

**U.S. Department of the Interior
FY 2022-2026 Learning Agenda**



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Introduction: Building and Using Evidence at the Department of the Interior

The U.S. Department of the Interior (DOI or the Department) protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities. To fulfill its mission in the most effective manner, DOI recognizes the importance of building and using evidence as a tool in program delivery. The bureaus and offices that constitute the Department have a range of capacity and maturity for using and building evidence; as such, a number of new and existing activities will help move the Department forward, including program evaluations, program audits, internal control reviews, performance data analysis, policy analysis, and the wealth of scientific research and data visualization that DOI provides to the public. This learning agenda is an initial look at how DOI leadership can establish an evidence base to inform decision making by focusing on the highest priority and most challenging questions for the Department.

[The Foundations for Evidence-Based Policymaking Act of 2018](#) (Evidence Act) P.L 115-435 requires federal agencies to establish and use a learning agenda for planned learning and evidence-building. The four-year learning agenda lays out a set of priority learning questions to begin DOI's process to build evidence, improve its use, and report out on progress made. The learning agenda aligns with and supports the DOI (Fiscal Years) FY 2022-2026 Strategic Plan. However, this learning agenda is a snapshot of key priority areas where the Department wants to put extra focus on learning needs. As DOI continues to learn and build evidence, and as new questions and priorities arise, the plans established in this learning agenda may change.

The Department of the Interior champions evidence-building activities within the [Office of Planning and Performance Management](#) (PPP). PPP's Director, who also serves as DOI's Evaluation Officer, works closely with the Chief Data Officer and Statistical Official named as part of implementation of the Evidence Act. These three officials provide guidance, direction, and consultation, as well as technical assistance, to bureaus, departmental offices, and regional and field level offices in building and using evidence. The leadership of the Evidence Act officials was key in developing the learning agenda and will be instrumental in answering the priority learning questions and identifying further evidence-building needs. As evidence is built, the officials will also ensure that the evidence is used for decision making, is equitable and transparent, and that the Department's maturity for evidence-building and use continues to improve. DOI's Evaluation Policy will guide the implementation of program evaluations within the Department and inform how evidence is gathered, used, and shared externally and internally.

Along with answering the priority learning questions in the learning agenda, the Department is developing its evidence-building capabilities, building maturity, and identifying current capabilities from which improvements in the upcoming years can be based. DOI's capacity assessment reviews the Department's coverage, quality, methods, effectiveness, and independence in its use of statistics, evaluation, research, and analysis and lays out a plan for building that maturity. Improving DOI's evidence-building capacity will better enable the Department to answer the learning agenda questions and be more effective in using evidence in decision-making.

Fiscal Years 2022 – 2026 DOI Strategic Plan

The learning agenda is aligned with the FY 2022-2026 DOI Strategic Plan which provides the framework for identifying and pursuing priority learning questions for the Department. In the Strategic Plan, DOI lays out four strategic goals:

- Goal 1: Promote well-being, equity, and justice for Tribes, American Indians, Alaska Natives, Native Hawaiians, and insular communities
- Goal 2: Conserve, protect, manage, and restore natural and cultural resources in the face of climate change and other stressors
- Goal 3: Sustainably balance the use of resources while supporting communities and the economy
- Goal 4: Serve and honor the public trust

In pursuit of these strategic goals, the Department is also striving to address four intersecting challenges that President Biden identified: COVID-19, economic recovery, racial equity and climate change.

DOI approached the development of the FY 2022-2026 Learning Agenda as a way to further leadership conversation and dialogue around Departmental initiatives that support specific, and span multiple, strategic goal areas. These include:

- Accelerating responsible development of renewable energy on public lands and waters;
- Strengthening the government-to-government relationship with Tribal nations;
- Making investments to support the Administration’s goal of creating millions of family-supporting and union jobs;
- Working to conserve at least 30% each of lands and waters by the year 2030; and
- Centering equity and environmental justice.

As DOI stewards its public lands, increases environmental protections, pursues environmental justice, and honors the nation-to-nation relationship with Tribes, integration of strategic goals, Agency Priority Goals, learning questions, and enterprise risk reduction strategies – and using this suite of program management tools in the most effective manner possible – is an intentional management objective. The DOI Learning Agenda presents priority learning questions in alignment with the Department’s strategic goals, outlines prior research that will inform the approach to answering a priority question, and provides information on initial plans to conduct evidence-building activities to address priority questions in the coming years.

