



U.S. DEPARTMENT OF AGRICULTURE



STAFF OFFICES AND DEPARTMENT ADMINISTRATION CLIMATE CHANGE ADAPTATION PLAN

June 2022



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INTRODUCTION

In October 2021, USDA released its Action Plan for Climate Adaptation and Resilience in response to E.O. 14008 Tackling the Climate Crisis at Home and Abroad Sec. 211 and in accordance with guidance from the White House Council on Environmental Quality. This plan, otherwise known as USDA's Adaptation Plan, highlights the importance of investing in soil and forest health, stakeholder outreach and education, the development of useful and usable tools, and strategic research and innovation to ensure that America's producers, forest landowners, and rural communities are poised to face the impacts of climate change.

At the same time, USDA updated its Departmental Regulation (DR) 1070-001 Policy Statement on Climate Adaptation to reflect the priorities of the Biden-Harris Administration and the renewed urgency of addressing the already-observable and future consequences of climate change. DR 1070-001 directs the Office of the Chief Economist (OCE) to issue guidance to USDA Mission Areas, agencies, and staff offices to complete or update their own climate adaptation plans. In fall 2021, the Office of Energy and Environmental Policy (OEEP) within OCE issued guidance to agencies and offices who contributed significantly to the Department's plan and/or participate regularly in USDA's climate coordinating body, the USDA Global Change Task Force.

In accordance with USDA's mission-based approach to climate adaptation, the guidance directed each organization to consider the impacts of climate change to their mission-delivery and develop adaptation actions that address and integrate these risks into their planning, programs, operations, and management. The guidance also asked each organization about the climate-related professional development needs of their staff, how to enhance their work with USDA's Climate Hubs, and the alignment of these climate adaptation efforts to departmental initiatives on environmental justice.

Departmental offices report directly to the Secretary. They provide support to Department officials and employees at all levels, and they support USDA programs and services by working with USDA agencies, Congress, organizations, and Tribal governments. Presented here is the climate adaptation plan of four USDA departmental offices:

- The **Office of the Chief Economist (OCE)**, which provides expertise, analysis, and coordination on a wide range of Departmental activities and initiatives, including climate change, sustainability, food loss and waste, pest management policy, biotechnology, agricultural markets, and regulations.
- The **Office of Budget and Program Analysis (OBPA)**, which coordinates and directs USDA's budget, legislative, and regulatory functions and provides analysis and evaluation to support the implementation of critical policies,

- The **Office of Homeland Security (OHS)**, which leads the Department in all its programs and initiatives that support the National Preparedness Goal, including Prevention, Protection, Mitigation, Response, and Recovery, and
- The **Office of Property and Environmental Management (OPEM)**, which provides Department-wide administration, leadership, oversight, and policy in the areas of property, fleet and environmental management.

As OEEP continues its department-wide efforts on climate adaptation, it will continue to reach out to other Departmental Staff Offices, as appropriate, to help address climate vulnerabilities or seize opportunities to enhance action and collaboration on climate adaptation at the department level.



OFFICE OF THE CHIEF ECONOMIST

The Office of the Chief Economist (OCE) provides expertise, analysis, and coordination on a range of Departmental activities and initiatives. OCE conducts economic and policy analysis and advises the Secretary on the economic impacts of changes in USDA policies and programs, proposed legislation, and market conditions. Below we describe how OCE addresses the effects of climate change on USDA's mission delivery, through its sub-offices and workstreams.

Office of Energy and Environmental Policy/Climate Change Program Office

The Office of Energy and Environmental Policy (OEEP) serves as a focal point for the Department's energy, environmental markets, and climate change activities. OEEP houses the Department's Climate Change Program Office (CCPO) which works to ensure that climate change is considered and integrated into the research, planning, programs, management, and decision-making processes of the Department. CCPO represents USDA to the US Global Change Research Program and co-chairs the USDA Climate Hubs Executive Committee.

CCPO manages climate adaptation efforts across USDA, working to ensure that the Department is preparing for the current and future effects of climate change on its mission and stakeholders, including through preparation of USDA's Climate Adaptation Plan and implementation of DR 1070-001. CCPO supports USDA agencies, mission areas, and staff offices in preparing and implementing their own climate adaptation plans and is responsible for ensuring that the agencies monitor and evaluate their progress towards implementing their plans. As appropriate, CCPO will continue to work with additional USDA agencies and offices to develop climate adaptation plans.

CCPO will support the agencies by addressing common or urgent climate adaptation knowledge and data needs; examples may include initiatives related to climate literacy of USDA's workforce, climate projections to support planning and decision-making, and attribution of climate adaptation benefits to agricultural conservation practices. CCPO is also responsible for liaising with the White House on Council on Environmental Quality (CEQ) on these efforts and reporting on progress and updating the Department's adaptation plan, as directed. In addition to these primary lines of effort, CCPO will continue to coordinate with other USDA agencies, offices, and programs to elevate and mainstream climate adaptation.

World Agricultural Outlook Board

The World Agricultural Outlook Board (WAOB) coordinates, reviews, and approves the monthly World Agricultural Supply and Demand Estimates (WASDE). The WASDE also provides annual forecasts for supply and use of U.S. and world wheat, rice, coarse grains, oilseeds, and cotton. The report also covers U.S. supply and use of sugar, meat, poultry eggs and milk, as well as Mexico's supply and use of sugar.

Meteorologists in WAOB provide weather assessments and real-time yield intelligence for global crop conditions in support of the WASDE; how climate change has affected their area of responsibility is integrated into their assessments as appropriate. In addition, they are responsible for publication of the Weekly Weather and Crop Bulletin and contribute to the U.S. Drought Monitor, released weekly by the National Drought Mitigation Center. WAOB meteorologists also work with the international community through partnerships led by the World Meteorological Organization, and directly with their counterparts in partner countries as with the North American Drought Monitor.

The Chief Meteorologist serves in a leadership capacity on several interagency groups supporting efforts to make the nation more resilient to a changing climate, with a focus on drought and other severe weather conditions affecting agriculture. These include: the National Integrated Drought Information System (NIDIS), the National Drought Resilience Partnership (NDRP), and the Interagency Council for Advancing Meteorological Systems (ICAMS).

Sustainable Development

USDA's Director for Sustainable Development provides leadership in planning, coordinating, and analyzing USDA's policies, programs, and activities related to sustainable agricultural, natural resource, and community development. USDA's approach to sustainability considers the balance of economic, social, and environmental dimensions in the context of providing safe and nutritious food for all, providing decent incomes and wages for farmers and others across the food system, and conserving natural resources for the benefit of current and future populations. USDA's efforts on sustainability and climate change intersect around the idea of sustainably enhancing agricultural productivity growth to meet the world's growing food demand, while mitigating and adapting to climate change. Agricultural productivity growth helps to mitigate greenhouse gas emissions from agriculture through more efficient use of resources and reduced land conversion including reduced deforestation. Agricultural productivity growth adapted to climate change will help farmers meet the world's food needs while simultaneously conserving resources. To mobilize efforts internationally to advance sustainable productivity growth in the transition to more sustainable food systems, the United States launched the Coalition on Sustainable Productivity Growth for Food Security and Resource Conservation at the 2021 UN Food Systems Summit. Through this initiative, USDA is working with partner countries, international organizations, academic and research institutions, the private sector, foundations and other organizations to motivate the acceleration of sustainable productivity growth within and across agriculture sectors.

