United States Environmental Protection Agency

FISCAL YEAR 2023

Justification of Appropriation Estimates for the Committee on Appropriations

Tab 15: FY 2023 Annual Evaluation and Other Evidence-Building Act

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Environmental Protection Agency
FY 2023 Annual Performance Plan and Congressional Justification

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EPA FY 2023 Annual Evaluation Plan

The Foundations for Evidence-Based Policymaking Act (Evidence Act) provides a framework to promote a culture of evaluation and continuous learning to ensure Agency decisions are made using the best available evidence. EPA's FY 2023 Annual Evaluation Plan (AEP) describes significant program evaluations the Agency plans to undertake in FY 2023. The Agency's FY2023 AEP includes program evaluations that assess program outcomes, support program improvement, and aid decision making,

Office of Chemical Safety and Pollution Prevention (OCSPP)

Title	EPA-Supported WPS Training of Farmworkers		
Lead National Program	Office of Chemical Safety and Pollution Prevention		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 7: Ensure Safety of Chemicals for People and the Environment Objective 7.1: Ensure Chemical and Pesticide Safety		
Planned start date	October 2022	**Planned completion date**	September 2023

Purpose and description: EPA provides funding through a five-year cooperative grant to train farmworkers in accordance with the Agricultural Worker Protection Standard (WPS) rule. WPS pesticide safety training is an annual requirement. This activity will assess the number of individuals trained and the effectiveness of the training.

Programmatic or policy decisions this activity will inform: Effectiveness and scope of the EPA-supported WPS training.

Question(s) this activity will address:

- How many farmworkers are receiving EPA-supported annual training required under the WPS rule, and what is their knowledge retention of the material?
- Is EPA funding under the grant resulting in quality training? Is the grantee fulfilling the conditions of the grant in a satisfactory manner?

Data, tools, method/analytical approach: Data will include critical datasets from the grantee, including the number of individuals trained in WPS as well as the results from pre- and post-assessments given to the trainees to determine knowledge gained about WPS and knowledge comprehension. The Office will assess whether additional data-gathering will need to be conducted as part of the assessment's data collection plan.

Anticipated challenges and proposed solutions: The COVID-19 public health emergency may continue to influence the grantee's ability to conduct training. Social distancing and other COVID protection strategies, such as smaller training groups, can result in fewer trained. Remote training also may present technical challenges for some workers. In-person training is the preferred method

to engage with trainees; the grantee and agricultural establishments will continue to implement strategies to address the pandemic-related obstacles while meeting the training needs.

Dissemination of findings*:* Information used in this evidence gathering will be made publicly available in the Annual Reports on PRIA Implementation (https://www.epa.gov/pria-fees/annual-reports-pria-implementation). Information and any findings also will be shared with appropriate EPA staff and management.

Title	IT Modernization of EPA Pesticide Tracking Systems		
Lead National Program	Office of Chemical Safety and Pollution Prevention		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 7: Ensure Safety of Chemicals for People and the Environment Objective 7.1: Ensure Chemical and Pesticide Safety		
Planned start date	April 2019	**Planned completion date**	September 2023

Purpose and brief Description: *Background:* In 2019, EPA kicked off Phase 1 of a multi-year digital transformation to create a fully electronic workflow for EPA registration and reevaluation activities. This effort builds on the 2016 launch of the Pesticide Submission Portal, a secure, web-based portal in EPA's Central Data Exchange (CDX) environment through which the public can electronically submit applications for EPA assessment. In mid-2020, a pilot of the new system went live for one of the three regulatory divisions within the Office of Pesticide Programs (OPP), as well as the Information Technology and Resource Management Division (ITRMD) which in-processes all applications. In early 2021, a second regulatory division in OPP entered the pilot. The pilot is specific to registration application workflows under the Pesticide Registration Improvement Act (PRIA) and its reauthorizations.

Purpose and description: The next phase of the effort will be development of additional workflows and expansion to all of the divisions in the OPP that support registration and reevaluation regulatory activities. By improving the employee and user experience, and, later, improving the customer experience, EPA will enhance the ability of the regulated community, other stakeholders, partners, and the American public to directly engage with the regulatory and science efforts.

Programmatic or policy decisions this activity will inform: Digital transformation to a single system will inform additional IT system development and facilitate enterprise resilience through strategic planning, proactive risk management, effective organizational change management and capacity planning, as well as emergent technologies. Managers will be able to monitor task assignments throughout their organizational unit, while leaders will be able to see the progress and timeliness of all registrations and registration review cases Predictive algorithms will help determine where skills gaps lie so targeted hiring decision can be applied to remove bottlenecks. Employees also will have access to assessment data in one place and augmented intelligence tools being built into the new system will eventually automate administrative tasks, allowing staff to focus on tasks that bring a higher efficiency and rigor to the science. Robotic Process Automation (RPA) will enable automation of many routine tasks allowing the scientists and regulatory specialists to focus on higher value work.

Question(s) this activity will address: How does a fully electronic workflow for EPA registration and reevaluation activities affect EPA employee work processes, such as the timeliness and efficiency of reviews?

Data, tools, method/analytical approach: Data from EPA's PRISM and OPPIN systems measuring how much time is spent at each stage of the risk assessment will allow EPA to establish a baseline and assess improvement in the overall review processes for registration and registration review cases. The Salesforce interface currently being piloted for antimicrobial and biopesticide applications will allow EPA to establish baselines for how much time is spent at each stage and assess improvement in review processes supporting new active ingredients registration determinations. In addition, the augmented intelligence and advance data analytics within Salesforce will allow EPA to identify stages in the review process that present bottlenecks, allowing further system development and/or resource allocation to address identified concerns.

Anticipated challenges and proposed solutions: OCSPP is currently awaiting award of the Mission Support IT Contract to continue work on the digital transformation. Current contracts supporting development and operations and maintenance of systems expire in November, thereby making the award of the new contract urgent.

Dissemination of findings: Process improvements relating to pesticide registration and registration review activities, as well as information technology improvements, are described annually in the PRIA annual report (https://www.epa.gov/pria-fees/annual-reports-pria-implementation). Information and any findings also will be shared with appropriate EPA staff and management.

Office of Land and Emergency Management

Title	Gathering Data on Results of Newly Required Annual and Triennial Testing to Evaluate Impacts of U.S. EPA's 2015 Federal Underground Storage Tank Regulation.		
Lead National Program	Office of Land and Emergency Management		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 6: Safeguard and Revitalize Communities Objective 6.2: Reduce Waste and Prevent Environmental Contamination		
Planned start date	January 2022	**Planned completion date**	January 2023

Purpose and brief Description: The purpose of this study is to understand how newly required Underground Storage Tank (UST) compliance testing requirements included in the 2015 updated UST regulation impacted the number of tests conducted to achieve a passing compliance test result. To this end, EPA's Office of Underground Storage Tanks (OUST) plans to collect failing and passing test counts for four newly required UST compliance tests over a six-year period from 2015-2021 within 17 states and territories whose compliance deadlines fell before the end of 2021. OUST will submit an information collection request (ICR) to covering this data gathering activities; After the ICR is approved, OUST will task a contractor with collecting the information from a census of 120 UST compliance testing companies, who conduct the compliance tests, within these 17 states.

Programmatic or policy decisions this activity will inform: This study will help OUST to better understand the impacts of the new requirements included in the 2015 update to UST regulations. OUST will share the information from the study with implementing agencies, who may use the information to better target resources and compliance assistance efforts. The information will help OUST plan outreach and technical assistance, may help to inform future EPA rulemaking efforts.

