

Climate Adaptation Implementation Plan



U.S. EPA Office of Chemical Safety and Pollution Prevention

October 2022

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EPA Publication Number 747B22001

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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

Climate Change Adaptation Implementation Plan

The Office of Chemical Safety and Pollution Prevention (OCSP)

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Climate Change Adaptation Implementation Plan

EPA Office of Chemical Safety and Pollution Prevention (OCSP)

1. Background

On January 27, 2021, President Biden signed Executive Order (EO) 14008 on Tackling the Climate Crisis at Home and Abroad.¹ The EO builds on and reaffirms actions the administration has taken to place the climate crisis at the forefront of the nation's policy including rejoining the Paris Agreement, which occurred on January 20, 2021. As part of its continuing commitment the administration will also host a leaders' climate summit, reconvene the major economies forum on energy and climate, and establish a special presidential envoy for climate. The EO also emphasizes taking a government-wide approach to the climate crisis. EPA Administrator Regan has repeatedly stated the Agency's support for the EO in a variety of settings.

OCSP is one of EPA's national programs. The overall office is comprised of three distinct offices that make up the chemical safety program: the Office of Pesticide Programs (OPP), the Office of Pollution Prevention and Toxics (OPPT), and the Office of Program Support (OPS).² For OCSP, development of this plan means integrating consideration of critical policy issues related to climate change into routine processes including pesticide registration decisions under the Federal Insecticide, Rodenticide, and Fungicide Act (FIFRA), new chemicals assessment under the Toxic Substances Control Act (TSCA), and the risk evaluation process under TSCA for existing chemicals. OCSP also is responsible for managing the Agency's pollution prevention programs under the Pollution Prevention Act (PPA), which are designed to prevent pollution at the source, promote the use of greener substances, and conserve natural resources. Under the EO, national programs and regions are each required to develop a *Climate Change Adaptation Implementation Plan* to integrate climate adaptation into their portfolios. This document and other program/region specific plans will be integrated into an overall EPA plan that will be key to meeting the policy directives outlined in the EO.

This document focuses on climate change adaptation and not how changes in climate patterns occur from human-caused increased levels of atmospheric greenhouse gases (GHG). Climate change adaptation means taking action to prepare for and adjust to both the current and projected impacts of climate change.³ There may be instances where there are related GHG impacts such as releases due to environmental degradation. These will be noted and considered as appropriate.

¹ E.O. 1/27/21 <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/>

² <https://www.epa.gov/aboutepa/about-office-chemical-safety-and-pollution-prevention-ocsp>

³ <https://www.epa.gov/climate-adaptation/climate-adaptation-and-epas-role>

Programs and regional offices were asked to include a variety of elements in their plan. These include: programmatic vulnerabilities, priority actions, role in the Agency's strategic measures, legal/enforcement, training/outreach, partnerships with stakeholders, impacts on vulnerable populations/locations, operational resiliency, science needs, consideration of the Bipartisan Infrastructure Law, and evaluation to inform the organization's efforts to integrate climate adaptation into its activities. Each of these elements have been integrated as appropriate herein.⁴

2. OCSPP Role in Implementing Agency Strategic Goals

Goal 1/Objective 1.2 Accelerate Resilience and Adaptation to Climate Change Impacts of the EPA 2022-2026 Strategic Plan describes long-term performance goals and strategies for addressing climate adaptation.⁵ The key long-term performance goals include implementing all priority actions outlined in the *EPA Climate Adaptation Action Plan*⁶ and those contained in each of the 19 National Program and Regional Climate Adaptation Implementation Plans – this document is the National Program Climate Adaptation Implementation Plan for OCSPP. The overall EPA Plan identified five priority actions: integration of climate adaptation into programs, stakeholder interaction, EPA resilience, performance metrics, and identification of science needs. The EPA Plan also provided strategies related to how these priorities are to be achieved.

The primary responsibility of OCSPP is to ensure the safety of chemicals as stipulated in EPA's Strategic Plan *Goal 7: Ensure Safety of Chemicals for People and the Environment*.⁷ OCSPP has developed this document to identify how and where climate adaptation will be incorporated into its programs.

Chemicals used to make products, build homes, protect property and crops, and support our way of life can potentially end up in the environment, cause risks (which are a function of exposure and the toxicity of a chemical), and impact human and environmental health. A changing climate and the associated effects of that process can impact risks to a wide range of chemicals make communities more vulnerable. OCSPP's efforts to assess chemical safety and to implement chemical management decisions and pollution prevention programs to appropriately manage risks could be impacted by a changing climate related to extreme weather events (e.g., increasing run off can increase pollution in nearby streams), changing chemical use patterns (e.g., changing pest pressure can affect the use of agricultural chemicals), as well as other factors. Decision making within OCSPP related to climate change issues will consider such impacts within the bounds of the applicable statutes.

⁴ This document focuses on domestic climate adaptation considerations. OCSPP will support international activities as appropriate either solely or in coordination with other aspects of EPA (e.g., collaboration via the United Nations Industrial Development Organization).

⁵ <https://www.epa.gov/system/files/documents/2021-10/fy-2022-2026-epa-draft-strategic-plan.pdf> & <https://www.epa.gov/system/files/documents/2021-10/fy-2022-2026-epa-draft-strategic-plan.pdf#page=14&zoom=100,69,82>

⁶ <https://www.epa.gov/system/files/documents/2021-09/epa-climate-adaptation-plan-pdf-version.pdf>

⁷ <https://www.epa.gov/system/files/documents/2021-10/fy-2022-2026-epa-draft-strategic-plan.pdf#page=69&zoom=100,69,82>

The specific statutes within the regulatory framework that OCSPP uses to ensure chemical safety provide for risk-based decision making but this framework differs for pesticides and industrial chemicals based on statutory requirements. Pesticides are regulated under the Federal Fungicide, Insecticide and Rodenticide Act (FIFRA) and under the Federal Food, Drug, and Cosmetic Act (FFDCA), EPA's implementation of which is managed by OPP. Industrial chemicals are evaluated and regulated under the Toxic Substances Control Act (TSCA), which is managed by OPPT. OPPT also administers the Pollution Prevention Act (PPA) through a series of programs that identify and leverage opportunities to prevent pollution. The PPA expanded the Toxics Release Inventory (TRI) Program, governed by the Emergency Planning and Community Right-to-Know Act (EPCRA), to include the collection of information to track industry progress in reducing waste generation and moving towards safer waste management alternatives. OPPT manages EPA's TRI Program.