Food Loss and Waste

Within OCE also sits USDA's Food Loss and Waste Liaison, who works across USDA and in the interagency to advance efforts to prevent food loss and waste. In the context of climate adaptation, addressing food loss and waste can increase the resilience of the food system to shocks, like those due to climate change, while also increasing the economic resilience of producers.

Office of Risk Assessment and Cost Benefit Analysis

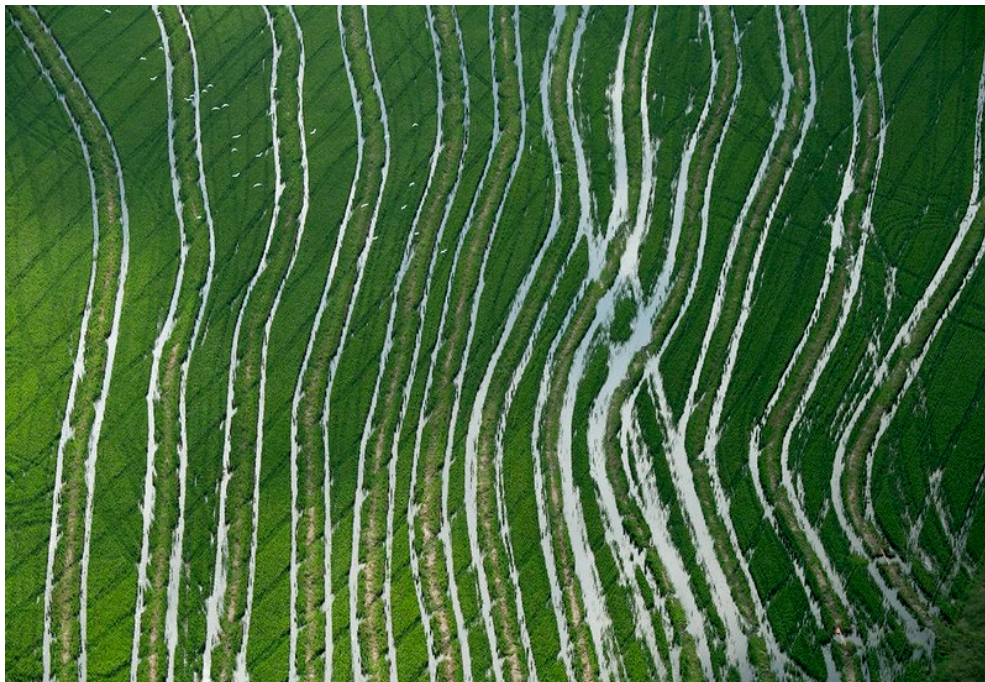
The Office of Risk Assessment and Cost Benefit Analysis (ORACBA) reviews risk assessments required for USDA proposed regulations that regulate issues pertaining to the environment, human health, or human safety and reviews economic analyses for USDA regulations. As the effects of climate change become more pronounced, especially related to invasive species, animal diseases, drought, wildfire, and other

risks to human health or the environment, there may be increased demands on ORACBA to review risk assessments for regulations designed to mitigate these risks or coordinate risk analyses of hazards exacerbated due to climate change.

Office of Pest Management Policy

The Office of Pest Management Policy (OPMP) develops and coordinates USDA policy on pesticides, biotechnology, integrated pest management, and other topics. As described in the climate adaptation plan of the Animal and Plant Health Inspection Service (APHIS), climate change will alter the geographic distribution and behavior of pests; thus, the work of OPMP will likely have to respond to these shifts and changes in agricultural practices as a result of climate change. OPMP supports the registration of safer, new pesticides and continued approval of older chemicals found to be safe under regulatory review. These products are needed to address pests and diseases in new geographic areas, including biological pesticides that have reduced environmental impacts.

USDA's Biotechnology Coordinator sits within OPMP and supports the development, coordination, and implementation of USDA's biotechnology policy. Agricultural biotechnology can be an important tool for addressing the causes and consequences of climate change. For climate adaptation, agricultural biotechnology can be used to develop plants and animals that are adapted to increased temperatures, drought, new diseases, and other stressors. OEEP and OPMP will continue coordinating to ensure that their efforts are complementary in supporting the needs of farmers and other producers in a changing climate.



OFFICE OF BUDGET & PROGRAM ANALYSIS

The Office of Budget and Program Analysis (OBPA) is a Departmental Staff Office within USDA whose mission is to ensure that USDA programs are delivered efficiently, effectively, and with integrity by incorporating performance, evidence, and risk into decision making while simultaneously advocating for necessary budgetary resources and executing the budget to ensure that USDA can effectively and efficiently accomplish its mission for the benefit of the American people.

In accordance with E.O. 14008 Tackling the Climate Crisis at Home and Abroad and the Department-wide Action Plan for Climate Adaptation and Resilience, OBPA has developed its own adaptation plan to best address climate change within its functions. OBPA will ensure that employees have basic climate literacy, especially within their Mission Area or agency, to understand how to build climate change programs within the context of the budget. Additionally, while OBPA does not deliver programs like other mission areas within the USDA, it leads the Department's strategic planning process, enterprise risk management, performance management and reporting, budget analysis and review, and legislative and regulatory process. With these overarching functions, OBPA can provide support for the Department's Action Plan for Climate Adaptation and Resilience in the following ways:

- **Strategic Planning, Performance, and Evidence Building.** OBPA coordinates the development of many Department-wide documents, such as the USDA Strategic Plan, Annual Performance Plan and Report, Learning Agenda, Capacity Assessment, and the Annual Evaluation Plan. OBPA engages with USDA senior level leadership as well as Mission Area staff across the Department to ensure cross departmental collaboration. The 2022 -2026 USDA Strategic Plan supports the Department-wide Climate Adaptation Plan and USDA leadership's commitment to address the climate change crisis by setting its first strategic goal to "combat climate change to support America's working lands, natural resources, and communities." This is to be accomplished through measurable objectives such as increasing the sustainability of our forest, crop, and livestock systems by deploying climate and environmentally smart management practices and increasing carbon sequestration practices to reduce greenhouse gas emissions. OBPA will partner with the various Mission Areas to develop performance metrics that accurately track progress towards climate change related activities and ensure USDA can measure progress in meetings its goals by looking at quarterly strategic updates.

OBPA will also work closely with agencies such as the Natural Resources Conservation Service (NRCS), Forest Service (FS), Office of the Chief Economist (OCE), Office of the Chief Scientist (OCS), Research, Education, and Economics (REE), and Office of Property and Environmental Management (OPEM) to identify the current evidence building activities and learning gaps in crosscutting priorities such as climate change, environmental justice, etc. through the development of the Department's Capacity Assessment and Learning Agenda. OBPA will

encourage cross collaboration in evidence building efforts and ensure activities are being accounted for in the development of the Strategic Plan and implementation strategies.