Question(s) this activity will address:

- Does the inclusion of four new operation and maintenance compliance requirements, which require a UST owner/operator to achieve a passing test result at least every one or three years, improve release prevention efforts (as measured by fewer tests required per each passing test result) by incentivizing owners/operators to better maintain required safety equipment or rapidly replace this equipment when necessary?
- Which, if any, required equipment poses more frequent operation and maintenance challenges? How EPA and implementing agencies can best target compliance assistance or enforcement efforts most effectively?

Data, tools, method/analytical approach: OUST will use data on the number of failing and passing test results for each of four types of compliance tests conducted from the period 2015-2021 within 17 states and territories. OUST plans to use a contractor to collect this information from a census of 120 UST compliance testing companies operating in these states. OUST will work with an EPA economist to analyze the information collected and determine whether statistically significant conclusions may be drawn about changes in passing test rates over the two three-year periods of the study. OUST developed a data submission template to share with respondents.

Anticipated challenges and proposed solutions: Since the study will collect information from a census of 120 UST compliance testing companies, EPA anticipates challenges in participation from all respondents due to the burden of reporting the information. EPA anticipates higher participation rates from larger compliance testing companies. EPA plans to collect information that will allow us to weight results to represent the entire population, rather than equally weighting only those who choose to respond, which would bias results in favor of larger companies who are likely to represent larger owner/operators.

Dissemination of findings*:* The summary of the results will be shared with regional, state, and industry partners and on EPA's website within the OUST page. Information and any findings also will be shared with appropriate EPA staff and management.

EPA FY 2023 Annual Plan for Evidence-Building Activities

The Foundations for Evidence-Based Policymaking Act (Evidence Act) provides a framework to promote a culture of evaluation and continuous learning to ensure Agency decisions are made using the best available evidence. EPA's FY 2023 Annual Plan for Evidence-Building Activities describes Agency plans for significant evidence-building across a range of program areas. In this section EPA describes evidence-building activities other than program evaluation[1], such as data analysis, foundational fact finding, research, statistical analysis, continuous process improvement, and performance measurement. This document shares examples of evidence-building that supports EPA's decision-making in response to Administration priorities, Congressional mandates, and management priorities.

The first part of this document gives an overview of EPA's evidence-building activities in support of the Agency's Learning Agenda, which is part of the *FY 2022 – 2026 EPA Strategic Plan*. This part is organized by Learning Priority Area. The second part of this document, the Other Evidence-Building Activities, is organized by national program.

Evidence-Building Activities Supporting EPA's Learning Agenda

Expanding EPA's Toolkit of Air Benefits Assessment Methodologies and Practices

Lead National Program	Office of Air and Radiation		
Strategic Goal and Objective supported	Goal 4: Ensure Clean and Healthy Air for All Communities Objective 4.1: Improve Air Quality and Reduce Localized Pollution and Health Impacts		
Planned start date	October 2022	**Planned completion date**	September 2023

Purpose and brief Description: EPA uses well-established methods for estimating the health benefits associated with reductions in some pollutants. However, as noted by scientific bodies including the NAS and SAB[2], there are areas where the science of air pollution effects continues to advance and there are benefits that EPA does not currently quantify and monetize.

Programmatic or policy decisions this activity will inform: This activity will improve EPA's ability to: (1) characterize the health benefits of improved air quality within Environmental Justice communities; (2) account for the role of air pollution in promoting the progression of chronic disease and subsequent death; (3) quantify the health benefits of toxic air pollutants.

[1] For descriptions of significant program evaluations, please see EPA's FY2023 Annual Evaluation Plan

[2] National Research Council. 2002. *Estimating the Public Health Benefits of Proposed Air Pollution Regulations*. Washington, DC: The National Academies Press.https://doi.org/10.17226/10511. National Research Council. 2008. *Estimating Mortality Risk Reduction and Economic Benefits from Controlling Ozone Air Pollution*. Washington, DC: The National Academies Press.https://doi.org/10.17226/12198.

Question(s) this activity will address:

- What are the health benefits of reducing human exposures to air pollutants not currently quantified, particularly those related to hazardous air pollutants (HAPs)?
- What are the health benefits of reducing the risk of air pollution-related effects that are challenging to quantify but nonetheless important to the exposed populations?
- What are the benefits of health outcomes that cannot yet be valued using Willingness-to-Pay or other measures of economic value?
- How can we account for sequelae and the progression of disease when quantifying benefits?

Data, tools, method/analytical approach: Addressing the above questions will require access to economic and health datasets providing information on health effect incidence, health outcomes, and health care expenditures. We would apply these newly developed techniques using existing Agency tools, including the environmental Benefits Mapping and Analysis Program (BenMAP).

Anticipated challenges and proposed solutions: Addressing questions of the scope and complexity of those above will require significant contract resources and additional FTE (in particular, economists, biostatisticians and air pollution epidemiologists).

Dissemination of findings*:* Project materials will be made available through the EPA website. Information and any findings also will be shared with appropriate EPA staff and management.

Drinking Water Systems Out of Compliance

Lead National Program	Office of Enforcement and Compliance Assurance		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 3: Enforce Environmental Laws and Ensure Compliance Objective 3.2: Detect Violations and Promote Compliance		
Planned start date	October 2022	**Planned completion date**	September 2023

Purpose and description: Drinking water noncompliance is greatest in small, disadvantaged communities and may be higher than EPA data suggests due to failures to monitor and report. The Drinking Water Systems out of Compliance learning priority area in EPA's Learning Agenda aims to increase drinking water compliance rates through evaluation of key program components identified by stakeholder experts.

Office of Enforcement and Compliance Assurance (OECA), Office of Water (OW), and the Drinking Water Systems out of Compliance learning priority workgroup are assessing drinking water data reported to EPA to determine whether it accurately measures national compliance and substantiates EPA policy decisions; considering noncompliance root causes and corresponding technical/managerial/financial factors; and testing efficacy of technical assistance, enforcement, and state oversight.

The assessments, once complete, will identify key water system characteristics for which EPA and states should focus its policies and the most effective way to apply compliance assurance tools for increasing compliance in the drinking water program.

OECA anticipates FY2023 funds will support finalizing Question 1 – access to data for measuring drinking water compliance; completing Question 2 – root cause analysis of system compliance; and conducting prospective studies for Question 3 – efficacy of enforcement on compliance. EPA/OECA anticipate beginning work on questions 4 and 5 in future years.

For Question 1, OECA developed a detailed work plan for assessing Safe Drinking Water Information System (SDWIS) data quality and determining if sample results data provide better insight into compliance. Existing reports and audits on SDWIS data quality have been reviewed for data quality issues, program file review reports are being reviewed and OECA is in the process of securing states' sample results data to compare to SDWIS data as a quality check. In FY 2021, OECA synthesized information from existing assessments of the quality of EPA's drinking water data for Question 1. EPA also has begun analyzing existing information for Questions 2 and 3. In FY 2023, for Questions 2 and 3, those analyses will continue and OECA will conduct work to determine root causes of compliance and to assess the influence of enforcement and inspection activities on compliance, which may include planning for randomized control trial studies – especially likely for Question 3.

Programmatic or policy decisions this activity will inform: Applying compliance assurance tools to effectively increase drinking water compliance rates.

Question(s) this activity will address:

- Does EPA have ready access to data to measure drinking water compliance reliably and accurately?
- What factors determine system noncompliance and optimal performance?
- Does increased use of compliance assurance tools (inspections and enforcement) improve system compliance, and if so under what circumstances?
- How can EPA determine if a system has the technical, managerial, and financial capacity to provide safe water on a continuous basis to its customers?
- What EPA oversight activities are effective at assessing and improving state programs' ability to drive compliance?

