encourage and generate ideas regarding increased emphasis on sustainability and climate change. By adding links to EPA's climate adaptation resources, EPA will help build capacity in other Federal agencies, increasing the resilience of federal facilities to withstand extreme weather events and remain in compliance with environmental laws.

This priority action will support the agency-wide climate change adaptation priority action number two, to consult and partner with states, tribes, territories, local governments, environmental justice organizations, community groups, businesses, and other federal agencies to strengthen adaptive capacity and increase the resilience of the nation.²⁹ FFEO will have the lead implementing this priority activity.

This will be a new activity for FFEO that will start in FY 2022 and continue with FFEO updating FedCenter as new information and tools become available. Currently there are some climate resources available on FedCenter that FFEO will enhance with the addition of links to new information and tools during FY 2023. In FY 2023, FFEO's target is to conduct quarterly reviews of FedCenter to ensure that the FedCenter's Climate Adaptation webpage is up to date. Based on the findings from the quarterly reviews, and when FFEO becomes aware of updates that occur sooner than quarterly, FFEO will update existing links and add any newly available climate resources to FedCenter.

II. Additional Actions

In addition to the priority actions discussed above, OECA is taking or plans to take additional actions that will support climate change adaptation and mitigation, contingent upon adequate available resources and as described below.

i. *Continue Disaster Mitigation and Recovery Activities:*

Disaster mitigation and recovery efforts are integral to climate adaptation. OECA and its regional partners play an important role in enhancing communities' resilience to climate-related disasters through integrating adaptation principles into our compliance and enforcement efforts; encouraging pre-disaster planning to mitigate future events; promoting sustainable and resilient

²⁹ EPA, *Climate Adaptation Action Plan*, October 2022, pages 11-16.
<https://www.epa.gov/system/files/documents/2021-09/epa-climate-adaptation-plan-pdf-version.pdf>

rebuilding efforts; providing EPA’s expertise to federal, state, tribal, and local partners; and streamlining federal action. OECA maintains a Disaster Resilience Team and standard operating procedures to coordinate and assist with disaster mitigation and recovery requests from the regions and other federal agencies. Along with OECA’s subject matter experts, this team provides assistance prior to disasters (blue skies), during short and long-term recovery efforts, and disaster mitigation projects.

ii. Require Consideration of Climate Change in All Civil Enforcement Cases:

OECA will issue a policy statement requiring consideration of climate change in all civil enforcement case resolutions and adoption of climate-related solutions where appropriate. Enforcement actions may result in a variety of climate benefits that are additional to ensuring a regulated entity returns to compliance. These may include significant reductions of greenhouse gas pollutants, as well as implementation of changes to a facility or operation that increase its resilience to future impacts from climate change.

iii. Incorporate Consideration of Climate Adaptation into Targeting and Enforcement at Federal Facilities:

FFEO will encourage regions to consider climate change-related components (injunctive relief, mitigation, and SEPs) in enforcement actions against federal facilities. Consideration of these components will be included in FFEO’s review of Consent Agreements and Final Orders, Federal Facility Compliance Agreements, and other enforcement documents. When developing targeting lists of federal facilities for inspections, FFEO will encourage regions to note facilities that are in areas more vulnerable to natural disasters and located in underserved communities.

iv. Initiate Reporting on GHG Emission Reductions Achieved Through EPA Enforcement Cases:

Building on prior work, OC will develop guidance and methodologies for calculating and reporting greenhouse gas (GHG) reductions achieved through certain types of EPA enforcement actions. OC will produce GHG reduction calculation and reporting guidance in FY 2022, with reporting on a new “GHG reductions through EPA enforcement actions” metric beginning in FY 2023.

4. OECA Training Plan for Enhancing Staff Knowledge About Climate Adaptation

To ensure that OECA staff have the knowledge necessary to integrate climate adaptation into decision making, OECA will require staff to receive regular training, understand climate change in general, and learn how climate change will likely impact OECA’s mission.

The Climate Adaptation Training, described in OECA’s Priority Action section, lays out the activities OECA will undertake to enhance staff and management awareness of relevant climate change impacts and climate adaptation approaches to build resilience. Development of this climate training module will occur during FY 2022 and focus on the impacts from climate change on OECA’s mission in addition to how climate change awareness may be integrated into more of OECA’s program activities.

As specified in the Priority Action section, OECA's target is to complete development of the new OECA-specific training module in FY 2022 and begin implementing the training for headquarters enforcement and compliance staff in FY 2023. OECA's target is to train 50% of headquarters enforcement and compliance staff during FY 2023 with the remainder completing the training module in FY 2024. The expectation is that the OECA training module will provide a foundation for staff on which future program and media specific training modules can be developed to help incorporate climate change adaptation and the use of available EPA climate change tools into daily activities.

As OECA gains experience and feedback from staff regarding the OECA climate training module, OECA will revise the training as necessary, and share the training with our regional enforcement staff. As appropriate and subject to available resources, OECA intends to work with our state and tribal partners to share relevant climate adaptation training materials and experience to help build staff climate capacity within the delegated state and tribal programs. Through the Climate Network, described in the Priority Action section, OECA will also provide information on additional training resources and other tools across EPA that are available to help build capacity within OECA's staff.

5. OECA Science Needs

Being able to accurately track and report on the climate components of OECA's enforcement and compliance activities is essential for understanding OECA's contribution to addressing the climate crisis. While OECA has created specific Priority Actions focused on developing the capacity to track enforcement and compliance assurance activities that include a climate component, the quantification of the impact of resilience activities is an area that needs additional scientific study to ensure accurate reporting.

As OECA gains experience integrating climate adaptation into our programs and activities, additional science needs are likely to develop as we identify and refine the types of adaptation and resiliency efforts that can be incorporated. OECA's Plan focuses its attention on Priority Actions that will fulfill our mission and increase human and ecosystem resilience to the impacts from climate change. OECA will continue to follow the science and adapt our program responses to incorporate new technologies, as appropriate, to ensure entities return to and maintain compliance even as the climate changes.

6. Conclusion

OECA will ensure that our policies and procedures continue to protect human health and the environment while acknowledging the additional challenges endured by communities and regulated entities as a result of the impacts from climate change. Already, OECA is taking action to incorporate adaptation principles into our work and to develop the data systems needed to measure OECA's contributions toward addressing the climate crisis.

OECA's FY 2022 and FY 2023 priority actions are intended to provide a framework for national action by EPA in coordination with our enforcement and compliance assurance partners, and to lay the foundation necessary to support an enhanced focus on addressing climate change

and its impacts in future years. These actions are critical to protecting communities from the impacts of climate change, especially overburdened and vulnerable communities which are most likely to encounter severe climate change impacts but least able to prepare and respond to these impacts.