- **Enterprise Risk Management.** OBPA is currently developing the framework for USDA's Enterprise Risk Management program, led by OBPA's Director who is named as USDA's Chief Risk Officer. OBPA will engage with leadership across the Department to identify different risk classes that are threats to strategy, mission support, and overall governance. The risk framework will allow for all Mission Areas to identify risks, categorize them in a coordinated approach, and allow for a holistic vision to address cross-Departmental risk such as climate change. Once the framework is fully developed and implemented, Mission Areas will be able to proactively identify the risk posed by factors such as climate change. OBPA will ensure that stakeholders have a clear understanding of their roles and responsibilities, as well as assist Mission Areas in identifying opportunities to leverage climate mitigation approaches and incorporate more data-driven decision making by creating measurable risk indicators.
- **Budget Formulation Process.** OBPA creates guidance for agencies to develop and formulate their budget estimates. In order to address pressing climate change needs, OBPA will provide guidance and direction for agencies to establish climate change activities as priorities that are detailed in their budget submissions. In the Chapter 11, 12, and 13 guidance that is sent out to the mission areas and agencies, OBPA will ask agencies to highlight the climate change activities occurring across the Department and incorporate the goals of the Departmental adaptation plan in the justifications. OBPA already began incorporating performance elements into the FY23 budget process at the agency estimate and department estimate stages and will continue working with Mission Areas to ensure that their performance metrics align with the Strategic Objectives laid out in the Strategic Plan. Additionally, OBPA will continue to feature climate change crosscutting activities in the annual budget summaries that are released with the President's Budget and provide examples of climate change related increases in the Budget.
- **Budget Data Collection and Requests.** OBPA works with OMB and USDA leadership to coordinate Department-wide budget data requests and crosscuts to report on funds spent on US Global Change Research Program, Clean Energy and Emission Mitigation, Climate Adaptation and Resilience, International Climate Assistance, Justice 40, etc. This includes close coordination with OCE to set definitions and guidelines to ensure that data collection is helpful and accurate. While this data is currently collected more retrospectively, OBPA will more proactively leverage the climate funding data to inform decision making and program investments during budget formulation. This can help provide a more complete picture for policymakers to evaluate climate change programs and align budgetary resources accordingly. This will build up on the role that OBPA has already played in coordinating climate hub funding across Mission Areas. OBPA is also working closely with the Office of the Secretary to implement the Justice40 initiative, a response to section 223 of E.O. 14008, by providing support in developing a benefit calculation methodology and overall coordination and implementation.
- **Regulatory and Rulemaking.** Executive Order (EO) 13990, "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis," directs all federal agencies to immediately review and take action, as appropriate and consistent with applicable law, to

address any regulations or other actions from the previous Administration that conflict with national objectives to combat the climate change crisis, and propose new regulations to establish the comprehensive standards of performance and emission guidelines for methane and volatile organic compound emissions. As such, OBPA has been assisting Mission Areas in identifying any existing regulations, orders, guidance documents, and policies that are inconsistent with national objectives and by providing comprehensive support and review for the addition or rescission of regulations to further the objectives of the EO.



OFFICE OF HOMELAND SECURITY

The vital mission of the Office of Homeland Security is to mitigate risk and safeguard USDA personnel, customers, assets, and information by leading government-wide initiatives and championing USDA's equities in homeland and national security. OHS leads the Department in all its programs and initiatives that support the National Preparedness Goal. This includes all Departmental activities that fall under the Goal's five mission areas of Prevention, Protection, Mitigation, Response, and Recovery. As a department with worldwide equities, USDA faces a variety of challenges in a diverse threat environment. OHS provides coordination on security policy of the Department including Homeland Security, Agro-Terrorism, and serves as liaison with the Intelligence Community. As a department with an extremely diverse workforce, USDA faces a variety of challenges to support the daily operations of its employees. In a rapidly changing threat environment, OHS must provide coordination and leadership on security policy activities and information to the USDA community including Insider Threat, Continuity of Operations, Emergency Response, and the proper management of radiological materials.

Component Missions

Office of the Director (OD). The OD oversees OHS's five Divisions, provides regular updates to the Office of the Secretary, the Assistant Secretary for Administration, and the Subcabinet, and coordinates all budget, procurement, human resources, and other cross-divisional initiatives. OD champions the security and protection of USDA workforce and facilities by chairing the USDA Security Council and partnering with all Agencies to strengthen security for USDA locations. OD serves as the Departmental Continuity Coordinator for all continuity of government events. The National Security Systems Program Office provides the Secretary of Agriculture, Executive Staff, Staff Offices, and Agencies with the ability to communicate Classified National Security Information (CNSI) within, and external of the Department in a secure and cost-effective manner; and ensures that the requirements as directed by the White House, for the Continuity of Operations (COOP) and the Continuity of Government (COG) are met.

Continuity of Planning Division (CPD). CPD assists the USDA Continuity Coordinator with providing oversight and coordination of the development and administration of the Department Continuity Program. This includes:

- Providing guidance and direction regarding continuity of operations to the Office of the Secretary, Departmental staff offices, mission areas, and agencies.
- Representing and acting as a liaison for the Department in contacts with other Federal entities and organizations concerning matters of assigned continuity program responsibilities.
- Overseeing the Department continuity of operations and emergency relocation facility planning, development, equipping, and preparedness to ensure that resources are in a constant state of readiness.

Emergency Programs Division (EPD). EPD serves as the focal point for emergency management and coordination of senior leadership notification and awareness to responses to natural or man-made disasters within the scope of the USDA mission.

EPD manages the 24/7 Operations Center which assists in the development and coordination of policies, capabilities, and procedures for reporting and alert notification of emergencies impacting the USDA mission or personnel globally.

National Security Division (NSD). NSD coordinates with USDA agencies to deliver a unified voice to the White House and interagency on national security policy initiatives which align with USDA's mission areas; collaborates with Food and Agriculture Sector partners to protect the Nation's critical infrastructure from all hazards and emerging threats; and works to enhance the preparedness, mitigation, resilience, and response activities of the agricultural sector.

NSD also provides strategic warning and orchestrates policy to counter threats to address national security; seeks to deter, prevent, detect, and mitigate threats in order to protect intellectual capital and classified national security information from exploitation, compromise, or other unauthorized disclosure; and provides direct support to the impact of investment of foreign business environments to our economic viability.

Personnel and Document Security Division (PDSB). PDSB focuses on safeguarding national security information within USDA, managing security clearances, and determining Suitability for Employment for USDA employees in public trust positions.

PDSB is responsible for establishing and implementing USDA's classified national security program to safeguard national security information.

PDSB provides oversight to USDA Agencies concerning classified information and Controlled Unclassified Information (CUI) and controls access to classified information by establishing and implementing USDA's Access to Classified Information program.

Radiation Safety Division (RSD). The RSD is the operational radiation safety office for all of USDA; implementing policies and procedures established by the USDA Radiation Safety Committee to ensure the safe acquisition, use, and disposal of ionizing radiation sources within USDA.