Data, tools, method/analytical approach: Question 2 Root Cause Analysis: The analysis will identify key system characteristics associated with noncompliance and continual compliance using the Agency's existing correlative and anecdotal data. Systems would likely be stratified by categories such as tribal versus non-tribal, rural versus urban, to identify system characteristics that correlate with compliance performance trends. This question seeks to identify the variation in challenges systems start with and how those challenges affect compliance rates. EPA's objective is to then acquire empirical evidence on the causal factors that lead to noncompliance and, on the positive side, optimal system performance.

Question 3 Enforcement and Inspection Efficacy: In future years, the Agency will empirically test the impact of increased use of compliance monitoring inspections and enforcement actions as compared to the status quo practice of heavily relying on sanitary surveys and other types of assistance. This priority question complements the Drinking Water National Compliance Initiative (NCI), EPA's increased use of inspections and enforcement for drinking water compliance could

be planned such that those activities form the basis of a prospective study to inform the evaluation. The results of the study could inform future compliance assurance strategies either as part of or beyond the NCI.

Anticipated challenges and proposed solutions: Dependent on high stakeholder engagement and participation (states, academic institutions, EPA management and staff, etc.)

Dissemination of findings*:* Final reports will be posted publicly on EPA's website. Information and any findings also will be shared with appropriate EPA staff and management.

Workforce Planning

Lead National Program	Office of Mission Support (OMS)		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Cross-Agency Strategy 3: Advance EPA's Organizational Excellence and Workforce Equity		
Planned start date	October 2022	**Planned completion date**	September 2023

Purpose and description: EPA identified Human Capital Management as an Enterprise Risk due to the high number of staff eligible for retirement and EPA's aging workforce. The Workforce Planning learning priority area in EPA's Learning Agenda will develop an evidence-based roadmap for how EPA can ensure it has employees with the competencies needed to achieve its mission now and in the future. It also will help determine the overall processes required to cultivate and manage the workforce, while anticipating internal and external changes, and continuously maximizing the efficiency and effectiveness of the Agency's Human Resources services.

Programmatic or policy decisions this activity will inform: Near and long-term strategies to attract, recruit, train, and retain a diverse and effective workforce.

Question(s) this activity will address:

- Does EPA have access to the tools and strategies needed to analyze and understand the Agency's near and long-term workforce needs?
- What are the critical skills needed to support the Agency's mission, now and in the future?
- What are the best strategies to attract, recruit, train, and retain a diverse workforce? What makes people stay in the Agency long-term?
- What is the best way to ensure knowledge is transferred from outgoing to current and incoming staff to support succession planning?

Data, tools, method/analytical approach: EPA will enhance the Agency's competency assessment tool and conduct skills assessments for the Agency's Mission Critical Occupations (MCOs). In this activity, the Agency will first revalidate its MCOs to ensure the correct positions and competencies are assessed. The Agency also will enhance EPA's competency assessment tool and conduct skills gap analyses among its Agency-specific MCOs. EPA will analyze internal and external recruitment strategies, enhance employee engagement strategy, develop an employee career progression model; and conduct an attrition cause analysis. EPA has various data sets and tools to capture employee demographic, hiring, and attrition data, but no current agencywide data

sets exist on current and future employee skills and competencies. To develop such data sets, EPA will use internal and contractor support to gather information from various internal and external stakeholders, including but not limited to: EPA employees and supervisors, the Human Resource Officer/Program Management Officer (HRO/PMO) community, Human Resources Council, First Line Supervisor Advisory Group (FLAG), senior leaders, and members of the external human resources academic and practitioner community. Surveys, literature reviews, focus groups, interviews, and other quantitative and qualitative methods will be used to obtain needed information. Cost-benefit analysis, benchmarking, and appropriate quantitative and qualitative analyses will be used along with other analytical approaches. Data will be managed consistent with security and privacy requirements.

Anticipated challenges and proposed solutions: There might be low participation among stakeholders in the assessment and analysis of the four workforce priority questions. This possible challenge will be mitigated by enlisting the buy-in and support of senior leaders, the Human Resources Council, and other key stakeholders to help promote the process prior to its start and keeping in constant contact with those stakeholders during the evaluation and analysis process.

Dissemination of findings*:* The identified workforce activities are considered key components of management's strategic decision-making process; findings will be shared consistent with requirements related to information that may be privileged or prohibited from disclosure. It is anticipated relevant results will be shared with internal stakeholders, including senior leaders and EPA's Human Resource Officer/Program Management Officer community. Aggregate information on findings might be shared with other federal agencies and/or publicly.

Grant Commitments met

Lead National Program	Office of the Administrator/Office of Congressional and Intergovernmental Relations		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Cross-Agency Strategy 4: Strengthen Tribal, State, and Local Partnerships and Enhance Engagement.		
Planned start date	October 2022	**Planned completion date**	September 2023

Purpose and description: Every year, EPA awards over $4 billion in grants and other assistance agreements. Through these grants, EPA helps to protect human health and the environment through the work of its grantees. The goal of the Grant Commitments Met learning priority area in EPA's Learning Agenda is to learn whether grant program accomplishments achieve the intended environmental results and to build a comprehensive system for tracking and reporting grant program outputs and outcomes by collecting and analyzing data and information on the Agency's practices for tracking and reporting grant program outputs and outcomes.

The Agency Learning Agenda outlines work to establish the baseline, assess the current state, define the future state, and begin grant program reviews. This effort spans three fiscal years, FY2021 through FY2023. Beyond FY2023, it is anticipated that the Agency will implement a regular schedule of grant program reviews.

Programmatic or policy decisions this activity will inform: Practices and tools to effectively track whether grantees are fulfilling their workplan grant commitments, including outputs and environmental outcomes.

Question(s) this activity will address:

- How are the Agency's grant programs meeting their intended purpose?
- What data and information exists to provide a baseline assessment of the Agency's grant and tracking systems?
- Which criteria are used to assess the ability of programs to successfully monitor grantee performance?

Data, tools, method/analytical approach: EPA is surveying all active EPA grant programs to determine the universe of existing grant reporting and tracking systems. The surveys are intended to provide the data and information needed to understand existing Agency approaches and processes for collecting, monitoring, reporting, and evaluating grant commitments. These data will provide a baseline inventory of what the Agency's grant programs are collecting and how the national programs are using the grant commitment information. Preliminary analyses are defining the current state of the Agency's grant commitment tracking and serve as the foundation for answering the Learning Agenda questions planned for FY2022 and FY2023.

EPA is comparing the current state of grants management to an ideal future state, considering the programmatic and statutory requirements unique to each grant program, and available tools for programmatic monitoring. A workgroup will develop criteria to assess the ability of programs to successfully monitor grantee performance, with a specific focus on tracking environmental outcomes and outputs. This activity will inform the next phase (Learning Agenda Question 2), which will analyze the Agency's ability to review progress made in protecting human health and the environment through its grant programs and demonstrate how EPA's grants programs are achieving the intended environmental results.

Anticipated challenges and proposed solutions: Dependent on high stakeholder engagement and participation (states, academic institutions, EPA management and staff, etc.)

Dissemination of findings*:* Final reports will be posted publicly on EPA's website. Information and any findings also will be shared with appropriate EPA staff and management.

Other EPA Evidence-Building Activities

Office of Air and Radiation (OAR)

Title	Title V Permitting Program Reviews		
Lead National Program	Office of Air and Radiation		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 4: Ensure Clean and Healthy Air for All Communities Objective 4.1: Improve Air Quality and Reduce Localized Pollution and Health Impacts		
Planned start date	October 2022	Planned completion date	September 2023

Purpose and description: EPA periodically assesses state and local permitting programs, including the sufficiency of fees collected, under Title V of the Clean Air Act as part of its responsibility to oversee delegated and approved air permitting programs.