3. Senior Leadership and Staffing

EPA's Office of the Administrator (OA) coordinates climate change activities across the Agency and represents the Agency in cross-governmental groups. To support EPA's efforts to address the climate change issue, OCSPP along with each EPA national program office and regional office must have a specific climate adaptation plan and designate associated leadership and staffing roles. Those involved in addressing the climate change issue will:

- Represent the program in interactions with OA, other programs, and regions on issues related to climate change.
- Be the primary point of contact and conduit of information for the national program, including maintaining a list of subject matter experts on relevant issues.
- Coordinate directly with management across the national program.
- Ensure that the national program coordinates with impacted stakeholders as appropriate.

The staffing plan of the OCSPP climate team (Table 1) is at the discretion of the Assistant Administrator for OCSPP. Currently, the approach is to have the Science Advisor in the OCSPP Immediate Office serve as the overall coordinator with the other science advisors serving as alternates in this role and/or supporting this function. The broad nature of the climate issue dictates engagement across the OCSPP organization. The office directors are included in this plan to ensure continuity in the process of initiating and sustaining elements of the plan such as directing staff and resources which will clearly be needed to address vulnerabilities through the identified priority actions described below.

| Table 1: OCSPP Climate Staffing Plan | | | |
|---|--|---------------------------------------|--------------------------|
| Position/Title/Group | Sub-organization | Name | Role or description |
| Assistant Administrator | Office of Chemical Safety and Pollution Prevention | Michal Freedhoff | Senior Executive Sponsor |
| Deputy Assistant Administrator for Pollution Prevention | Office of Chemical Safety and Pollution Prevention | Jennie Romer | Senior Executive Advisor |
| Science Policy Advisor | Office of Chemical Safety and Pollution Prevention | Jeff Dawson | Staff Lead |
| Science Policy Advisor | Office of Chemical Safety and Pollution Prevention | Stan Barone | Staff Lead |
| Science Policy Advisor | Office of Pesticide Programs | Vacant (Anna Lowit on detail to OPPT) | Staff Lead |
| Science Policy Advisor | Office of Pollution Prevention and Toxics | Anna Lowit (acting) | Staff Lead |
| Office Director | Office of Program Support | Hayley Hughes | Program Management Lead |
| Office Director | Office of Pesticide Programs | Ed Messina | Program Management Lead |
| Office Director | Office of Pollution Prevention and Toxics | Denise Keehner | Program Management Lead |
| Note: Teams related to specific topics will be assembled and used as applicable for pertinent issues. These will be designated at the discretion of the Staff Lead and Program Management Leads for each applicable office. | | | |

4. Climate Vulnerability Assessment

OCSPP identified vulnerabilities associated with climate change in its 2014 Climate Adaptation Plan.⁸ Further efforts to identify vulnerabilities were completed during the interagency development of the Fourth National Climate Assessment.⁹ The national assessment focused on topics in which OCSPP may have equities including land use patterns, forests, ecosystems and biodiversity, oceans and marine resources, agriculture, urban areas, air quality, human health, and tribes/indigenous peoples.

The effects on the environment resulting from climate change pose challenges to EPA as it strives to fulfill its mission of protecting human health and the environment. Challenges resulting from a changing environment due to climate change that may inhibit the Agency's ability to fulfill its mission are referred to as vulnerabilities. Vulnerabilities include physical changes in the environment causing increased exposure to chemicals and their breakdown products. Breakdown products may, in some cases, be more hazardous and thereby increase

⁸ https://www.epa.gov/sites/default/files/2015-08/documents/adaptationplans2014_508.pdf#page=110 & <https://www.epa.gov/climate-adaptation/2014-climate-adaptation-plans>

⁹<https://nca2018.globalchange.gov/>

risks. They may also relate to programmatic processes or tools that may need to be adapted as a result of a changing environment. This section discusses potential vulnerabilities to OCSPP's mission of ensuring chemical safety, tracking chemical releases, and otherwise preventing pollution.

OCSPP has considered vulnerabilities related to climate change for several years. For example, in 2010 to assist with the evaluation of potential programmatic vulnerabilities, OCSPP consulted the FIFRA Scientific Advisory Panel (SAP)¹⁰ to seek advice on areas within pesticide assessment processes that may be vulnerable to changing climatic conditions. The SAP concluded that climate change would likely impact pest pressure which can impact how and where pesticides are employed, and the quantity of pesticides used. The SAP agreed with the preliminary EPA conclusions that since pesticide registrations are reevaluated at least every 15 years using assessment methodologies that are conservative and protective of human health and the environment, it is expected that the assessments, and decisions based on them, will remain protective if they evolve and account for climate shifts (e.g., through updates to weather-based inputs used for assessments).

Table 2 below presents the major vulnerabilities which have been identified currently for OCSPP and its programs. It also describes:

- Relevant risks posed by climate change and potential impacts.
- Environmental Justice concerns including vulnerable populations potentially at risk due to the climate threat.
- Actions already taken to address the risks, remaining vulnerabilities, and known barriers to further actions.

EPA's chemical safety programs—particularly the assessment and management of chemical risks to health and the environment, including risks to vulnerable subpopulations—will play an important role in achieving the Biden-Harris Administration's goal to tackle the climate crisis as set forth in Executive Order (EO) 14008: *Tackling the Climate Crisis at Home and Abroad*. Since TSCA was amended in 2016, significantly increasing EPA's responsibilities under TSCA, the resources appropriated for this work have remained essentially unchanged. EPA's ability to implement the actions in this plan will depend on whether resources requested in the FY 2023 President's budget request are provided to the agency.

Overall, the vulnerabilities discussed below are unlikely to severely impede OCSPP's ability to carry out its core mission of ensuring chemical safety and preventing pollution because many of its programmatic processes can be adapted to address changing environmental conditions, including those resulting from climate change which is discussed further below.