RSD provides technical assistance to all of USDA during its response to nationally significant radiological emergencies (such as nuclear power



plant accidents). RSD coordinates USDA's participation on the Federal interagency Advisory Team for Environment, Food, and Health; providing human health protective action recommendations to State, Tribal, and local governments during radiological emergencies.

Climate Change Effects and Vulnerabilities

In accordance with E.O. 14008 Tackling the Climate Crisis at Home and Abroad and the Department-wide Action Plan for Climate Adaptation and Resilience, OHS has developed its own adaptation plan to best address climate change within its functions. OHS will ensure that employees have basic climate literacy, especially within their own OHS office, to understand how to build climate change programs within each office area in the following ways:

Interagency Coordination. OHS recognizes that there is an increasing need for more intensive interagency coordination due to increased severity and duration of weather impacts that affect all areas of OHS including continuity of operations planning, interagency policy development, and emergency response and recovery. OHS will enhance interagency coordination at meetings with Agency Emergency Coordinators, Continuity Coordinators, and Security Council to focus on the potential impacts of climate change on USDA emergency response and recovery, COOP planning and policy development.

Importance of Intelligence Briefings. OHS will ensure that intelligence briefings provided by the National Security Division (NSD) incorporate the latest information related to the five climate vulnerabilities outlined in the USDA Action Plan for Climate and Adaptation. These vulnerabilities are based on prior vulnerability assessments by USDA and the best understanding of the threats posed by climate change and its impacts in the Fourth National Climate Assessment. OHS will also incorporate I.C. Products into briefings related to the climate vulnerabilities outlined in the USDA Action Plan for Climate and Adaptation that can be shared with varying levels of USDA leadership.

Operations Center Importance. OHS recognizes that there is an increasing workload for our 24/7/365 Operations Center due to longer and more intense fire, flood and hurricane seasons resulting in need to operate at a higher tempo for longer durations of time. In the future, there may be a need for different staffing patterns or additional personnel. OHS will examine flexibilities with our current Operations Center contract to allow us to expand personnel as needed during fire, flood and hurricane seasons. Recognizing the importance of GIS software to track impacts, OHS will work with interagency partners on enhanced GIS products and share information in a timely manner.

Agency Alternative Sites. OHS will ensure that agency alternative sites have properly accounted for risks posed by climate change, specifically concerning threats that may not have been considered (or considered using a very different model) when sites were originally chosen. This includes considering the potential for intense and severe heat. OHS will work closely with the Agency COOP Coordinators to ensure that they are accounting for the risks posed by climate change to their alternate sites.

Headquarters Building Potential Impacts on Operations. OHS operations are increasingly vulnerable to the flooding risk posed to USDA HQ Department's Emergency operations by having many of its offices in the basements of the Whitten and South Buildings, which have been known to flood. OHS will continue to exercise alternate work opportunities for watch officers so that they can perform the majority of their work from HQ and alternate locations.

Collaboration. OHS will ensure that we collaborate closely with our USDA and external partners and their own climate initiatives. Whenever possible OHS will incorporate identified climate change threats and vulnerabilities into the Department’s Emergency Response and Preparedness Exercise Program to enhance climate literacy and incorporation of climate considerations into USDA and its agencies COOP and COG planning. This can provide an important avenue for USDA employees to practice integrating climate preparedness into USDA’s mission, programs, operations, and management.

Resilience. OHS will continue to assess climate vulnerabilities pre and post disaster, ultimately to build resilience.

Climate Hubs. OHS will continue to support Climate Hubs interactions with the diverse offices within FEMA and find audiences for their vital climate information.

OFFICE OF PROPERTY AND ENVIRONMENTAL MANAGEMENT

The Office of Property and Environmental Management (OPEM) provides Department-wide administration, leadership, policy, and program oversight in the areas of property, fleet, and environmental management. This includes issuing guidance and policy, managing data, leasing oversight and compliance; real property management; fleet and aviation management; environmental response and restoration; environmental compliance; and sustainable operations for energy and water, sustainable buildings, solid waste and recycling, sustainable acquisition, and electronic stewardship. To successfully accomplish its mission goals, OPEM recognizes that it is critical to incorporate climate change adaptation and to address climate change in its operations.

In the January 27, 2021, Executive Order (EO) 14008 Tackling the Climate Crisis at Home and Abroad, President Biden laid out a vision for a United States governmentwide approach. This approach is based on a set of coordinated domestic actions to address the risks and opportunities posed by climate change. In EO 14008, the White House directs USDA to submit an action plan with steps to bolster adaptation and increase resilience to the impacts of climate change across our mission and operations. USDA published its Climate Action Plan in October 2021.

Previously, in 2014, in response to EO 13653 Preparing the United States for the Impacts of Climate Change, USDA wrote its first overarching Climate Adaptation Plan. The plan included a vision for integrating climate change considerations into operations and mission objectives in the context of



USDA's strategic goals. Since 2010, the OPEM has developed the USDA Sustainability Plan annually. In this plan, USDA reports on its progress in sustainable operations, and provides the necessary strategies to increase its climate adaptation and resilience as well as sustainability levels.

In 2021, USDA leadership drafted a 2022-2026 USDA Strategic Plan to align with the Biden- Harris Administration's priorities, including to address climate change. Subsequently, the OPEM has developed its internal Strategic Operations Plans and Key Performance Indicators to lead and assist USDA agencies and staff offices to achieve the USDA strategic goals.

The OPEM develops this Climate Adaptation Plan to meet the requirement of Departmental Regulation 1070-001. This Climate Adaptation Plan identifies how climate change is likely to affect the office's ability to achieve

mission, operations, and program objectives, to develop and prioritize actions integrating climate risks into strategic planning and decision-making, and to implement and evaluate progress. To measure progress towards achieving climate adaptation goals, OPEM is to develop metrics relevant to its mission and adaptation strategies.

OPEM Climate Vulnerabilities

Climate change increases vulnerabilities and presents many additional challenges to OPEM and its agencies. OPEM's program management vulnerabilities arise from diminished resources availability to functions and decision making in managing multiple OPEM programs, including facilities energy and water, sustainable buildings, managing real and personal property, as well as fleet vehicles, sustainable acquisition, and environmental response and restoration.

Climate change threatens facility operations as well as resources and infrastructure availability. The increasing frequency and intensity of extreme weather events challenge OPEM's mission and the department's external-facing mission. OPEM identifies the following climate vulnerabilities building on prior USDA vulnerability assessments.