Programmatic or policy decisions this activity will inform: In general, these analyses identify good practices, document areas needing improvement, and inform how EPA can help the permitting agencies improve their performance.

Question(s) this activity will address:
- What are some good practices and areas of improvement in state and local permitting programs under Title V of the Clean Air Act?
- How can EPA help the permitting agencies improve their performance?

Data, tools, method/analytical approach: In general, EPA uses a questionnaire to gather preliminary information, reviews files maintained on permits, conducts site visits, and follows up with the permitting program to clarify information in conducting a Title V program assessment.

Anticipated challenges and proposed solutions: The Agency conducts these analyses annually and does not anticipate challenges.

Dissemination of findings*:* The Title V Permit analyses are posted on EPA's website. Information and any findings also will be shared with appropriate EPA staff and management.

Title	Our Nation's Air: Status and Trends Through 2021		
Lead National Program	Office of Air and Radiation		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 4: Ensure Clean and Healthy Air for All Communities Objective 4.1: Improve Air Quality and Reduce Localized Pollution and Health Impacts		
Planned start date	October 2022	Planned completion date	September 2023

Purpose and description: EPA is committed to protecting public health and the environment by improving air quality and reducing air pollution. This annual report presents the trends in the

nation's air quality and summarizes the detailed information found at EPA's Air Trends website and other air quality and emissions data.

Programmatic or policy decisions this activity will inform: This activity provides an annual assessment of air quality in an accessible format, allowing EPA, states, and other stakeholders to understand how air quality is changing both in their local area and across the nation. Stakeholders can use this information to help inform their decisions in their air quality programs.

Question(s) this activity will address:
- Where are areas experiencing air quality above the national ambient air quality standards?
- Are these areas trending toward improving air quality?

Data, tools, method/analytical approach: Existing data is pulled from several sources to generate the report such as the National Emission Inventory (NEI) and Air Quality System (AQS).

Anticipated challenges and proposed solutions: The Agency produces this report annually and does not anticipate challenges. This activity is contingent upon air quality data availability from state, local, and tribal air pollution control agencies.

Dissemination of findings: This report is annually included on EPA's Air Trends website. Information and any findings also will be shared with appropriate EPA staff and management.

Office of Chemical Safety and Pollution Prevention (OCSPP)

Title	TSCA Risk Evaluation and Management Activities		
Lead National Program	Office of Chemical Safety and Pollution Prevention		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 7: Ensure Safety of Chemicals for People and the Environment Objective 7.1: Ensure Chemical and Pesticide Safety		
Planned start date	October 2022	**Planned completion date**	September 2023

Purpose and description: OCSPP's Office of Pollution Prevention and Toxics (OPPT) will continue to stand up a project management program that eventually will support all major activities in the office. A primary area in which this effort is expected to contribute is the planning and execution of risk evaluation and risk management actions taken by EPA under TSCA.

Programmatic or policy decisions this activity will inform: This activity will inform the understanding of how is meeting TSCA's mandates and how this can be improved, as well as what appropriate measures are for tracking performance.

Question(s) this activity will address: Can the processes currently used to develop TSCA risk evaluations and risk management actions be improved?

Data, tools, method/analytical approach: Critical data sets include performance metric targets and results and any other data sets that could point to a need for operational improvements. For some aspects of this work, new information will be developed to establish a baseline for future

measurement. The project management approach and tools will be used to understand, plan, and improve TSCA implementation.

Anticipated challenges and proposed solutions: OCSPP does not anticipate major challenges, but the adoption of new approaches across a highly technical and complex program will take time to realize results. Similarly, TSCA timelines for risk evaluation and risk management actions run for about five years per chemical, so improvements may not be able to be demonstrated immediately.

Dissemination of findings: OCSPP will make results publicly available via performance reporting. Information and any findings also will be shared with appropriate EPA staff and management.

Title	Effectiveness of OCSPP Pollution Prevention Activities		
Lead National Program	Office of Chemical Safety and Pollution Prevention		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 7: Ensure Safety of Chemicals for People and the Environment Objective 7.2: Promote Pollution Prevention		
Planned start date	October 2022	**Planned completion date**	September 2023

Purpose and description: The Pollution Prevention (P2) Program seeks to alleviate environmental problems by leveraging business-relevant approaches to achieve significant reductions in the generation of hazardous releases to air, water, and land; reductions in the use of hazardous materials, which also advances EPA's chemical risk reduction and management goals under the Toxic Substances Control Act (TSCA); reductions in the generation of greenhouse gases; and reductions in the use of water. As a result of these preventative approaches, the P2 Program helps businesses and others reduce costs and access market opportunities.

Programmatic or policy decisions this activity will inform: The review will assess the degree of progress and effects of the P2 Programs, as well as the utility of performance measures (APG, LTPG, internal operational metrics) for the Program.

Question(s) this activity will address:
- What are the effects of EPA's P2 Program on different stakeholders' outcomes?
- What is the potential pace of the Safer Choice Program when appropriately resourced?

Data, tools, method/analytical approach: Critical data sets include data collected as part of the P2 Program, the existing list of Safer Choice products, and performance metric targets and results and any other data sets that could point to a need for operational improvements.

Anticipated challenges and proposed solutions: OCSPP does not anticipate any major challenges in gathering relevant data.

Dissemination of findings*:* OCSPP will make results publicly available via performance reporting. Information and any findings also will be shared with appropriate EPA staff and management.

Title	Reducing Use of Animals in Chemical Testing		
Lead National Programs	Office of Chemical Safety and Pollution Prevention and Office of Research and Development		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 7: Ensure Safety of Chemicals for People and the Environment Objective 7.1: Ensure Chemical and Pesticide Safety		
Planned start date	October 2020	**Planned completion date**	October 2035

Purpose and description: OCSPP and ORD have been world leaders in advancing the science of moving away from the use of animals for toxicity testing. In June of 2020, EPA released, "New Approach Methods Work Plan: Reducing Use of Animals in Chemical Testing," which provides a workplan to develop metrics for reducing the use of mammalian laboratory animals in both research and for safety evaluations for pesticides and industrial chemicals.

Additionally, the U.S. Government Accountability Office (GAO) released a report to Congress in 2019 recommending that Federal agencies develop metrics to assess the progress made toward reducing, refining, and replacing animal use in testing. EPA implemented activities and policies over the past several years that demonstrate significant reductions in the number of animals used in testing and saving resources for the Agency and stakeholders.

Programmatic or policy decisions this activity will inform: OCSPP primarily uses laboratory animal data for assessing the risks of pesticides and industrial chemicals under FIFRA and TSCA. This effort will support metrics that show progress regarding the move away from this historical paradigm towards replacing animal studies with new approach methods that are more efficient and more human relevant.

Question(s) this activity will address:

- What progress is being made towards achieving the goal of reducing mammal study requests and funding by 30 percent by 2025?
- What progress is being made towards achieving the goal of eliminating mammalian study requests and funding by 2035?

Data, tools, method/analytical approach: OCSPP tracks the reduction and replacement metrics through internal committees, primarily the Hazard and Science Policy Council (HASPOC) and the Chemistry and Acute Toxicology Science Advisory Council (CATSAC) and division-level processes.

OCSPP is in the process of an Analysis of TSCA Available, Expected and Potentially Useful Information (ATAEPI) that will provide the foundation for developing metrics for TSCA-specific activities in this area.