Stakeholder Engagement

DOI engaged internal and external stakeholders in the process of developing DOI’s learning agenda. The Evaluation Officer, Statistical Official, and Chief Data Officer, along with other leaders in the Department, identified areas where priority learning questions would need to be answered to better accomplish the DOI mission and to support the Biden-Harris administration and the priorities of Secretary Haaland. The Department also held consultations with Tribes and

Alaska Native Corporations, covering topics including climate impacts, equity, investments from the Bipartisan Infrastructure Law, government-to-government consultations, and the contents of and performance goals in DOI's FY 2022-2026 Strategic Plan. These consultations and the specific feedback Tribal leaders provided will be incorporated into performance and learning plans and DOI's priority learning questions. The process of developing learning questions revealed many opportunities for evidence-building within the Department and the importance of maturing DOI's evidence-building capacity.

Guidance for Navigating the Learning Agenda

The DOI FY 2022-2026 Learning Agenda is organized within the framework of the FY 2022-2026 Strategic Plan. The learning agenda is divided into sections for each of the strategic plan's four strategic goals. Each strategic goal section contains a brief overview of the strategic goal and the strategic objectives that support the strategic goal; studies and research relating to the strategic goal; the priority learning questions; and initial, planned activities for the next four years to answer priority learning questions.

A learning agenda is not a fixed plan, but a guide to identify the Department's learning needs and how evidence-building and learning will proceed. As DOI learns and builds evidence, the learning agenda will remain flexible and responsive to new information and data. The planned activities in each section identify how the Department will begin to build data and evidence to answer priority learning questions. As learning plans are adjusted, the Department will report progress in the [Annual Performance Plan and Report \(APP&R\)](#).

DOI will conduct activities using methods including foundational fact-finding, policy analysis, performance measurement and analysis, and program evaluations. All of these types of evidence-building activities will be important to advance learning. DOI will prioritize increasing the use of formal program evaluation, a more rigorous form of evidence-building, and will publish planned program evaluations and results each year, per the Department's Evaluation Policy, in the DOI Annual Evaluation Plan.

Strategic Goal 1: Promote well-being, equity, and justice for Tribes, American Indians, Alaska Natives, Native Hawaiians, and insular communities

The Department is a multi-faceted agency, and part of the Department's goals are to promote equity and justice for Tribes, American Indians, Alaska Natives, Native Hawaiians, and insular communities. The scope of the Department's responsibilities includes fulfilling fiduciary trust responsibilities, supporting Tribal self-governance and self-determination, and strengthening the government-to-government relationship between the Federal Government and Tribal nations. Additionally, the Department funds 33 Tribal colleges, universities, technical colleges, and post-secondary schools that provide quality education for students to equip them to meet the demands of the future. The Department also provides technical assistance through partnerships with Native Hawaiian and insular communities to efficiently and effectively secure and manage Federal funds through planning and program activities.

This strategic goal is supported by the following strategic objectives in the FY 2022-2026 DOI Strategic Plan:

- Tribes and the U.S. Department of the Interior have an effective government-to-government relationship and trust and treaty obligations are upheld
- Tribal, Native Hawaiian, and insular communities are safe and healthy
- Tribal, Native Hawaiian, and insular communities have economic security and growth
- Bureau of Indian Education students have the education necessary for future success

Related Studies and Research

The U.S. Government Accountability Office (GAO) and DOI's Office of Inspector General completed recent reports related to strategic issues facing DOI's goal to promote well-being, equity, and justice for Tribes and insular communities.

Missing or Murdered Indigenous Women: New Efforts Are Underway but Opportunities Exist to Improve the Federal Response (GAO, 2021).¹ This study examined the extent to which the number of missing or murdered AI/AN women in the United States is known and whether U.S. Department of Justice and DOI have taken steps to address the crisis. GAO recommended that DOI develop plans to implement the requirements in Savanna's Act and the Not Invisible Act of 2019 that remain unfulfilled past their statutory deadlines.

Native American Cultural Resources: Improved Information Could Enhance Agencies' Efforts to Analyze and Respond to Risks of Theft and Damage (GAO, 2021).² This study examined approaches that federal agencies have taken to prevent and detect theft and damage and factors that have hindered agencies' efforts to prevent, investigate, and prosecute incidents of theft and damage. GAO recommended that DOI take steps to identify and obtain the information needed to target its efforts for analyzing and addressing risks to American Indian

¹ <https://www.gao.gov/products/gao-22-104045>

² <https://www.gao.gov/products/gao-21-110>

cultural resources and share any promising practices with the Departmental Consulting Archeologist.

National Park Service Employees Violated Federal and National Park Service Regulations During Cleanup Efforts at Virgin Islands National Park (DOI OIG, 2021).³ The OIG found that NPS did not follow its compliance and protection process required by Section 106 of the National Historic Preservation Act to protect archeological, cultural, and historic resources before a crew started work in 2018 at the Virgin Islands National Park. The crew's work damaged artifacts at the site. The OIG also found that the NPS failed to comply with a DOI regulation under the Archeological Resources Protection Act, which seeks to protect archeological resources on federal lands.