¹⁰ December 2010 Scientific Advisory Panel Meeting, [EPA-HQ-OPP-2010-0761](https://www.epa.gov/pesticides/fifra-sap-2010-0761)

Table 2: Major Vulnerabilities Related to Climate Change For OCSPP

| # | Vulnerability: Key Office ¹¹ | Impact – Likelihood and Nature | Actions Already Being Taken | Known Barriers to Future Actions | Vulnerable Populations |
|---|--|---|---|---|---|
| 1 | Pest Complex Changes: OPP | Climate change can alter pest pressure (e.g., species, population levels, potential resistance) or the location where crops are grown, which in turn may affect the rate, timing and/or frequency of chemical use (e.g., subtropical fruit production moving further north as temperatures increase). Such events can alter pest pressure because of several factors including but not limited to differing indigenous pests in those areas or pests moving with crop and climate changes. This could impact chemical use due to the chemicals needed, increases in the rate, timing and/or frequency of chemical use. This could burden Section 24 and Section 18 programs for local needs. These effects could also pressure Agency resources should they require modifications to labels and potentially pesticide registration review schedules as more frequent evaluations based on changing scientific inputs could be needed. It may also burden producers because of economic changes tied to factors such as choice/availability of chemistries and impacts on crop yields. | OCSPP has established lines of communication with a strong network of potentially impacted stakeholders. This enables the organization to track trends related to changing pest complexes and the nature and location of where crops are grown. Mechanisms are also in place to allow for flexible scheduling and focused use of available resources such as employed during the COVID pandemic to ensure timely consideration of necessary regulatory actions. Opportunities for education, training, and linkages with co-regulators will be utilized to enhance these efforts. | There are many potential barriers which include unpredictable factors such as the magnitude and breadth of a particular event which could potentially challenge available information and resources (e.g., aftermath of a large hurricane or major flooding). Additionally, training and expertise of Agency staff may be limited relative to possible issues which may require outside counsel and/or particular peer review activities (e.g., establishing health criteria for a new mode of action insecticide, resources for implementation). | It is anticipated that this type of issue will be largely geographical in nature. This indicates that any possible susceptible population within such locales could be impacted and will be considered. Demographic factors such as economic disparities, race, and age (e.g., children or the elderly) will be included as well as whether tribes and indigenous peoples are impacted. Additionally, social and cultural concerns will be considered along with environmental factors as applicable. |
| 2 | Novel Disease Vectors and Invasive Species: OPP | The introduction of new disease vectors or invasive species could increase the demand for evaluating and making decisions regarding the safety of new chemicals or new uses of existing products to address public health threats. For example, invasive species could displace native species and create new pest and disease concerns. | OCSPP is actively engaged with partner organizations (e.g., CDC and USDA) to stay informed regarding potential disease vectors and invasive species. OCSPP is also active related to obtaining information on new control measures such as novel modes of action chemistries and existing approaches such as those utilized in Integrated Pest Management. | There are limited staff with applicable knowledge of critical public health topics so broader training may be required. Also, resources are limited and there is limited, focused research and support for public health pesticide development given costs and low typical return for producers. This is important because in many circumstances there are limited control measure options available (e.g., only a couple modes of action are available for mosquito management). | It is anticipated that this type of issue will be largely geographical in nature (defined by pest of concern range) or focused on certain agricultural sectors (e.g., avian or swine flus). This indicates that any possible susceptible population within such locales could be impacted and will be considered. Demographic factors such as economic disparities, race, and age (e.g., children or the elderly) will be included as well as whether tribes and indigenous peoples are impacted. Additionally, social and cultural concerns will be considered along with environmental factors as applicable. |

¹¹ The “Key Office” information is intended to elaborate the key elements within OCSPP to which each vulnerability applies.

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| 3 | Changes in Chemical Production Practices: OPP & OPPT | Extreme weather events and impacts to energy production and use are important considerations. Limited availability of water and other natural resources are changing the way manufacturers produce products, driving them to look for new ways to reduce and reuse water and other materials. Increased demands on energy are pushing businesses to streamline production processes and minimize waste. | OCSPP will continue to use its authorities to ensure the safest possible practices are utilized in chemical production and use activities. It will also use its existing pollution prevention efforts to encourage safer, climate friendly practices. Additionally, existing reporting requirements and the resulting data can be used to identify and assess events which are publicly available. | There are many potential barriers which include unpredictable factors such as the magnitude and breadth of a particular event which could potentially challenge available information and resources. Additionally, training and expertise of Agency staff may be limited relative to possible issues which may require outside counsel and/or peer review activities on particular issues (e.g., establishing health criteria for novel material new chemical action). | It is anticipated that this type of issue will be largely geographical in nature as defined by the locale of the production facility and could impact exposure potential and other factors such as social and cultural considerations. This would indicate that any possible susceptible population within such locales could be impacted and will be considered. Demographic factors such as economic disparities, race, and age (e.g., children or the elderly) will be included as well as whether tribes and indigenous peoples are impacted. |
| 4 | Damage Due to Extreme Weather/Infrastructure Failure: OPP & OPPT | Extreme changes in environmental conditions that could impact chemical safety need to be considered. For example, rising sea levels and more frequent extreme weather events increase the vulnerability to flooding and destruction of structures in low lying areas due to the magnitude of an event and/or infrastructure failure. Chemical production and storage facilities located in low lying areas may have an increased potential for chemical releases into the environment as a result of major weather events. Similarly, many farms, pesticide storage facilities, and businesses are along major waterways because of their proximity to growing areas, which could be impacted. Industrial chemicals could also be stored in low lying areas near ports along the seaboard, rivers, and other waterways. | OCSPP maintains systems which can be used to identify applicable information should an event occur (e.g., environmental fate data/criteria and water modeling tools could be used to evaluate impacts of a flooded pesticide storage facility). Also, chemical storage criteria are included in pesticide user training and associated directives. OCSPP works to provide this information to address topical events and to ensure longer term preventative solutions whenever feasible. | There are many potential barriers which include unpredictable factors such as the magnitude and breadth of a particular event which could challenge available information and resources. Additionally, resources, training and expertise of Agency staff may be limited relative to possible issues which may require outside counsel and/or peer review activities on particular issues (e.g., establishing health criteria for novel material new chemical action). | It is anticipated that this type of issue will be largely geographical in nature. This indicates that any possible susceptible population within such locales could be impacted and will be considered. Demographic factors such as economic disparities, race, and age (e.g., children or the elderly) will be included as well as whether tribes and indigenous peoples are impacted. |
| 5 | Infrastructure Supply Chain Impacts: OPP & OPPT | Increased demand due to shifting weather patterns may require novel technologies and additional systems related to housing and other human needs. This could burden the new chemicals program for industrial chemicals. It could also impact existing chemicals reviews since production values, the numbers of workers involved, and other factors could change because of needs for chemicals (e.g., refrigerant feedstocks). Changing climate can also induce disease outbreaks which may necessitate higher than normal levels of chemicals such as disinfectants and PPE which could impact infrastructure operations (e.g., ensuring safety at subway stations, airports and in mass transit vehicles). | OCSPP has established lines of communication with a strong network of potentially impacted stakeholders. This enables the organization to track trends related to changing supply chain issues. Mechanisms are also in place to allow for flexible scheduling and focused use of available resources to ensure timely consideration of necessary regulatory actions. OCSPP also collaborates closely with EPA's OHS and ORD to ensure cutting edge research information is utilized in a timely way. | There are many potential barriers which include unpredictable factors such as the magnitude and breadth of a particular event which could challenge available information and resources. Additionally, resources, training and expertise of Agency staff may be limited relative to possible issues which may require outside counsel and/or peer review activities on particular issues (e.g., establishing health criteria for a novel refrigerant). | It is anticipated that this type of issue will be largely geographical in nature. This indicates that any possible susceptible population within such locales could be impacted and will be considered. Demographic factors such as economic disparities, race, and age (e.g., children or the elderly) will be included as well as whether tribes and indigenous peoples are impacted. |