Anticipated challenges and proposed solutions: Under TSCA, there is no defined set of toxicology data requirements which makes establishing baselines difficult. In addition, OCSPP

needs to develop the processes for tracking and working towards publicly accessible metrics where the submitted data are protected as TSCA CBI.
Accelerating progress towards adopting new approach methods requires the availability of approaches that are "equal to or better than" the typically used animal studies. Other activities described in the June 2020 workplan will address this challenge.

Dissemination of findings*:* EPA efforts to reduce use of animals in chemical testing is reported in the Annual Reports on PRIA Implementation. In the future, OCSPP also will publish metrics on its website. Information and any findings also will be shared with appropriate EPA staff and management.

Title	Pesticide Registration Review		
Lead National Program	Office of Chemical Safety and Pollution Prevention		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 7: Ensure Safety of Chemicals for People and the Environment Objective 7.1: Ensure Chemical and Pesticide Safety		
Planned start date	October 2022	**Planned completion date**	September 2023

Purpose and description: Review will assess the degree of progress and timely completion of docket openings, draft risk assessments, and case completions for the second cycle of registration review.

Programmatic or policy decisions this activity will inform: Decisions on whether any changes are needed to performance measures or the process for completion of pesticide registration review activities.

Question(s) this activity will address:
- Do OCSPP's processes for meeting registration review statutory timeframes warrant further revision?
- Should OCSPP develop a new suite of performance measures to measure current or new processes, and if so, what are the options?

Data, tools, method/analytical approach: Critical data sets include performance metric targets and results and any other data sets that could point to a need for operational improvements.

Anticipated challenges and proposed solutions: OCSPP does not anticipate any major challenges in gathering performance data. Expert input will be brought to bear on any challenges and possibility that solutions will be needed.

Dissemination of findings*:* OCSPP will make results publicly available via performance reporting. Information and any findings also will be shared with appropriate EPA staff and management.

Title	ESA Effects Determinations for Listed Species		
Lead National Program	Office of Chemical Safety and Pollution Prevention		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 7: Ensure Safety of Chemicals for People and the Environment Objective 7.1: Ensure Chemical and Pesticide Safety		
Planned start date	October 2022	**Planned completion date**	September 2023

Purpose and description: The Endangered Species Act (ESA) requires that the actions of federal agencies do not jeopardize the continued existence of federally threatened or endangered species or destroy or adversely modify their critical habitat. EPA is developing a process to incorporate ESA determinations into its new active ingredient registration process and to work towards more routine considerations of ESA determinations for registration review decisions. EPA anticipates integrating ESA considerations into its new active ingredient registrations and registration review decisions at an increasing frequency over the next 5 years.

Programmatic or policy decisions this activity will inform: Decisions on whether any changes are needed to the processes for incorporating ESA effects determinations into OSCPP's risk assessments supporting registration and registration review activities.

Question(s) this activity will address:
- Do OCSPP's processes for developing ESA effects determinations warrant further revision?
- Should OCSPP develop a new suite of performance measures to measure current or new processes, and if so, what are the options?

Data, tools, method/analytical approach: Critical data sets include EPA workflow tracking systems and stand-alone reports on ESA-related risk assessment activity and label mitigation. Tools and analytical methods listed above would not be needed for this exercise.

Anticipated challenges and proposed solutions: OCSPP does not anticipate any major challenges in gathering performance data. Expert input will be brought to bear on any challenges and possibility that solutions will be needed.

Dissemination of findings*:* OCSPP will make results publicly available via performance reporting. Information and any findings also will be shared with appropriate EPA staff and management.

Office of Enforcement and Compliance Assurance (OECA)

Title	Compliance Learning Agenda		
Lead National Program	Office of Enforcement and Compliance Assurance		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 3: Enforce Environmental Laws and Ensure Compliance Objective 3.2: Detect Violations and Promote Compliance		
Planned start date	To be determined	Planned completion date	To be determined

Purpose and description: OECA is developing a compliance learning agenda in collaboration with states, Tribes, and academics to improve the effectiveness of enforcement and compliance programs, approaches, and tools. With cross-agency participation, OECA will support a venue for EPA, states, Tribes, and territories to collaborate on prioritizing the most pressing programmatic questions; planning evidence-based studies to address these questions; and identifying effective and innovative approaches for improving compliance. OECA anticipates finalizing the compliance learning agenda by the end of FY 2022, with projects beginning and/or continuing through FY 2023.

Programmatic or policy decisions this activity will inform: Projects produced from the compliance learning agenda will inform compliance program improvements and innovative enforcement remedies.

Question(s) this activity will address:
[NOTE: This list is expected to be refined by OECA in conjunction with state, Tribe and territory co-regulators, as well as academic experts and other stakeholders.]:

- Do formal enforcement approaches achieve similar levels of compliance?
- What are the effects of different data sharing/transparency models on compliance rates for regulated facilities (federated vs. non-federated)?
- What is the relative value of onsite vs. offsite compliance monitoring activities?
- What are the circumstances under which provision of compliance assistance is effective in producing improved compliance?

Data, tools, method/analytical approach: EPA will leverage and/or create critical data sets use Agency systems along with obtaining relevant and germane data and information from outside parties. Identify any tools (e.g., statistical software, models, sensors) that will be used, the method (e.g., survey instrument, literature review, data mining), and any analytical approach that will be used (e.g., A/B analysis, benefit-cost analysis, statical regression, trend analysis). Additional data, tools, and methods to be determined, working with stakeholders.

Anticipated challenges and proposed solutions: Anticipated challenges include the availability of relevant and reliable data, as well as the ability of key partners such as EPA regions, EPA, states, Tribes, and territories to undertake activities that generate new data. To help overcome this challenge, OECA has partnered with the E-Enterprise Leadership Council (EELC) and have invited the Environmental Council of States (ECOS), and the National Tribal Council (NTC) to participate in the workgroup to draft the learning agenda.

Dissemination of findings*:* OECA anticipates making project(s) findings public including with states and Tribes through the EELC and other partnerships. Information and any findings also will be shared with appropriate EPA staff and management.

Office of Land and Emergency Management

Title	OLEM Population Analysis		
Lead National Program	Office of Land and Emergency Management		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 6: Safeguard and Revitalize Communities Objective 6.1: Cleanup Up and Restore Land for Productive Uses and Healthy Communities		
Planned start date	January 2023	**Planned completion date**	May 2023

Purpose and description: This is a descriptive study. The purpose is to conduct a bi-annual analysis to support evidence-based descriptions of who benefits from EPA's cleanup and prevention work, by collecting data on the population living within three and one mile(s) of a Superfund site, Brownfields site, Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) site, Leaking Underground Storage Tank (LUST) site, and Underground Storage Tank (UST) facility that exist in thousands of communities across the United States ranging from remote to large urban settings. This analysis also supports EPA's *America's Children and the Environment Report*, by estimating the number of children and their socioeconomic/demographic characteristics who live within one mile of a RCRA CA or Superfund site that may not have had all human health protective measures in place at the time of the analysis.

Programmatic or policy decisions this activity will inform: Populations that are more minority, low income, linguistically isolated, or less likely to have a high school education than the U.S. population as a whole, may have fewer resources with which to address concerns about their health and environment. EPA includes these factors in population analyses to understand the potential for these vulnerabilities in relation to cleanup sites at the national level. Results are included in EPA's annual budget reviews with OMB, and in budget justifications for Congress. Results also are used in general communications with press, other government agencies, and the public.