The Bureau of Indian Affairs Jeopardized Land Buy-Back Program Accomplishments by Delegating Land Title Authority (DOI OIG, 2021).⁴ The OIG evaluated DOI's Land Buy-Back Program for Tribal nations, finding that BIA violated federal regulations by delegating land title authority to its Acquisition Center. The delegation of land title authority resulted in confusion about roles and responsibilities, allegations of title document defects, breakdown in communication between offices, and the potential for litigation.

Facility Improvements Still Needed at Pine Hill School (DOI OIG, 2021).⁵ The OIG completed a follow-up inspection of Pine Hill School to determine whether the facility conditions had changed since the OIG's last review. The OIG found that BIA and the school implemented 9 of the 12 recommendations from the OIG's 2016 inspection and addressed a number of safety and health issues. However, some of the issues identified in the OIG's 2016 inspection remained unresolved—mainly the extensive water damage and mold in the library, kindergarten classroom, and the gymnasium, as well as general deficiencies that were present throughout the school. The OIG also identified additional safety, health, and security risks during this inspection not covered in the 2016 inspection.

Indian Education: Schools Need More Assistance to Provide Distance Learning (GAO, 2021).⁶ This study examined the extent to which BIE had provided schools with guidance to develop and implement distance learning programs during the COVID-19 pandemic, and whether BIE students had the technology they needed to participate in such programs. GAO recommended that BIE provide comprehensive guidance to schools on distance learning and establish policies and procedures to ensure it has complete, accurate, and up-to-date information on schools' technology needs.

Land management explains major trends in forest structure and composition over the last millennium in California's Klamath Mountains (Knight et al, 2022).⁷ This study by the U.S. Geological Survey, the Yurok and Karuk Tribes, and others, suggested that traditional ecological

³ <https://www.doioig.gov/reports/investigation/national-park-service-employees-violated-federal-and-national-park-service>

⁴ <https://www.doioig.gov/reports/inspection-evaluation/bureau-indian-affairs-jeopardized-land-buy-back-program>

⁵ <https://www.doioig.gov/reports/inspection-evaluation/facility-improvements-still-needed-pine-hill-school>

⁶ <https://www.gao.gov/products/gao-21-492t>

⁷ <https://www.pnas.org/doi/10.1073/pnas.2116264119>

indigenous practices to remove forest fuels in what is now northern California created healthier forests.

Compacts of Free Association: Implications of Planned Ending of Some U.S. Economic Assistance (GAO, 2022).⁸ GAO previously found the Federated States of Micronesia and Republic of the Marshall Islands trust funds may not provide sustainable income and recommended that DOI work to develop a trust fund distribution policy to address the funds' sustainability. In this report, GAO studied the effects of the ending certain assistance under the compacts to the aforementioned and Palau, as well as the sustainability of compact trust fund disbursements to replace grants and financially support the three nations.

Priority Learning Questions

- 1.1. How effective are DOI surveys to get feedback on the usefulness of available materials and tools, particularly in light of limited broadband connectivity of some Tribes?
- 1.2. How well does DOI collect and document traditional knowledge that informs decisions?
- 1.3. What challenges are Tribes facing in their ability to reclaim remaining abandoned mine lands?
- 1.4. How effective is DOI in upholding its responsibilities of the trust and treaty relationships with Tribes and the Federal Government? What specific improvements need to be made in coordination among federal agencies, improving notice to Tribes, and ensuring consistency and accountability in achieving meaningful consultations?
- 1.5. How effective is DOI at supporting Tribes to be successful in self-determination or self-governance? What are the factors of successful self-determination or self-governance that DOI can support?
- 1.6. How can DOI better support Tribes to establish and use Indian Forest Land Assistance Accounts (FL) funds to develop and enhance natural resource programs?
- 1.7. To what extent are the pilot Interactive Beneficiary Kiosks effective at providing service to a variety of beneficiaries? To what extent does the design of the pilot Interactive Beneficiary Kiosk allow for beneficiaries of various ages, geographic locations, and other attributes to access information about their trust accounts more easily?
- 1.8. How effectively is the Bureau of Indian Education (BIE) data being used to support improving student achievement? What organizational processes and data most affect education service delivery? What processes and data are being used for decisions impacting education service delivery and what are the outcomes?