USDA mission-related stresses, energy, water, and natural resources availability

Resource availability is threatened by climate change, including quantity and quality of energy and water available. Climate change impacts on the water cycle results in reduced water supply, degraded water quality, more intense and frequent drought, and more intense and frequent flooding. This results in operational and mission accomplishment challenges and threats to resilience. Key threats and impacts related to energy and water infrastructure include threats to OPEM customer agencies' land and facility management in these areas:

- **Energy and water availability.** The energy and power supply at many USDA facilities are susceptible to the increased frequency and severity of storms. Dual fuel equipment is critical for USDA's remote buildings, as these remote facilities require secondary fuels as a backup. USDA's beneficial operations rely on fossil fuels for heat, usually interruptible natural gas supplies, which are frequently subject to supply shortages. Outages can result in damage to heating equipment and extremely high costs.
USDA owns miles of aging overhead and underground electrical wiring, steam pipes, natural gas pipes, and domestic water and sewer lines, which are vulnerable to severe weather events. This infrastructure requires periodic maintenance to improve and maintain reliability, functionality, and resilience.
- **Surface water quality and availability.** High-intensity wildfires introduced by weather extremes and drought can cause erosion rates at much higher rates than lower-intensity fires due to destruction of the litter layer. A heavy rainstorm following a wildfire can cause excessive runoff and erosion, depending on the local soils and topography, whereas light rain could have minimal impact and increase plant growth. The streams, rivers, or lakes within a watershed can experience increased sediment loading following a wildfire. Runoff from erosive upland areas can transport sediment to surface waters. Eroding stream banks can also contribute sediment if increased runoff volumes have altered the physical characteristics of a stream channel, such as

width, depth, and cross-sectional area, to the point the stream channel becomes unstable. The loss of vegetation that, prior to the fire, helped hold stream banks together can also lead to bank instability and erosion. Increased sediment loads in surface waters can affect aquatic habitat, food webs, fish spawning grounds, and, in severe cases, can directly cause fish kills.

- **Riparian, aquatic, and terrestrial ecosystems.** Changes in climate and the water cycle are affecting aquatic and riparian ecosystem structure and function, potentially resulting in loss of at-risk species, new species being put at risk, the introduction of additional or expansion of existing invasive species, and the establishment of new diseases and pathogens. Declines in forest health because of drought, excess soil moisture and flooding will lead to increased vulnerability to natural disasters such as wildfires, severe storms, and forest insect and pathogen outbreaks. These natural disasters will impact OPEM customer agency's operations and mission.
- **Target existing programs to support water issues.** Projected changes in water availability will require programmatic shifts to address emerging needs.

Supply chain disruptions in procuring supplies and services that fulfill sustainable acquisition requirements

OPEM leads USDA efforts to comply with sustainable acquisition requirements by implementing policies and practices to purchase energy efficient, sustainable, and USDA- designated biobased products in compliance with statutory requirements and the Federal Acquisition Regulation. USDA reports annual progress on meeting sustainable acquisition requirements and monitors USDA agency progress quarterly. Climate change can cause supply chain disruptions for procuring any supplies and services. This can affect the department's ability to obtain products and services that comply with sustainable acquisition requirements and reduce the department's ability to meet those requirements.

Stress on facilities, fleet, infrastructure, and federal land

Climate change causes more frequent and intense disruptive events, including hurricanes, floods, drought, and fires, which can have significant impacts. The increasing frequency, severity, and extent of extreme events have far-reaching consequences on facility and fleet operations, on supply chains, and on natural and built infrastructure on National Forest System and other federal lands. Increasing flood frequency, wildfire intensity, sea level rise, and extreme precipitation events can damage low-elevation infrastructure and utilities, threaten engineered solutions on environmental restoration sites, degrade air quality, and endanger coastal communities.

- **Facility operations.** Extreme events such as floods, wildfires, sea level rise, and storms can disrupt access to and safe use of USDA facilities, as well as resource availability. Adaptation strategies include assessing sustainable buildings, proactively engineering and building structures to account for extreme events, and building-in workplace and system redundancies. In addition, to help USDA agencies adapt, the department must position itself to write facility planning, construction, and operations guidance that accounts for these climate stresses.
- **Fleet operations.** Climate change and extreme weather events pose significant, ongoing challenges and risks to fleet operations. Fleet-related assets can be affected by climate change

as they are exposed to weather conditions while their protection or adaptation requires substantial planning and investment. Changes of the current climate conditions that can affect fleet operations include sea level rise, increase of the intensity and frequency of storms and winds, increase of temperature, changes in the intensity and frequency of extreme precipitation events, floods, and droughts. Potentially vulnerable to these changes are both infrastructure and operation, while the impacts can be either permanent from loss of infrastructure, or temporary from disruption of services.

Fleet operation disruptions primarily arise from the effects that cause an immediate and extended loss of electric power. Following these disruptions, the infrastructure, notably the fueling stations, becomes unusable. As a result, the vehicles themselves are unavailable, inaccessible, or inoperable resulting from physical damage, or not reliable and performance-ready for the length of a sustained outage.

One major disruption to fleet operations is the effect of extreme weather events that heavily impact fuel and its corresponding transport, delivery, storage, and dispensing infrastructure. Regardless of infrastructure designs meant to handle the assortment of stresses along their useful life, increases in the frequency and severity of extreme weather events will, nonetheless, increase the rate of their deterioration. Structural damage resulting from severe weather can also impact the service life of the vehicles themselves.



Environmental cleanup

Extreme weather events can undermine the effectiveness of the engineered remedies that are designed to protect human health and the environment at remediation sites. Flooding, drought, and fire can adversely affect the original site remediation design. These events can also impact the site characteristics that formed the basis of the design. Affected site characteristics may include contaminant toxicity, exposure, organism sensitivity, and contaminant fate and transport. Similarly, the long-term operations, management, and stewardship of remediation sites are vulnerable to extreme weather events. As a result, climate change can not only decrease the effectiveness of the remedy, but also increase the cost of cleaning up contaminated land. Increased temperatures increase the mobility of contaminants in soil, water, and air. Adverse weather events can delay operations and damage

equipment. Increased flooding and changes in drainage patterns could render contaminated areas inaccessible or alter migration pathways, distributing contaminants over a wider area.

Stress on vulnerable and underserved communities

Climate change is likely to disproportionately impact vulnerable and underserved communities via several pathways. These include:

- **Environmental Sustainability and Human Health.** Many communities who are exposed to the impacts of climate change are already burdened by air and water pollution and other environmental health hazards. The impact of climate change on hazardous waste sites could increase exposure to pollutants in vulnerable underserved communities.
- **Ecosystem services and livelihoods.** Climate change threatens community ecosystem services including clean air and water, subsistence foods, medicine, fiber, fuel, and cultural services. Rural communities and migrant workers are particularly vulnerable to climate change impacts.
- **Extreme weather event impacts.** The impacts of extreme weather events influenced by climate change are expected to have a disproportionate impact on populations lacking resources to cope with economic and environmental shocks and uncertainty. Risk-prone communities face cumulative exposure to multiple pollutants and climate event impacts. Extreme weather could flood risk-prone communities with contaminated water.

See the Environmental Justice discussion in Part III OPEM Priority Adaptation Actions.

OPEM Priority Adaptation Actions

OPEM will implement following priority adaptation actions via its programs mission relative to USDA operations and management of real property, federal land, sustainable procurement, fleet and environmental protection.

Enhance workforce climate information sharing and literacy

OPEM acts to enhance climate information sharing and literacy efforts, both internally and externally to assist USDA agencies. USDA will use its Sustainable Operations Council and various interagency working groups to facilitate information sharing and climate literacy through the agency and office senior leaders and program managers.