Question(s) this activity will address: What are the estimates for the population living within three and one mile(s) of a Superfund site, Brownfield site, RCRA CA site, LUST site and UST facility by Race, Ethnicity, Minority, Income, Education; Age; Linguistic isolation?[3]

Data, tools, method/analytical approach: OLEM will use site location and status data from the Assessment, Cleanup and Redevelopment Exchange System (ACRES), Superfund Enterprise Management System (SEMS) and RCRA Info for Brownfields, Superfund and RCRA CA, respectively. Site location and status data for LUST sites and UST facilities from ORD's state LUST/UST database**.** Population data from the most recent American Community Survey 5-Year Estimates. Latitude and longitude coordinates are used to map site locations. Then 1- and 3- mile buffers are drawn from the site location. Depending on data availability, the site location is either a point, a modeled circular site boundary based on site acreage around a point or the actual site boundaries. Using census block group centroids and the 1- and 3- mile buffers, the population and

[3] Race - people who self-identify as white, black, Asian, Native American, Hawaiian/pacific islander, or other; Ethnicity - people of all races who self-identify as hispanic or non-hispanic; Minority - all race and ethnicity combinations except "non-hispanic whites"; Income - below poverty level, and incomes twice or more above poverty level; Education - less than high school education; Age- Under 5, Under 18, over 64; Linguistic isolation: households where all members do not speak English as a first language or "very well."

characteristics are estimated. If the census block centroid falls within the buffer, then the population of that census block is included in the estimation of the near site population. OLEM compares the near site populations to the overall U.S. population to identify differences in the characteristics listed above. OLEM follows the methods used in the America's Children and the Environment Report Indicators E10 and E11. For more details on the methods, see the Summary of Methods. This spatial analysis is done using ArcGIS and R software suites.

Anticipated challenges and proposed solutions: Geospatial data available to map site boundaries is limited. EPA continues to work to improve geospatial data on Superfund and RCRA Corrective Action site boundaries. The LUST/UST data used was obtained from the USTFinder. The USTFinder is a new web map application containing a comprehensive, state-sourced national map of underground storage tank (UST) and leaking UST (LUST) data. USTFinder was made possible by a large ORD data collection effort. Ability to update estimates for LUST/UST in the future depends on whether ORD updates data in the USTFinder.

Dissemination of findings*:* EPA will share the results of these analyses on EPA's website and include the information in Agency documents that are available to the public. Information and any findings also will be shared with appropriate EPA staff and management.

Title	Redevelopment Economics at Remedial Sites (non-federal facility)		
Lead National Program	Office of Land and Emergency Management		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 6: Safeguard and Revitalize Communities Objective 6.1: Cleanup Up and Restore Land for Productive Uses and Healthy Communities		
Planned start date	October 2022	**Planned completion date**	January 2023

Purpose and description: Cleaning up contaminated sites can serve as a catalyst for economic growth and community revitalization. The Superfund Remedial Program facilitates the redevelopment of sites across the country while protecting human health and the environment. Collaborative efforts among state, local, and tribal partners, redevelopers and other federal agency programs encourage restoration of sites. Since Superfund sites often encompass buildings, roads, and other infrastructure, their effective and efficient cleanup and reuse can play a pivotal role in a community's economic growth. EPA has initiated efforts to collect economic data at a subset of Superfund sites.

Programmatic or policy decisions this activity will inform: Economic data are included in budget justifications to Congress and are used in general communication with key stakeholders and the public.

Question(s) this activity will address: The analysis will provide current, reliable business-related information for a subset of Superfund sites in reuse and continued use. Some innovative business owners and organizations reuse Superfund sites for a variety of purposes. These uses can help economically revitalize communities near Superfund sites.

Data, tools, method/analytical approach: The study estimates economic activity at Superfund sites in reuse from reputable sources based on methodology developed by EPA's Superfund

Redevelopment Initiative and outlined on the public webpage. Information on the number of employees and sales volume for on-site businesses typically comes from Hoovers/Dun & Bradstreet, the ReferenceUSA and Manta databases.

Anticipated challenges and proposed solutions: There are no anticipated challenges.

Dissemination of findings*:* The summary of the results will be shared on EPA's website. Information and any findings also will be shared with appropriate EPA staff and management.

Title	Redevelopment Economics at Federal Facilities		
Lead National Program	Office of Land and Emergency Management		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 6: Safeguard and Revitalize Communities Objective 6.1: Cleanup Up and Restore Land for Productive Uses and Healthy Communities		
Planned start date	October 2022	**Planned completion date**	January 2023

Purpose and description: Cleaning up contaminated sites at federal facilities can serve as a catalyst for economic growth and community revitalization. The Superfund Federal Facilities Program facilitates the redevelopment of federal facility sites across the country by assisting other federal agencies (OFAs) expedite activities related to CERCLA response actions, while protecting human health and the environment. Collaborative efforts among OFAs; developers; and state, local, and tribal partners encourage restoration of sites. Since federal facility Superfund sites often encompass thousands of acres with buildings, roads, and other infrastructure, their effective and efficient cleanup and reuse can play a pivotal role in a community's economic growth. EPA has initiated efforts to collect economic data at a subset of federal facility Superfund sites that is outlined on the public webpage Redevelopment Economics at Federal Facilities.

Programmatic or policy decisions this activity will inform: Economic data are included in budget justifications to Congress and are used in general communication with other Federal agencies and the public.

Question(s) this activity will address: The analysis will provide current, reliable business-related information for a subset of federal facility Superfund sites in reuse and continued use. Some innovative business owners and organizations reuse Superfund sites for a variety of purposes. These uses can help economically revitalize communities near Superfund sites.

Data, tools, method/analytical approach: The study estimates economic activity at federal facilities Superfund sites in reuse from reputable sources based on methodology developed by EPA's Superfund Redevelopment Initiative, which is outlined in more detail at Redevelopment Economics at Federal Facilities. Information on the number of employees and sales volume for on-site businesses typically comes from Hoovers/Dun & Bradstreet, the ReferenceUSA and Manta databases.

Anticipated challenges and proposed solutions: There are no anticipated challenges.

Dissemination of findings: The summary of the results will be shared on EPA's website. Information and any findings also will be shared with appropriate EPA staff and management.

Office of Mission Support

Title	Diversity, Equity, Inclusivity, Accessibility Plan Implementation		
Lead National Program	Office of Mission Support		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Cross-Agency Strategy 3: Advance EPA's Organizational Excellence and Workforce Equity		
Planned start date	October 2021	Planned completion date	September 2026

Purpose and description: In line with President Biden's Executive Order on Diversity, Equity, Inclusion, and Accessibility in the Federal Workforce, EPA will implement the actions identified in the draft Diversity, Equity, Inclusion, and Accessibility (DEIA) Plan.

Programmatic or policy decisions this activity will inform: EPA will take an evidence-based and data-driven approach to determine whether and to what extent agency practices result in inequitable employment outcomes, and whether agency actions may help to overcome systemic societal and organizational barriers. For areas where evidence is lacking, the Agency will propose opportunities advance diversity, equity, inclusion, and accessibility, addressing those gaps.

Question(s) this activity will address:

- Are Agency recruitment, hiring, promotion, retention, professional development, performance evaluations, pay and compensation policies, reasonable accommodations access, and training policies and practices equitable?
- What is the status and effects of existing diversity, equity, inclusion, and accessibility initiatives or programs?
- What are the number and nature of institutional resources available to support human resources activities?

Data, tools, method/analytical approach: Tools will include the various HR dashboards and systems that contain demographics data that can be used to assess diversity within the Agency. Methods and approaches will be determined following finalization of the DEIA plan.

Anticipated challenges and proposed solutions: There are no anticipated challenges.

Dissemination of findings: Results of findings will be shared with the Agency as new workforce policies, procedures, trainings that will be used to foster a diverse, equitable, inclusive, and accessible workforce. Information and any findings also will be shared with appropriate EPA staff and management.