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| 6 | Agricultural Practice Adaptation: OPP | Changes in pest pressures, crop tolerance to weather, use of greater quantities of pesticides, and other factors might have unintended consequences related to the increased use of fuels to achieve equal amounts of agricultural yields because more applications of pesticides or mechanical cultivation practices might be required. | OCSPP is aware that this is an issue and is considering how climate related factors such as this can potentially be included in regulatory decision making. Often in critical decisions, alternatives analyses indicate that additional pesticide use or mechanical cultural practices are needed to replace certain chemistries. Information related to these will be utilized in such processes. | The are many potential barriers which could impact implementation of this issue including statutory requirements for regulatory decision making and appropriate quantification of climate related criteria as an input into such decisions (e.g., determination of climate load from additional fuel/equipment use). Resources may also be limited for evaluating this issue and implementing updated approaches. | The impacted populations from this issue will be determined largely based on geographical constraints but in this case, locales will be determined based on where crops are produced, and the chemicals used for those crops. Emphasis will be placed on farmworkers as they experience more routine exposures to pesticides. Demographic factors such as economic disparities, race, and age (e.g., children or the elderly) will be included as well as whether tribes and indigenous peoples are impacted. |
| 7 | Institutional Use Practice Adaptation: OPP | Changes in pest pressures, pest tolerance to weather, use of greater quantities of pesticides, and other factors might have unintended consequences. These could include higher uses of pesticides in institutional settings such as hospitals, schools, public housing. They may also require greater expenditures and fuel/energy use with increased sealing of buildings. | OCSPP is aware that this is an issue and is considering how climate related factors such as this can potentially be included in regulatory decision making. Often in critical decisions, alternatives analyses indicate that additional pesticide use or changing management practices are needed to replace certain chemistries. Information related to these will be utilized in such processes. | The are many potential barriers which could impact implementation of this issue including statutory requirements for regulatory decision making and appropriate quantification of climate related criteria as an input into such decisions (e.g., determination of climate load from additional energy use). Resources may also be limited for evaluating this issue and implementing updated approaches. | The impacted populations from this issue will be determined largely based on geographical constraints where known institutional pest pressures exist (e.g., termite presence in the southeast). Demographic factors such as economic disparities, race, and age (e.g., children or the elderly) will be included as well as whether tribes and indigenous peoples are impacted. |
| 8 | Endangered Species & Pollinator Impacts: OPP | Climate changes could have detrimental effects on endangered species and pollinators due to changing their habitat and ranges. This could impact pesticide regulation as it would require updated analyses of the impacts of chemicals on such species. As noted above this could burden regulatory programs needed to address local needs. | OCSPP considers the most up to date information relative to endangered species and pollinators including their vulnerability, potential to be exposed to and affected by chemicals, as well as their biology, habitats, and ranges as provided by the applicable U.S. Services. If climate change impacts where endangered species are located, then there may be implications related to land use, pesticide usage, and regulations in those areas, which could include use of different chemistries of pesticides or other factors that would need to be evaluated relative to the species. OCSPP also has active pollinator protection programs which can be leveraged to address these issues. | As the U.S. Services provide information on species habitats and ranges the schedule for updates may not coincide with specific OCSPP program needs related to specific locales and events. Changes in habitats and ranges for pollinators will also be considered based on availability of information, which could be limiting. Resources may also be limited for evaluating this issue and implementing updated approaches. | It is anticipated that this type of issue will be largely geographical in nature. This indicates that any possible susceptible population within such locales could be impacted and will be considered. |

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| 9 | Outdated tools and methods: OPP & OPPT | This is a primary vulnerability which was identified related to chemicals management programs. It is critical to ensure that the tools and methodologies OCSPP uses remain robust so that they reasonably reflect environmental changes, including those influenced by climate change. | OCSPP periodically updates its tools and methods to account for changing information. These updates are typically defined by relevance noted by the user communities and applicable subject matter experts. Also, pesticides are periodically reviewed in the registration review process which ensures the most up to date data and methods are employed. | Tools and methodologies often require information technology input to update tools such as an electronic modeling system. Resources and systems may be outdated which would require extensive expenditures and time which could delay development and implementation. Resources may also be limited for evaluating this issue and implementing updated approaches. | It is anticipated that this type of issue will be specific in nature (e.g., geographic or life stage specific). This indicates that any possible susceptible population within such locales could be impacted and will be considered. Demographic factors such as economic disparities, race, and age (e.g., children or the elderly) will be included as well as whether tribes and indigenous peoples are impacted. |
| 10 | Outdated Critical Data: OPP & OPPT | Existing data could be compromised under certain circumstances related to changing climate and its impact on agriculture. For example, changing climatic zones could influence the relevance of crop field trial data used in dietary exposure analysis given the potential for more pesticide need due to extended seasons and evolving pest pressures. Additionally, stream flow information and other environmental fate information (e.g., dissipation characteristics) could be outdated given increasing drought and or severe weather event conditions. This could impact pesticide and industrial chemical environmental evaluations. | OCSPP periodically updates critical data used for analysis. For example, the pesticides program recently updated weather information used for air modeling predictions to more recent periods of time in order to reflect more current conditions. In cases such as with field trials the Agency will monitor changes in factors such as USDA growing regions which could impact data applicability and will adjust accordingly. This may include, but is not limited to, using USDA Pesticide Data Program (PDP) monitoring data in dietary exposure analyses as well as current pesticide usage data that may identify changes in pesticide usage in many major crops because of shifts in pest pressures or cropping practices as well as current pesticide usage data that may identify changes in pesticide usage in many major crops because of shifts in pest pressures or cropping practices. | The ability to ask for additional research to support needed future data needs may be compromised because of statutory limitations related to requiring such information from the regulated community. Limited funding and/or internal laboratory capacity could impact the ability to have access to applicable data in the future. Resources may also be limited for evaluating this issue and implementing updated approaches. | It is anticipated that this type of issue will be largely geographical in nature. This indicates that any possible susceptible population within such locales could be impacted and will be considered. Demographic factors such as economic disparities, race, and age (e.g., children or the elderly) will be included as well as whether tribes and indigenous peoples are impacted. |