OPEM will leverage existing communication channels to provide information on and increase awareness of the value of adopting and applying climate-smart adaptation strategies. Also, OPEM will foster discussion of climate change adaption strategies specific to its programs including to:

- As a priority, share climate information regularly in the quarterly USDA Environmental Coordinator's meeting. This meeting includes USDA Environmental Program Leads representing each mission area, agency, and staff office that addresses USDA environmental issues;
- Communicate, in OPEM work group meetings and directly with staff, regarding the science of climate change and effects of climate change policy on USDA programs. Raise awareness of climate change influences and impacts on USDA practices; and
- Highlight information on climate change and adaption resources and training offered by other federal agencies as part of the Quarterly EnviroPost Newsletter distributed widely across USDA.

Develop USDA climate-smart policy and guidance to incorporate climate risk considerations

OPEM incorporates climate adaptation in the departmental policies and guidance to assist agencies to implement climate-smart policies and practices for effective adaptation, mitigation, and resilience. This will effectively increase sustainability and operational adaptation strategies. Many collaborative actions already exist or are positioned to begin soon, using existing resources and programs.

Additional efforts will enable OPEM to effectively address actions that rely on new data or expertise or require significant program enhancements. In the near-term, OPEM measures progress using existing systems, and can use existing data to plan for climate risk considerations in policies and practices.

OPEM will take the following actions to manage climate-related risks:

- Evaluate and monitor climate risks to facilities, fleet, and property acquisition processes,
- Implement incentives to encourage mitigation, resilience, and adaptation practices,
- Implement procedures that facilitate access to energy, water, and other natural resources, and
- Provide guidance and an online compilation of resources for the mitigation of climate risk to cleanup actions.



Issue policy and guidance to increase facility energy and water resilience

OPEM will issue policy and guidance to USDA agencies to support facilities' energy and water management adaptation actions that lead to enhanced climate resilience. These actions include:

- **Increase onsite renewable energy capacity and installation of microgrids.** OPEM will issue policy and guidance to increase onsite renewable energy capacity and install microgrids to improve resilience at its facilities. This will include guidance for transitioning from propane/diesel generators to mobile solar energy systems with battery backup at remote sites and installing solar panels to enable facilities to operate off-grid; and using energy performance contracts to install solar energy equipment, geothermal energy systems, and microgrids at remote facilities to mitigate impacts from future storms. This guidance will help reduce the cost of electricity and eliminate the dependence on unreliable and poor-quality power at remote sites.

- **Improve the condition and resilience of government owned infrastructure.** OPEM will issue guidance for performing leak tests on water systems that show inconsistent consumption or lack of integrity, conducting cost-effective maintenance and repair on equipment and infrastructure, and establishing and maintaining good communications with local utility providers.
- **Switch fuel types, use dual fuel equipment, and reduce the carbon footprint of facilities.** OPEM will issue guidance for converting to dual fuel heating equipment, selecting secondary fuel types with the best GHG emission ratings, and converting heating equipment from fossil fuels to electric heat pumps that can be powered by solar panels.

Develop and implement an Energy Management System

OPEM will develop and implement an ISO 50001-based Energy Management System (EnMS) to integrate sustainable energy and water management into USDA's policies and practices. An EnMS will help provide a framework for USDA to develop policies, objectives, and actions for more efficient use of energy and water. An EnMS will enable USDA to better manage its energy and water needs and infrastructure, while also maintaining the capacity to adjust its essential energy and water use to the effects of climate change.

Foster strategic planning for climate adaption and resilience in cleanup projects

OPEM will include a requirement to evaluate climate impacts and opportunities to incorporate sustainable practices in all requests for funding from the Hazardous Material Management Account. USDA agencies will be required to demonstrate a consideration for adaptive and resilient design as part of the project funding process. Strategic goals for cleanup projects should emphasize approaches to address climate vulnerabilities, such as the following examples:

- Design and construct remedial systems to handle severe storms, flooding, wildfire, and other impacts that are expected to result from a warming climate,
- Model design solutions based on future climatic conditions as much as possible, rather than relying on past data,
- Create systems that will maintain working conditions in the event of extended loss of power or heating fuel through energy load reductions and reliance on passive heating and cooling strategies (passive survivability),
- Optimize the use of on-site renewable energy,
- Carry out water conservation practices and rely on annually replenished water resources, including, potentially, harvested rainwater, as the primary or backup water supply,
- Find opportunities to use gray water, defined as domestic wastewater excluding sewage, for plant irrigation, or for toilet flushing as required on-site,
- Specify products and materials that will not off-gas or leach hazardous substances in the event of flooding or fire damage, and
- Provide redundant electric systems with at least minimal back-up power capacity, such as a fuel-fired electric generator with adequate fuel storage or a solar-electric system with islanding capability.

Build climate change resilience in USDA facilities and on USDA land

OPEM will build resilience across the real property portfolio, emphasizing those assets found to be most vulnerable to climate change impacts. OPEM will take action to:

- **Implement priority USDA real property resilience projects.** Assess asset-specific resilience requirements throughout USDA's real property portfolio and plan and develop resilience projects, prioritizing assets that are found to be most vulnerable to climate change impacts,
- **Integrate climate adaptation into sustainable facility and fleet policy, practice, and guidance.** OPEM integrates adaptation and resilience actions related to operations, sustainable construction, and sustainable acquisition,
- **Leverage existing USDA collaboration mechanisms.** OPEM continues to lead collaborations across the department,
- **Increase support for research and development of climate-smart facility and fleet practices and technologies.** USDA will act to encourage agency research and development of climate-smart facility and fleet practices,
- **Enhance green infrastructure and use a landscape-wide approach to address water issues at USDA land.** OPEM shares information on using green infrastructure technologies and practices to enhance natural water infiltration and decrease surface runoff and downstream flooding on USDA land. Successful adaptation actions are integrated contiguously across landscapes to manage water resources and restore ecosystems to enhance their climate resilience. OPEM will assess requirements, plan, and develop green infrastructure projects, and prioritize sites that are found to be most vulnerable to climate change impacts from extreme events, and
- **Explore innovative technologies and approaches.** Innovative technologies and approaches help USDA agencies to follow sustainable practices. For example, in conserving and managing the department's water and energy resources, reducing its greenhouse gas emissions, and in minimizing the USDA fleet's carbon footprint. OPEM supports innovative technologies and approaches. These will help USDA to reduce lifecycle costs, improve fleet efficiency, and meet environmental goals.

Enhance operational climate resilience in facilities, on sites, and in fleet

In response to the threats and impacts to OPEM's internal operations and mission, OPEM will work internally on operational resilience & externally with its counterpart agencies to integrate adaptation, mitigation, and resilience actions. USDA will facilitate integrating these agency actions into installation, building, facility, fleet, and natural and built infrastructure operations and management.