Title	Facility Climate Resiliency Assessments		
Lead National Program	Office of Mission Support		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 1: Tackle the Climate Crisis Objective 1.2: Accelerate Resilience and Adaptation to Climate Change Impacts		
Planned start date	October 2021	Planned completion date	September 2024

Purpose and description: Climate resiliency has been an integral component of EPA's site planning and facility support for more than a decade. In preparation for severe weather effects on its buildings, infrastructure, operations, and mission-critical activities, EPA's Office of Mission Support (OMS) has conducted climate resiliency assessments at several key facilities in coastal, plains, and mountain regions to identify vulnerabilities and opportunities for climate readiness and adaptation. EPA may conduct additional facility climate resiliency assessments to identify new vulnerabilities and determine best practices for withstanding severe weather events, enhancing IT security, ensuring resilient power supplies, and continuing EPA's mission-related work in the event its buildings or operations are compromised by climate change.

Programmatic or policy decisions this activity will inform: Following completion of a climate assessment at a facility, EPA will prioritize the identified projects based on several factors, including impact on overall facility resiliency, cost, ability to execute, and initiate the highest priority projects.

Question(s) this activity will address: The results of the climate assessments will provide EPA with data on actions/projects the Agency can take to improve the physical and operational resiliency of its facilities against the impacts of climate change.

Data, tools, method/analytical approach: Climate assessments will examine physical and operational vulnerabilities of facilities, assessments may address the following areas: Water Quality and Supply; Severe Weather and/or Flooding Damage; Field Worker Safety; Physical Security; and Security Operations and Emergency Communications. To meet the directives in Executive Order 14008 – Tackling the Climate Crisis at Home and Abroad, EPA is currently developing a Climate Adaptation Plan; final plans and approaches for facility climate assessments will be included.

Anticipated challenges and proposed solutions: The primary challenge associated with this activity is financial as the costs associated with pursuing climate resiliency enhancements to EPA-owned facilities may exceed annual appropriations in the Buildings & Facilities account. EPA will prioritize the facility projects to ensure that the highest priority projects with the greatest impacts on resiliency are initiated within available resources.

Dissemination of findings*:* EPA will not make generally available the results of every facility climate assessment; however, EPA publishes a list of the major Buildings & Facilities projects it intends to pursue with the annual Congressional Justification budget narrative and these projects may include major climate resiliency projects. Information and any findings also will be shared with appropriate EPA staff and management.

Title	Implementing Multifactor Authentication and Encryption		
Lead National Program	Office of Mission Support		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Cross-Agency Strategy 3: Advance EPA's Organizational Excellence and Workforce Equity		
Planned start date	October 2021	Planned completion date	September 2026

Purpose and description: Executive Order 14028 – *Improving the Nation's Cybersecurity* mandates that Agencies implement a Zero Trust Architecture in accordance with the National Institute of Standards and Technology (NIST) standards and guidance and implement Multifactor Authentication (MFA) and encryption for Data at Rest and Data in Transit for Federal Information Systems Modernization Act (FISMA) Systems. EPA currently has 127 systems, of which 40% are believed to meet the NIST requirements for multifactor authentication. The Agency has identified the implementation of MFA as a Long-Term Performance Goal for the *FY 2022-2026 EPA Strategic Plan*. This effort will require collecting information regarding MFA for all 127 FISMA into the Agency's Governance Risk and Compliance (GRC) Information Security management system, XACTA, in a standardized manner.

Programmatic or policy decisions this activity will inform: This data will identify the FISMA systems across the Agency that will require implementation of MFA and enable the Office of Mission Support to target compliance to those offices within the FISMA system boundaries.

Question(s) this activity will address:
- What FISMA systems currently have implemented MFA?
- What FISMA systems that do not currently have MFA, require MFA to be implemented?

Data, tools, method/analytical approach: FISMA System owners will update this data, in a standardized format to allow the Office of Mission Support to track compliance with MFA implementation requirements. Agency tools (e.g., Beyond Trust, CyberArk, hosting utilities, others) can potentially be configured to monitor the use of Multifactor Authentication to access the FISMA Systems and the adoption of Encryption for DAR and DIT. (OISP can work with System Owners and OITO tool managers to configure tools and generate reports). Annual Assessments performed by third party auditors shall address the multifactor authentication and encryption security controls and will reflect updates in the final report. (Report provided by third-party assessor to system owners). Updated Quarterly FISMA reporting shall address the modifications to the "System Boundaries" to address the enforcement. (System, owners will report status to ISSS, and OISP for an official response).

Anticipated challenges and proposed solutions: No anticipated challenges foreseen at this time.

Dissemination of findings*:* This is privileged information pertaining to EPA system security and will not be made available to the public. Information and any findings also will be shared with appropriate EPA staff and management.

Office of Research and Development

Title	Climate Change Research		
Lead National Program	Office of Research and Development		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 1: Tackle the Climate Crisis Objective 1.2: Accelerate Resilience and Adaptation to Climate Change Impacts		
Planned start date	October 2023	Planned completion date	September 2026

Purpose and description: Climate change is impacting public health, air and water quality today and will exacerbate environmental challenges in the future. Potential effects from climate change include increases in scale and frequency of hurricanes, wildland fires, flooding and drought, and changes in transportation and energy usage. EPA/ORD is coordinating research across the six National Research Programs (NRP) to: research causes and mitigating factors for climate change; developing knowledge to support science-based decision making; and supporting emergency response, disaster preparation and recovery, as well as supporting communities and ecosystems against severe weather within a sustainable management framework.

Programmatic or policy decisions this activity will inform: In support of climate change research and Environmental Justice (EJ), ORD research efforts will strengthen science as a foundation for addressing environmental and human health challenges within underserved or at-risk communities.

Question(s) this activity will address: EPA and stakeholders require tools and data that accurately forecast how air quality, water quality, ecosystems, and human health will be affected as a consequence of a changing climate and the potential mitigation strategies that are adopted. ORD research will inform decisions and efforts to decrease the disproportionate impacts of climate change.

Some climate induced disasters will cause EPA, states, and tribal governments to provide support activities including public drinking water supply, drinking and wastewater infrastructure recovery, debris management, and environmental contamination cleanup (oil spill, pesticide, hazardous waste, mold, etc.). Likewise, many of these response activities benefit from capabilities developed from Homeland Security research supporting chemical, biological, and radiological incident response.

Data, tools, method/analytical approach: This research area will produce a large amount of data, methods, and tools to advance the government and stakeholders' understanding of adverse and multi-faceted effects associated with a changing climate. Similarly, the research will produce methods and tools to improve community preparation, response, and recovery for climate induced disasters, as well as to improve the long-term resilience of communities to climatic change with respect to human health and the environment.

Anticipated challenges and proposed solutions: This research area will produce a large volume of scientific deliverables which will require complex research planning, facilitation, review coordination, task prioritization, and regular interactions with programmatic partners (e.g., OAR,

OW, OLEM, Regional Offices) to ensure deliverables/products address stakeholder requirements. To support these efforts, EPA/ORD will continue development of more efficient methods of project implementation and tracking.

Dissemination of findings*:* EPA will make research findings publicly available through several forms such as technical reports, journal publications, open-access web-based tools and models, data sets, webinars, and technical fact sheets. Information and any findings also will be shared with appropriate EPA staff and management.