5. Priority Actions

OCSPP has identified a series of priority adaptation actions which are in alignment with the May 2021 EPA Draft Climate Adaptation Action Plan and the May 2021 Policy Statement on Climate Adaptation.¹² These priority actions will be implemented to integrate climate adaptation into OCSPP programs, policies, rules, financial programs, and operations (including procurement and facilities). Additional consideration has been given to actions that also deliver co-benefits in other areas including reductions in greenhouse gases and other pollution; public health enhancements; economic growth and job creation; enhanced national security; and environmental justice.

The EPA Climate Adaptation Plan has five following priorities. They include:

- 1) Integrate climate adaptation into EPA programs, policies, rulemaking processes, and enforcement activities.
- 2) 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, with a particular focus on advancing environmental justice.
- 3) Implement measures to protect the agency's workforce, facilities, critical infrastructure, supply chains and procurement processes from the risks posed by climate change.
- 4) Measure and evaluate performance.
- 5) Identify and address climate adaptation science needs.

Table 3 provides a summary of the OCSPP main priority action items for quick reference. The table also provides higher level information associated with each item such as relevance to the Agency goals as noted above. Additional, more detailed narratives are provided below based on the data fields prescribed as part of the required content of this document for each action item.

¹² <https://www.epa.gov/climate-change>

Table 3: OCSPP Climate Adaptation Priority Action Items

| OCSPP Priority Action Item | Description | Co-Benefits | Applicable EPA Climate Adaptation Plan Priority ¹³ | Lead Organization | Timeframe |
|----------------------------|---|---|---|--|---|
| A | Streamline Processes for Bringing Climate Favorable Chemistries to Market | Scientific Integrity, Environmental Justice | 1 | OPP, OPS, OPPT depending upon specific topic | Many not initiated, some ongoing with general plans in place by FY 2023 |
| B | Training & Communication | Scientific Integrity, Environmental Justice | 2, 3 | OPP, OPS, OPPT depending upon specific topic | Many not initiated with some ongoing with general plans in place by FY 2023 |
| C | Enhance Rulemaking and Decision Processes | Scientific Integrity, Environmental Justice | 1, 3, 5 | OPP, OPS, OPPT depending upon specific topic | Many not initiated with some ongoing with general plans in place by FY 2023 |
| D | Framework Development | Scientific Integrity, Environmental Justice | 5 | OPP, OPS, OPPT depending upon specific topic | Ongoing with general plans in place by FY 2023 |

Detailed information related to each OCSPP Climate Adaptation Priority Action Item and supporting performance measures are provided below in Table 4.¹⁴ Each product developed as a result of the priority actions undertaken as part of this plan will also include in associated publications and communication materials a component that describes how climate adaptation concerns have been integrated into the materials. Additionally, efforts will be made to include climate adaptation considerations in other materials produced by OCSPP especially major policy statements and decision related materials as appropriate.

¹³ Based on EPA Climate Adaptation Plan listed on previous page and more detailed table below.

¹⁴ Note there is a field in these tables “Key Partners and Stakeholders” which only provides information on external partners. Collaboration within EPA is coordinated via an established workgroup focused on climate adaptation that is represented by all programs and regions.

Table 4: OCSPP Climate Adaptation Priority Action Items

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| OCSPP Climate Adaptation Priority Action Item A: Increase the number of streamline processes for bringing climate favorable chemistries to the market. | |
| Sub-priority A.1 - Actions to directly support climate adaptation related to new chemistries and innovative technologies or other related processes | |
| Co-Benefits | Scientific Integrity, Environmental Justice |
| Applicable Agency Climate Adaptation Plan Priorities | 1 |
| Lead Organizations | OPPT, OPS depending upon specific topic |
| Timeframe | Not initiated, plan in place by FY'22. Begin implementation in FY 2023. |
| Performance Metrics | Develop a strategy to directly support climate adaptation related to new chemistries, innovative technologies, and/or other related processes. |
| FY 2023 Target | 1 |
| Metric Details | <p>Baseline: One strategy implemented for biofuels to directly support climate adaptation in FY 2022.</p> <p>Data Source: Report out from OPPT/New Chemicals Division</p> <p>Misc.: Strategy could include guidance and training. In FY 2023, EPA is exploring strategies in areas such as electric vehicle batteries, biotechnologies, and hydrofluorocarbon replacements.</p> |
| Resource Requirements | No specific resources have been allocated to this activity. Resource needs will vary based on the nature of the issue, the availability of pertinent information, the vetting required of new information, and the integration of new information into existing tools and/or processes. |
| Accomplishments | This is a novel effort. |
| Key Partners & Stakeholders | <p>ECOS https://www.ecos.org/</p> <p>American Chemistry Council https://www.americanchemistry.com/default.aspx</p> <p>Green Chemistry in Commerce Council (GC3) https://greenchemistryandcommerce.org/</p> <p>Association for the Advancement of Alternatives Assessment https://www.saferalternatives.org/</p> <p>American Chemical Society Green Chemistry Institute https://www.acs.org/content/acs/en/greenchemistry/about.html</p> <p>Various NGOs – Natural Resources Defense Council (NRDC), Environmental Working Group (EWG), Environmental Protection Network (EPN), Union of Concerned Scientists (UCS), People for the Ethical Treatment of Animals (PETA)</p> <p>Co-regulators – State, local, tribal, and territorial programs</p> <p>Other appropriate academic, regulated industry, and scientific organizations</p> |
| Challenges/Barriers | The challenges are multifaceted and include maintaining the ability to properly identify the most current data and information which could have been refreshed based on climate change criteria. They also include resource challenges associated with the surety of novel information and integration of such information into tools and processes. |