OPEM will continue to improve the climate resilience of sites and facilities and implement its Departmental Regulation for sustainable operations of sites and facilities. OPEM is responsible for coordinating with



agencies, setting annual strategic goals, developing actions, and measuring progress by creating agency scorecards for improvement. OPEM will construct and operate a climate-ready USDA real property portfolio, acting to:

- **Leverage OPEM sustainability policies.** The department is raising its standards for design, construction, operation, and maintenance of facilities and infrastructure by increasing renewable energy use and equipment efficiencies to conserve energy and reduce its GHG footprint,
- **Elevate building performance levels.** New buildings are required to perform 30 percent more energy efficiently than the industry standard. Over 45 percent of USDA-owned buildings with 10,000 gross square feet and larger are required to meet the Guiding Principles for Sustainable Federal Buildings. USDA uses third-party certification systems such as LEED or Green Globes to validate its green buildings,
- **Build with sustainable construction materials.** For construction materials, USDA prefers wood for new buildings due to its capacity for lower embodied energy and its carbon sequestration potential. Equipment performance is monitored throughout system lifecycles,
- **Select sustainable and environmentally equitable real property facility locations for leased and owned buildings.** USDA increasingly locates sustainable facilities that are third-party certified green and ENERGY STAR facilities with access to public transit. However, to meet its mission, USDA often leases facilities in remote and rural markets with limited options. USDA will achieve further emissions reductions in facilities in the future by building community climate resilience and sustainability, and



- **Practice operational resilience relative to flooding and rising sea levels.** USDA chooses utility equipment and central data center locations so as to improve operational resilience to flooding and rising sea levels. These centers feature direct digital controls, thermal aisle design, emergency power, and redundant cooling for continuity, lower operating costs, and higher capacities.

Transition to a low-emissions fleet and telematics rollout

OPEM is committed to reducing the fleet’s carbon footprint in USDA. This effort includes using acquisition strategies to identify and eliminate inefficient vehicles and replace them, as needed, with vehicles that use less petroleum per mile and use alternative fuels where available. Looking ahead, OPEM plans to incorporate fleet replacement initiatives to transition from fossil fuel vehicles to a combination of biofuels, fully electric, and hybrid-electric vehicles to reduce costs, improve fleet efficiency, and meet environmental goals. OPEM will also identify locations to install biofuel and electric vehicle infrastructure.

USDA is expanding the rollout of telematics technology. Increasing the number of vehicles with telematics devices installed will support replacement strategies by helping to identify and match ideal petroleum-fuel vehicle candidates for conversion to plug-in hybrids and all-electric vehicles. Telematics technology will also help to identify prime locations for electric vehicle charging stations. Leveraging telematics technology will support the agency’s key aims of optimizing vehicle performance; improving safety; increasing efficiency; reducing operating costs; and streamlining compliance with minimizing its environmental footprint.

Prepare for climate-ready supply of sustainable products and services

OPEM will work with USDA mission areas and agencies to determine the potential for increasing the resiliency of supply chains for products and services that comply with sustainable acquisition requirements, and steps that can be taken to improve the availability of those products across USDA. This has the potential to help agencies source sustainable products such that they will be available when needed, and despite any weather events that might disrupt supply chains, thus improving resilience. This will be discussed at USDA’s Green Purchasing Work Group, which is led by OPEM and comprised of representatives from USDA Agencies that report data to the Federal Procurement Data System on sustainable acquisition.

Environmental Justice

OPEM will focus on environmental justice in Hazardous Materials Management Appropriation (HMMA) funding to meeting the Environmental Justice 40 initiative, and in real property facility location selections, acting to:

- **Address adaptation limitations and constraints within vulnerable communities through HMMA funding allocations.** Forty percent of HMMA funding will be allocated to disadvantaged communities in accordance with the Environmental Justice 40 initiative. Socially disadvantaged, low-income, minority, and rural populations as well as American Indians, Alaska Natives, and sovereign Tribal governments are more likely to be vulnerable to the impacts of climate change.

These communities' ability to adapt to a changing climate is often limited by financial, social, and other constraints. Providing HMMA funding to these communities will help minimize impacts of climate change on contaminated sites.

- **Select customer-friendly real property lease locations.** The OPEM Lease Compliance Officers (LCOs) consider access by disadvantaged community customers when working to select the best facility locations. In selecting facility locations, OPEM addresses how to best serve disadvantaged communities by:
 - Collaborating across the department with USDA community outreach agencies, such as the Office of Civil Rights, the Office of Small Disadvantaged Business Utilization, the Farm Services Agency, and Rural Development,
 - Supporting all USDA agencies in their work directly with tribal and other socially disadvantaged communities, and
 - Serving USDA disadvantaged community customers, by providing space in these specific locations in conjunction with state contract officers.

USDA will demonstrate, in implementing this Climate Action Plan, how adaptation actions lead to greater resilience, both internally and externally for the Department's stakeholders. USDA is addressing emerging and future climate risks and adjusting its efforts and resources to prepare USDA mission stakeholders for climate resilience in both rural and urban communities.

TABLE 1: OCE CLIMATE ADAPTATION ACTIONS

Action	Lead Office	Coordination	Accomplishments to Date
Climate Adaptation	OEEP/CCPO	USDA & interagency	<ul style="list-style-type: none"> • May 2021 Revision of Departmental Regulation 1070-001 • October 2021 release of USDA’s Action Plan for Climate Adaptation & Resilience • USDA Climate, Agriculture, and Forestry Seminar Series (ongoing) • Inclusion of climate adaptation in USDA’s 2022-2026 Strategic Plan
Drought Coordination	WAOB Meteorologists	USDA & interagency	<ul style="list-style-type: none"> • Coordination with Climate Hubs on upcoming Cooperative Agreement with the National Drought Mitigation Center • Actively partnering with Intergovernmental Council on Advancing Meteorological Services to produce a survey of Federal weather and climate networks • Maintaining leadership roles in the National Drought Resilience Partnership and the National Integrated Drought Information System • Rotating authorship of US Drought Monitor and North American Drought Monitor
Sustainability	OCE	USDA, State, USAID	<ul style="list-style-type: none"> • The United States launched the Coalition on Sustainable Productivity Growth for Food Security and Resource Conservation (the SPG Coalition) in 2021 at the United Nation’s Food Systems Summit to mobilize action to accelerate the transition to more sustainable food systems through productivity growth that optimizes agricultural sustainability across social, economic, and environmental dimensions • The SPG Coalition has over 90 members, including 19 countries, the EU, the Food and Agriculture Organization of the UN and research and private sector organizations from around the world. • The Coalition has finalized its Terms of Reference, hosted webinars to share best practices, and is planning its first global conference for October 8, 2022.
Food Loss & Waste	OCE	USDA, EPA, & interagency	
Risk Assessment and Regulatory Review	ORACBA	USDA & interagency	<ul style="list-style-type: none"> • Reviewing environmental risk assessments for USDA regulations • Coordinating risk assessment resources across USDA • Advertising climate-related events in ORACBA News and Calendar
Climate-related pest management issues	OPMP	USDA & interagency	<ul style="list-style-type: none"> • Investigating the specific impacts on grower adoption of climate-smart conservation practices (e.g., no-tillage and cover cropping) from regulatory changes for key herbicides.