Title	Environmental Justice and Vulnerable Populations		
Lead National Program	Office of Research and Development		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 2 Take Decisive Action to Advance Environmental Justice and Civil Rights Objective 2.1: Promote Environmental Justice Efforts at the Federal, Tribal, State, and Local Levels		
Planned start date	September 2023	Planned completion date	September 2026

Purpose and description: EJ is an integral part of EPA's mission to protect human health and the environment. EJ is achieved when all people are fully protected from environmental and health hazards and have equitable access to decision-making processes to maintain a healthy environment in which to live, learn, play, and work. Low-income, disadvantaged communities and indigenous peoples are often disproportionately vulnerable to environmental health challenges due to greater risk of exposure to many sources of pollutants or contaminants (chemical stressors). EJ communities are often disadvantaged due to long term environmental policies that resulted in wealth and/or health inequities or disparities, and they are increasingly at-risk to the effects of climate change and extreme weather. Similarly, health impacts from these chemical and nonchemical stressors vary with lifestages, as well as inherent sensitivities. Children, older persons, and people with disabilities or pre-existing health conditions are particularly vulnerable to the effects of climate changes and associated environmental stressors. In coordination with the six National Research Programs (NRP), EPA will lead research on identifying how health disparities can arise from unequal environmental conditions, including impacts from climate change and exposures to pollution, and inequitable social and economic conditions.

Programmatic or policy decisions this activity will inform: In support of climate change research and EJ, ORD research efforts will strengthen science as a foundation for addressing environmental and human health challenges within underserved or at-risk communities.

Question(s) this activity will address: ORD's research will:

- Expand scientific understanding of environmental health disparities and the shortening of human lifespan related to exposure to chemical and nonchemical stressors in vulnerable populations and life stages
- Investigate the intertwined social and environmental variables effecting community resilience and vulnerability to environmental hazards
- Characterize and assess exposures, risks, and impacts associated with air pollution and climate change, while identifying and incorporating evidence-based solutions to reduce these adverse effects in EJ communities

Data, tools, method/analytical approach: A large amount of data, methods, and tools will be developed to support decision-making and empower disadvantaged communities to improve resilience and sustainability. Similarly, this research will enhance human health by supporting the development of new technologies, data, models, and tools as well as resources and trainings for risk communication and risk management, outreach, and community engagement.

Anticipated challenges and proposed solutions: This research area will produce a large volume of scientific deliverables which will require complex research planning, facilitation, review coordination, task prioritization, and regular interactions with programmatic partners (e.g., OAR, OW, OLEM, Regional Offices) to ensure deliverables/products address stakeholder requirements. To support these efforts, EPA/ORD will continue development of more efficient methods of project implementation and tracking.

Dissemination of findings*:* EPA will make research findings publicly available through several forms, such as technical reports, journal publications, open-access web-based tools and models, data sets, webinars, and technical fact sheets. Information and any findings also will be shared with appropriate EPA staff and management.

Office of Water

Title	Clean Water Infrastructure Revolving Fund State Reviews		
Lead National Program	Office of Water		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 5: Ensure Clean and Safe Water for All Communities. Objective 5.1: Ensure Safe Drinking Water and Reliable Water Infrastructure.		
Planned start date	October 2022	Planned completion date	September 2023

Purpose and description: EPA completes annual reviews of each State Clean Water Revolving Fund Program (CWSRF).

Programmatic or policy decisions this activity will inform: These reviews will help assess if states are effectively implementing the Clean Water Revolving Fund Categorical Grant Program by increasing the amount of non-federal dollars leveraged. The reviews also will be used to encourage states to direct funding to projects that address climate resiliency and equity.

Question(s) this activity will address:

- Are states effectively implementing the Clean Water Revolving Fund Categorical Grant Program by leveraging non-federal funds?
- Are the states complying with the EPA's State and Tribal Assistance Grant Program requirements?
- What steps are the states taking to promote climate resiliency and equity through CWSRF funding?

Data, tools, method/analytical approach: Data are provided from each state CWSRF Program review that are conducted by EPA Headquarters and the Regions.
Anticipated challenges and proposed solutions: There are no anticipated challenges.
Dissemination of findings*:* The findings from the annual state reviews are documented in Program Evaluation Reports, which are provided to EPA Headquarters by the regional offices. EPA Headquarters periodically updates guidance based on these findings. Revised guidance is made available to states and stakeholders through EPA's website. Information and any findings also will be shared with appropriate EPA staff and management.

Title	Safe Drinking Water Information System (SDWIS) National Community Water System Non-Compliance Review		
Lead National Program	Office of Water		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 5: Ensure Clean and Safe Water for All Communities. Objective 5.1: Ensure Safe Drinking Water and Reliable Water Infrastructure.		
Planned start date	October 2022	Planned completion date	September 2023

Purpose and description: EPA conducts a review quarterly of the Safe Drinking Water Information System (SDWIS) National Community Water System (CWS) health-based non-compliance data.

Programmatic or policy decisions this activity will inform: This review assesses the trends and causes of non-compliance to information technical, managerial, and financial state and public water system capacity building training or future drinking water regulation needs, in support of regulatory drinking water compliance.

Question(s) this activity will address:
What are the barriers and challenges of CWS systems maintaining compliance with health-based drinking water standards?

Data, tools, method/analytical approach: Data are provided from EPA's SDWIS database. There is a non-compliance review of CWS systems with health-based violations by regulation type, geographical distribution and system source type**.**

Anticipated challenges and proposed solutions: There are no anticipated challenges.

Dissemination of findings*:* The findings from the Program reviews will be publicly shared. Quarterly data reports are shared publicly via the *SDWIS FED Data Warehouse*. Information and any findings also will be shared with appropriate EPA staff and management.

Title	Public Water System Supervision (PWSS) Program Reviews & Drinking Water Infrastructure Revolving Fund State Reviews		
Lead National Program	Office of Water		
Strategic Goal, Objective, and/or Cross-Agency Strategy	Goal 5: Ensure Clean and Safe Water for All Communities. Objective 5.1: Ensure Safe Drinking Water and Reliable Water Infrastructure.		
Planned start date	October 2022	Planned completion date	September 2023

Purpose and description: EPA annually conducts reviews of agencies with Public Water System Supervision (PWSS) primacy (55 reviews) and reviews of each State Drinking Water Revolving Fund Program.

Programmatic or policy decisions this activity will inform: These reviews assess if primacy entities are effectively implementing the PWSS Program to oversee community water system compliance with the Safe Drinking Water Act and assess if states are effectively implementing the Drinking Water Revolving Fund Categorical Grant Program to facilitate community water system compliance with the Safe Drinking Water Act (SDWA).

Question(s) this activity will address:

- Are primacy entities effectively implementing the range of activities in the PWSS Program to oversee community water system compliance with the Safe Drinking Water Act?
- Are states effectively implementing the Drinking Water Revolving Fund Categorical Grant Program to facilitate community water system compliance with the Safe Drinking Water Act and complying with the EPA's State and Tribal Assistance Grant Program requirements?

Data, tools, method/analytical approach: Data is provided via program review reports by agencies with primacy for the PWSS Program. The reports include elements such as state use of the funds and the associated effects, compliance, and implementation of SDWA regulations, alignment of program with national enforcement and compliance priorities, and public communication efforts. For DWSRF data is provided from each state DWSRF program review conducted by EPA Headquarters and the Regions.

Anticipated challenges and proposed solutions: There are no anticipated challenges.

Dissemination of findings*:* EPA's regional offices engage and share results with primacy agencies under their purview. EPA shares PWSS information on water system compliance rates across and within states. EPA makes publicly available an annual report on the status of the national DWSRF Program. EPA also shares project and financial data at the national and state level. Please see the most recent annual report, 2019 DWSRF annual report, for additional information. Information and any findings also will be shared with appropriate EPA staff and management.