Table 4: OCSPP Climate Adaptation Priority Action Items

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| Sub-priority A.2 - Consider impact of climate change and the resulting effects (e.g., on evolving pest complexes such as novel invasive and disease vectoring pests, shifting crop production patterns, and risk management options) | |
| Co-Benefits | Scientific Integrity, Environmental Justice, Public Health, Homeland Security |
| Applicable Agency Climate Adaptation Plan Priorities | 1 |
| Lead Organizations | OPP, OPS depending upon specific topic |
| Timeframe | Not initiated, plan in place by FY'22. Begin implementation in FY 2023. |
| Performance Metrics | Develop a strategy for evaluating the processes associated with Section 18s to determine potential efficiencies and/or process improvements. |
| FY 2023 Target | 1 |
| Metric Details | <p>Baseline: Zero strategy for considering the impact of climate adaptation and the resulting effects in FY 2022.</p> <p>Data Source: Report out from OPP/Registration Division</p> <p>Misc.: Strategy could include accompanying guidance as well.</p> |
| Resource Requirements | No specific resources have been allocated to this activity. Resource needs will vary based on the nature of the issue, the availability of pertinent information, the vetting required of new information, and the integration of new information into existing tools and/or processes. |
| Accomplishments | Activities are ongoing related to this sub-priority, but the climate change adaptation component is a novel effort. |
| Key Partners & Stakeholders | <p>USDA – for a variety of ag related issues</p> <p>CDC – because of climate impacts on disease vectors</p> <p>Local mosquito control districts and state lead agencies (via program and regional contacts or AMCA https://www.mosquito.org/)</p> <p>RISE https://www.pestfacts.org/</p> <p>Crop Life America http://www.croplifeamerica.org/</p> <p>Various NGOs – NRDC, EWG, EPN, UCS, United Farmworkers (UFW), PETA</p> <p>Co-regulators – State, local, tribal, and territorial programs</p> <p>Other appropriate academic, regulated industry, and scientific organizations</p> |
| Challenges/Barriers | The challenges are multifaceted and include maintaining the ability to properly evaluate the current tools and processes which may need to be refreshed based on climate change criteria. They also include resource challenges associated with the surety of novel information and integration of such information into tools and processes. |

Table 4: OCSPP Climate Adaptation Priority Action Items

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| OCSPP Climate Adaptation Priority Action Item B: Establish and Implement training programs related to climate adaptation for OCSPP employees. | |
| Co-Benefits | Scientific Integrity, Environmental Justice |
| Applicable Agency Climate Adaptation Plan Priorities | 2 & 3 |
| Lead Organizations | OPP, OPS depending upon specific topic |
| Timeframe | Not initiated. Scoping exercise to be completed in FY'22. Followed by content development and beginning implementation FY 2023 |
| Performance Metrics | Complete training climate adaptation curriculum. |
| FY 2023 Target | 100% |
| Metric Details | <p>Baseline: Zero trainings on climate change topics relevant for risk evaluation and risk management in FY 2022.</p> <p>Data Source: Report out from climate training workgroup.</p> <p>Misc.: This activity will include forming a climate training workgroup, developing a curriculum, and testing the curriculum with a focus group. May be dependent upon training delivery method.</p> |
| Resource Requirements | No specific resources have been allocated for this activity. Resource needs will vary based on the nature of the issue, the availability of pertinent information, the vetting required of new information, and the integration of new information into existing tools and/or processes. |
| Accomplishments | Activities are ongoing related to this sub-priority, but the climate change adaptation component is a novel effort. |
| Key Partners & Stakeholders | <p>USDA – for a variety of ag related issues</p> <p>CDC – because of climate impacts on disease vectors</p> <p>ECOS https://www.ecos.org/</p> <p>Local mosquito control districts and state lead agencies (via program and regional contacts or AMCA https://www.mosquito.org/)</p> <p>RISE https://www.pestfacts.org/</p> <p>Crop Life America http://www.croplifeamerica.org/</p> <p>American Chemistry Council https://www.americanchemistry.com/default.aspx</p> <p>Green Chemistry in Commerce Council (GC3) https://greenchemistryandcommerce.org/</p> <p>Various NGOs – NRDC, EWG, EPN, UCS, UFW, PETA</p> <p>Other appropriate academic, regulated industry, and scientific organizations (e.g., agricultural extension related to pesticide choices/considerations)</p> <p>Co-regulators – State, local, tribal, and territorial programs</p> <p>Other appropriate academic, regulated industry, and scientific organizations</p> |

Table 4: OCSPP Climate Adaptation Priority Action Items

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| Challenges/Barriers | The challenges are multifaceted and include maintaining the ability to properly develop content relative to climate change criteria and its impacts on programs. They also include resource challenges associated with broad implementation of content. |
| OCSPP Climate Adaptation Priority Action Item C: Increase the number of risk assessments and risk management decisions that incorporate climate adaptation. | |
| Co-Benefits | Scientific Integrity, Environmental Justice |
| Applicable Agency Climate Adaptation Plan Priorities | 1 & 5 |
| Lead Organizations | OPP, OPPT, OPS depending upon specific topic |
| Timeframe | Not initiated. Initiate establishing baselines for current approaches and evaluate workflow by FY'22. Initiate process updates FY 2023 |
| Performance Metrics | Develop criteria for incorporating climate adaptation into risk assessment and risk management documents. |
| OPP FY 2023 Target | 100% |
| OPP Metric Details | Baseline: Zero criteria for considering the impact of climate adaptation and the resulting effects in FY 2022. Data Source: Report out from OPP Misc.: Criteria could include science approach, risk management approach, and accompanying guidance. |
| OPPT FY 2023 Target | 100% |
| OPPT Metric Details | Baseline: Zero criteria for considering the impact of climate adaptation and the resulting effects in FY 2022. Data Source: Report out from OPPT Misc.: Criteria could include science approach, risk management approach, and accompanying guidance. |
| Resource Requirements | No specific resources have been allocated for this activity. Resource needs will vary based on the nature of the issue, the availability of pertinent information, the vetting required of new information, and the integration of new information into existing tools and/or processes. |
| Accomplishments | Activities are ongoing related to this sub-priority, but the climate change adaptation component is a novel effort. |
| Key Partners & Stakeholders | ECOS https://www.ecos.org/ American Chemistry Council https://www.americanchemistry.com/default.aspx Green Chemistry in Commerce Council (GC3) https://greenchemistryandcommerce.org/ Association for the Advancement of Alternatives Assessment https://www.saferalternatives.org/ American Chemical Society Green Chemistry Institute https://www.acs.org/content/acs/en/greenchemistry/about.html Various NGOs – NRDC, EWG, EPN, UCS, UFW, PETA Co-regulators – State, local, tribal, and territorial programs Other appropriate academic, regulated industry, and scientific organizations |