			<ul style="list-style-type: none"> • Supporting the continued registration and proper stewardship of pesticide seed treatments products, which can be especially well-suited to the unique challenges of higher pest and disease pressure in no/low-till, cover-crop scenarios. • Support continued safe use of tools that are needed in crop protection, and which may become more important in the face of changing pest complexes.
Climate-related biotechnology issues	OPMP	USDA & interagency	<ul style="list-style-type: none"> • Coordination within USDA and across the Federal government to support domestic and global development, risk-proportionate regulation, and usage of biotechnology products that can help address the causes and consequences of climate change. • Coordination of USDA input into the draft executive order “Advancing Biomanufacturing and Biotechnology Innovation for a Sustainable, Safe, and Secure Bioeconomy”, which includes leveraging biotechnology to address climate change (expected finalization in June 2022). • Along with other USDA staff, published the peer-reviewed journal article “Advancing genome editing to improve the sustainability and resiliency of animal agriculture” which emphasized the role of biotechnology in climate change adaptation and mitigation in animal agriculture on April 21, 2022. • Worked with USDA Foreign Agricultural Service to host “The Role of Agricultural Biotechnology to Address Climate Change” workshop for APEC High Level Policy Dialogue for Agricultural Biotechnology on April 19-20, 2022. • Publication of the “Biotechnology and Climate Change” page on the USDA website in March 2022. • Coordination within USDA and with FDA on FDA’s March 2022 announcement of a regulatory decision for genome-edited SLICK cattle, which have increased heat tolerance. • Led a February 2-3, 2022, workshop for developers on regulation of genetically engineered microorganisms, many of which will enable climate change adaptation and mitigation in agriculture and industry.

TABLE 2: OBPA CLIMATE ADAPTATION ACTIONS

Action	Lead Office	Accomplishments to Date
Strategic Planning, Performance, and Evidence Building	OBPA Performance	The 2022 -2026 USDA Strategic Plan supports the Department-wide Climate Adaptation Plan and USDA leadership’s commitment to address the climate change crisis by setting its first strategic goal to “combat climate change to support America’s working lands, natural resources, and communities.”
Enterprise Risk Management	OBPA Performance	OBPA is currently developing the framework for USDA’s Enterprise Risk Management program, led by OBPA’s Director who is named as USDA’s Chief Risk Officer.
Budget Formulation Process	OBPA Budget Formulation	OBPA already began incorporating performance elements into the FY23 budget process at the agency estimate and department estimate stages and will continue working with Mission Areas to ensure that their performance metrics align with the Strategic Objectives laid out in the Strategic Plan. Additionally, OBPA will continue to feature climate change crosscutting activities in the annual budget summaries that are released with the President’s Budget and provide examples of climate change related increases in the Budget.
Budget Data Collection and Requests	OBPA Budget Formulation	OBPA works with OMB and USDA leadership to coordinate Department-wide budget data requests and crosscuts to report on funds spent on US Global Change Research Program, Clean Energy and Emission Mitigation, Climate Adaptation and Resilience, International Climate Assistance, etc. OBPA is also working closely with the Office of the Secretary to implement the Justice40 initiative, a response to section 223 of E.O. 14008, by providing support in developing a benefit calculation methodology and overall coordination and implementation.
Regulatory and Rulemaking	OBPA Regulatory	OBPA has been assisting Mission Areas in identifying any existing regulations, orders, guidance documents, and policies that are inconsistent with national objectives and by providing comprehensive support and review for regulatory actions that support those objectives.

TABLE 3: OHS CLIMATE ADAPTATION ACTIONS

Climate Vulnerability	Action Title/ Description	Type of Activity	Coordination
Increasing need for more intensive interagency coordination due to increased severity and duration of weather impacts	Ensure that we utilize our interagency coordination at meetings with as the Agency Emergency Coordinators, Continuity Coordinators, and Security Council to focus on the potential impacts of climate change on USDA emergency response and recovery, COOP planning and policy development.	Planned	USDA
Increasing workload for our 24/7/365 Operations Center due to longer and more intense fire, flood and hurricane seasons	Look at flexibilities with our current Operations Center contract to allow us to expand personnel as needed during fire, flood and hurricane seasons. Work with interagency partners on enhanced GIS products and share information in a timely manner.	Planned	USDA
Ensuring agency alternative sites have properly accounted for risks posed by climate change	Work closely with the Agency COOP Coordinators to ensure that they are accounting for the risks posed by climate change to their alternate sites.	Planned	USDA
Increasing vulnerability to flooding risk posed to USDA HQ Department’s Emergency operations	Continue to exercise alternate work opportunities for watch officers so that they can perform the majority of their work from HQ and alternate locations.	Planned	USDA
Ensuring that intelligence briefings provided by the National Security Division (NSD) incorporate the latest information related to USDA’s climate vulnerabilities	Incorporate I.C. Products into briefings related to the 5 climate vulnerabilities outlined in the USDA Action Plan for Climate and Adaptation. that can be shared with varying levels of USDA leadership.	Planned	USG

TABLE 4: OPEM CLIMATE ADAPTATION ACTIONS

Climate Vulnerability	Action	Coordination	Progress Metrics	Accomplishments to Date
Climate change threats to facility operations as well as resources and infrastructure	Enhance workforce climate literacy	USDA		
	Develop climate smart policy and guidance			
USDA mission-related stresses, energy, water, and natural resources availability	Issue policy and guidance to increase facility energy and water efficiency	APHIS, ARS, FS, NRCS, OO	Decrease in energy and water use intensity	Issued Sustainable Practices DR in 2021.
	Develop and implement an Energy Management System	APHIS, ARS, FS, NRCS, OO	1. Percent completion of draft EnMS (By Dec 2022) 2. Number of USDA agencies and staff offices which have implemented an EnMS (initiate June 2023)	1. OPEM Facilities Energy Program Manager received training on developing and implementing an EnMS; and 2. OPEM initiated framework for developing an EnMS.
Environmental cleanup at remediation sites	Foster strategic planning for climate adaption and resilience in cleanup projects	USDA	Percentage of projects funded that have a response action that incorporates resiliency strategy.	1. Update to DR 56001-005 to consider climate adaptation and resiliency in environmental actions (Feb 2022); and 2. Establish requirements for incorporating use of resilient response actions for providing project funding from the HMMA (May 2022)
Stress on facility, fleet, infrastructure, and federal land operations	Build climate change resilience in USDA facilities and on USDA land	USDA	Percentage of portfolio constructed using sustainable resilient practices	Issued Sustainable Practices DR in 2021
	Enhance operational climate resilience in facilities, on sites, and in fleet	USDA	Percentage of portfolio and fleet operated using climate resilient practices	Issued Sustainable Practices DR in 2021

Stress on fleet operations	Transition to a low-emissions fleet and telematics rollout	USDA	Percentage of fleet vehicles with low-emissions, telematics	Acquiring vehicles with less petroleum per mile and using alternative fuels as available
Prepare for climate-ready supply of sustainable products and services	Sustainable acquisition actions for climate-ready supply of products and services	USDA		Topic discussed with USDA Green Purchasing Work Group.
Stress on vulnerable and underserved communities	Environmental Justice	USDA	Percentage of projects funded that have a response action in an area accessible to EJ communities	1. Update to DR 56001-005 that requires the integration of Environmental Justice in all actions (Feb 2022); and 2. Establish requirements for serving EJ communities for providing project funding from the HMMA (May 2022)