Table 4: OCSPP Climate Adaptation Priority Action Items

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| Challenges/Barriers | The challenges are multifaceted and include maintaining the ability to properly identify and track changes in materials science, building codes, etc. based on climate change criteria. They also include resource challenges associated with the surety of specific ties to climate change. |
| OCSPP Climate Adaptation Priority Action Item D: Use the most up-to-date and appropriate tools and data related to climate change in risk assessments including for vulnerable populations. | |
| Co-Benefits | Scientific Integrity, Environmental Justice |
| Applicable Agency Climate Adaptation Plan Priorities | 5 |
| Lead Organizations | OPP, OPPT, OPS depending upon specific topic |
| Timeframe | Begin inventory in FY'22 and with general plans in place by FY 2023 |
| Performance Metrics | Develop framework for systematically ensuring latest tools and data are included into risk assessments to account for climate adaptation. |
| OPP FY 2023 Target | 100% |
| OPP Metric Details | Baseline: Zero systematic look at data and tools related to considering the impact of climate adaptation and the resulting effects in FY 2022. Data Source: Report out from OPP Misc.: Criteria could include science approach, risk management approach, and accompanying guidance. |
| OPPT FY 2023 Target | 100% |
| OPPT Metric Details | Baseline: Zero systematic look at data and tools related to considering the impact of climate adaptation and the resulting effects in FY 2022. Data Source: Report out from OPPT Misc.: Criteria could include science approach, risk management approach, and accompanying guidance. |
| Resource Requirements | Resource needs will vary based on the nature of the issue, the availability of pertinent information, the vetting required of new information, and the integration of new information into existing tools and/or processes. |
| Accomplishments | Activities are ongoing related to this sub-priority, but the climate change adaptation component is a novel effort. |
| Key Partners & Stakeholders | USDA – for a variety of ag related issues CDC – because of climate impacts on disease vectors ECOS https://www.ecos.org/ Local mosquito control districts and state lead agencies (via program and regional contacts or AMCA https://www.mosquito.org/) RISE https://www.pestfacts.org/ Crop Life America http://www.croplifeamerica.org/ American Chemistry Council https://www.americanchemistry.com/default.aspx |

| | |
|----------------------------|---|
| | <p>Green Chemistry in Commerce Council (GC3) https://greenchemistryandcommerce.org/</p> <p>Various NGOs – NRDC, EWG, EPN, UCS, UFW, PETA</p> <p>Co-regulators – State, local, tribal, and territorial programs</p> <p>Other appropriate academic, regulated industry, and scientific organizations</p> |
| Challenges/Barriers | <p>The challenges are multifaceted and include maintaining the ability to properly identify the most current data and information which could have been refreshed based on climate change criteria. They also include resource challenges associated with the surety of novel information and integration of such information into tools and processes.</p> |

6. Training Plan for Climate Knowledge

OCSPP will utilize appropriate and available materials to develop approaches which will enhance staff and management awareness of the importance of climate adaptation and the need to integrate the concept into its programs. The exact nature of the materials is formative at this point and will depend on available materials and information as well as how these materials and thinking related to climate change implications for OCSPP evolve over time.

OCSPP will use approaches such as webinars available for all staff and orientation materials for new entering staff to ensure appropriate information is conveyed. OCSPP is committed to conducting at least one webinar per fiscal year. The timing of the first webinar will be within one year of adoption of this plan to allow for time to prepare curriculum materials and ensure their quality.

7. Tribal and Environmental Justice Considerations

Certain individuals and communities - such as communities of color, children, the elderly, those with lower income, those with limited access to information, tribal communities, and indigenous people - can be especially vulnerable to the impacts of a changing climate. As climate change exacerbates existing pollution problems and environmental stressors, overburdened and underserved communities and individuals are particularly susceptible to impacts.

EPA's FY 2022–2026 Strategic Plan prioritizes consideration of climate change and environmental justice in Goal 1: Tackle the Climate Crisis and Goal 7: Ensuring Safety of Chemicals for People and the Environment. Key objectives deliver targeted assistance to increase the resilience of tribes, states, territories, and communities to the impacts of climate change (Goal 1, Objective 1.2 and 1.3) and seek to protect the health of families, communities and ecosystems from the risks posed by chemicals and pesticides (Goal 7). OCSPP is a contributor to these overall objectives through outreach activities to partners such as tribes and states. Examples include interactions with the Tribal Pesticide Program Council (TPPC) and via the Pesticide Regulatory Education Program (PREP).

Under EPA's Strategic Plan, OCSPP has significant responsibilities for ensuring the safety of chemicals and pesticides by addressing unreasonable risks to human health and the environment. OCSPP will work to complete High Priority Substance TSCA risk evaluations, initiate TSCA management actions, consider the protections of federally threatened and endangered species and support Agricultural Worker Protection Standard (WPS) pesticide safety training for farmworkers.

Integrating climate adaptation into OCSPP's programs will take place over several years. As a first step, OCSPP outlined major climate change vulnerabilities (Table 2) related to program responsibilities, including environmental justice perspectives. These vulnerabilities include several topics critical to the health of communities such as managing the potential increase of pest population and activities; potential detrimental effects on endangered species and pollinator habitats; and how to evaluate and make decisions regarding the safety of new chemicals or new uses of existing products to address public health threats.

Actions within this plan (Table 4) focus on elements that examine the intersect of OCSPP's programs with environmental and social impacts that can be used to improve climate adaptation and resilience and reduce impacts from climate change. For example, OCSPP uses the risk management process to ensure that chemicals meet statutory standards for protecting human health and the environment, and effectively assess, manage, and mitigate risk based on the best available science and policy, including feedback from stakeholders on environmental justice concerns. This plan seeks to further include climate adaptation perspectives, as appropriate, into risk management processes and decisions. Identifying risk associated with climate change and managing them to reduce their impacts is essential and will foster risk-based climate change vulnerability analysis.

Managing the consequences of climate variability at a national level requires the agency to understand complex sociocultural interactions that contribute to societal adaptive activities and capacity building at the local, community levels. OCSPP will focus on enhancing community resilience by utilizing existing community networks to design strategies that are inclusive of local and indigenous knowledge as well as western science perspectives. Critical to achieving results, EPA seeks to proactively engage with tribes, communities, and other stakeholders to discuss and potentially address disproportionate impacts of climate change in a meaningful manner.

When working with our tribal partners, OCSPP seeks to uphold tribal treaty rights as well as focus on understanding and considering the integration of Indigenous Tribal Ecological Knowledge, as appropriate and permitted by the law and under the guidance of tribal partners, into agency environmental science, policy, and decision-making processes. EPA also acknowledges that unique situations and relationships may exist that promote the agency to consider information on sacred sites, cultural resources, and other traditional knowledge for federally recognized tribes and indigenous peoples. OCSPP will use a tribal-driven approach with these matters as well as review EPA policies (e.g., EPA Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous Peoples) and newly anticipated federal guidance currently in development by the White House Council on Native American Affairs.

8. Science Needs

Science needs will be identified in a timely manner that is consistent with the current availability of resources and organizational priorities. These will also be incorporated as appropriate into research planning activities with ORD. Additionally, OCSPP may utilize its statutory authorities under FIFRA and TSCA to require data and leverage equities through other sources such as regional capabilities, assistance agreements, and IPM Centers. The science needs identified based on the current Priority Action Items noted above to date are summarized in Table 5 below. OCSPP will work with Agency and outside partners to address these needs in a manner consistent with priorities and allowable per statute. These efforts will include consideration of Citizen Science activities and products as appropriate.

| Table 5: Climate Adaptation Science Needs For OCSPP | | |
|---|---|---|
| No. | Description | Comments |
| 1 | Ensure that the most current data and information in risk assessment and risk management | Develop/obtain/maintain information related to changing environmental factors which could alter behaviors of pesticides and industrial chemicals in the environment. (e.g., water flow information, changing climate zones, etc.) |
| 2 | Utilize current tools and methods in risk assessment and risk management | Develop/obtain/maintain information related to changing environmental factors which could alter behaviors of pesticides and industrial chemicals in the environment. (e.g., stream dilution models, geospatial methods, volatilization prediction tools.) |
| 3 | Enhance tracking/integration for changing pest complexes, invasive species, and disease vectors | Develop/obtain/maintain data to illustrate how climate change could alter pest habitats (expansions and range reductions) and host species which could impact chemical needs. Also, develop and maintain surveillance and countermeasures for invasive species and disease vector species. |
| 4 | Enhance tracking/integration of changing agricultural production practices | Develop/obtain/maintain data to illustrate how climate change could alter chemical use/needs associated with modifications of agricultural practice changes such as modified tillage and cultivation practices which may require more weed control or more chemical use due to a higher presence of invasive pests. |
| 5 | Enhance tracking/integration of changing practices related to industrial and structural pest control | Develop/obtain/maintain data to illustrate how climate change could alter chemical use/needs associated with modifications of industrial/structural pest control practice changes such as modified application methods relative to novel pests and the measures needed to manage them. |
| 6 | Enhance tracking/integration of changing fundamentals surrounding endangered species and pollinators | Obtain/maintain data to illustrate how climate change could alter chemical use/needs associated with endangered species and pollinators due to factors such as modified competition for resources in novel habitats and lower foraging opportunities for pollinators. Will work with appropriate partners such as USDA related to this topic. |
| 7 | Identify tools, data, and methods for predicting future trends related to climate change. | Develop/obtain/maintain data and information related to the prediction of future climate change impacts which could include topics ranging from meteorology, infrastructure preparedness, agricultural production needs, pest complex, and crop production information. |
| 8 | Enhance tools, data, and methods for protecting populations exposed to chemicals as part of their employment including agricultural and industrial settings | Develop/obtain/maintain data and information related to the protection of those exposures due to their employment status. This could include any number of topics from heat stress, adaptation of employer needs, protective equipment and clothing designs/materials, training, compliance initiatives, and availability. |

| | | |
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| 9 | Collect, analyze, assess, and use data, as appropriate, to evaluate potential chemical and pesticide exposures associated with vulnerable populations, including tribes and agricultural workers. | <p>Collect new data to evaluate and assess potential risks.</p> <p>Consider potential impacts that may result in changed risk calculations and mitigation approaches, data analysis, training and education, technical assistance, and overall program perspectives.</p> <p>Analyze data and information to better understand and incorporate, as appropriate, social and behavioral aspects of climate change into program perspectives.</p> <p>Expand work with partners to identify and discuss indicators and surrogate data to inform climate vulnerabilities.</p> |
|---|---|---|

9. Operational Resiliency

Operational resiliency ensures that OCSPP can maintain its activities and ongoing processes regardless of potential ongoing deleterious conditions including those associated with climate adaptation concerns. Managing such events is complex and can be thought of in phases including immediate needs followed by concerns over ensuring the continuing operations of OCSPP in a manner that protects both its staff and facilities.

To address immediate needs and concerns, OCSPP will rely on guidance from EPA’s Office of Mission Support (OMS). It will also implement the Occupant Emergency Plan which has been developed based on guidance established by the General Services Administration (GSA).¹⁵

Regarding continuing operations after immediate needs are addressed, it is important to consider how to ensure ongoing operations continue. Significant lessons have been learned as a result of the Covid 19 pandemic and it is likely much of the same approaches would be utilized in any future event that would require this approach. OCSPP may also use the more intensive activation of the Continuity of Operations plan. COOP plans including the one utilized by OCSPP contain elements described in the Federal Emergency Management Agency (FEMA) guidance.¹⁶ Implementation of these types of activities would be coordinated with OMS. These combined activities would protect the OCSPP workforce and ensure the resilience of its facilities and operations.

¹⁵ <https://www.gsa.gov/resources-for/citizens-consumers/child-care-services/for-providers-and-boards/emergency-management> & <https://www.dhs.gov/fps-guidance-occupant-emergency-planning>

¹⁶ https://www.fema.gov/pdf/about/org/ncp/coop_brochure.pdf

10. Bipartisan Infrastructure Law

OCSPP will take steps to ensure the outcomes of infrastructure investments using Infrastructure Investment and Jobs Act (IIJA, or Bipartisan Infrastructure Law [BIL]) funds are resilient to the impacts of climate change. OCSPP will explore opportunities to integrate climate change considerations into its financial assistance programs in order to expand support for projects that increase climate resilience while delivering co-benefits for public health, the mitigation of greenhouse gases, and the reduction of other pollution. OCSPP will also provide technical assistance to recipients of BIL funds to help them make climate smart infrastructure investments.

11. Adoption

This OCSPP Climate Adaptation Plan is approved by:

Digitally signed by Michal Freedhoff, PhD on 07/22/2022

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