Planned Activities

Plans for evidence-building are under development. DOI will strive to leverage existing work underway while expanding the Department's ability to track and use evidence for decisions. For

⁸ <https://www.gao.gov/products/gao-22-104436>

strategic goal 1 questions, the Department will pay particular attention to learning that comes from Tribal consultations. Initial activities include:

- An investigation of identified sites on Tribal lands that require remediation from prior coal mining activity. The purpose of the investigation will be to determine what is holding Tribes back from completing reclamation work and to identify potential solutions. (supporting priority question 1.3)
- An implementation evaluation that looks at the interactions using the Interactive Beneficiary Kiosk as part of the pilot program and will collect metrics about the type of request made, the duration of the interaction, and the location where the Interactive Beneficiary Kiosk was used. The Interactive Beneficiary Kiosk pilot users will be included in BTFA's survey of call center users and that data will be included in the Interactive Beneficiary Kiosk Evaluation. (supporting priority question 1.7)
- A process evaluation to identify what BIE processes and data exist and their connections to student outcomes. This will inform providers and stakeholders of the connections with current decisions from data and the connection to program goals and objectives. Understanding this, the process evaluation method will identify the extent that program activities have been implemented based on previous data-informed decisions and results related to academic performance. (supporting priority question 1.8)

Strategic Goal 2: Conserve, protect, manage, and restore natural and cultural resources in the face of climate change and other stressors

DOI is a steward of more than 480 million acres of public lands accounting for almost 20 percent of the Nation's land mass, and over 760 million acres of cooperatively managed marine areas comprising approximately 25 percent of U.S. waters. DOI ensures that America's natural endowment – the natural land and water resources of the United States– is conserved for the benefit, use, and enjoyment of current and future generations. In the face of climate change and other stressors, DOI uses the best available science, evidence-based natural resource management techniques, technology, engineering, and partnerships and alliances to guide stewardship of public lands and waters. The Department, in partnership with States, local, and Tribal governments, as well as agricultural and forest landowners, fishers, non-profit organizations, and other key stakeholders, is working to advance the goals of America the Beautiful to tackle climate change, stem the decline of biodiversity, and improve equitable access to nature. The Department will continue to support conservation and restoration in a manner that is faithful to its guiding principles—building a locally led movement that benefits people and the economy, is anchored in science, honors Tribal sovereignty, and respects private landowners.

This goal is supported by the following strategic objectives in the FY 2022-2026 DOI Strategic Plan:

- Lands, waters, and heritage are conserved for present and future generations
- Species, habitats, and ecosystems are protected, sustained, and healthy
- People find enjoyment and take pride in our lands, waters, and heritage

Related Studies and Research

Fourth National Climate Assessment (USGCRP, 2018).⁹ Required by the Global Change Research Act of 1990, the U.S. Global Change Research Program provided the fourth National Climate Assessment to Congress and the President that, per the law, integrates, evaluates, and interprets the findings of the Program; analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; and analyzes current trends in global change, both human-induced and natural, and projects major trends for the subsequent 25 to 100 years.

The Status of Tribes and Climate Change Report (Institute for Tribal Environmental Professionals Tribes and Climate Program and the BIA Tribal Climate Resilience Program, 2021).¹⁰ This study found that inadequate funding remains one of the greatest barriers for Tribes planning for and adapting to climate change, as at least \$6.2 billion will be needed over the next 50 years to protect, replace, and move existing Tribal infrastructure.

⁹ <https://nca2018.globalchange.gov/chapter/front-matter-about/>

¹⁰ <https://sites.google.com/view/stacc2021-itep/home>

Biodiversity and Climate Change Workshop Report (IPBES and IPCC, 2021).¹¹ This co-sponsored workshop synopsis report provided ongoing and future assessments by both the Intergovernmental Panel on Climate Change and the Intergovernmental Platform on Biodiversity and Ecosystem Services related to the connections between climate and biodiversity.

Plan to Conserve Global Forests: Critical Carbon Sinks (US Department of State, 2021).¹² This report presents the USG approach to conserving critical global terrestrial carbon sinks, a plan to catalyze the global effort to conserve and restore the forests and other ecosystems that serve as critical carbon sinks.

Department of the Interior Climate Action Plan (DOI 2021).¹³ This plan presents actions that DOI is currently or will undertake to address the impacts and threats from climate change. The plan identifies DOI's actions for adaptation and resiliency and its five primary vulnerabilities.

America the Beautiful Plan (DOI, CEQ, USDA, Commerce, 2021).¹⁴ This plan presents President Biden's goal to conserve, connect, and restore 30 percent of America's lands and waters by 2030. This plan lays out how federal agencies will pursue a locally led and voluntary, nationwide effort to conserve, connect, and restore lands, waters, and wildlife. The plan also outlines key principles that will guide conservation efforts.

State of the Birds (USFWS, USGS, NPS, USFS, AFWA, and 24 other partners in the U.S. Committee of the North American Bird Conservation Initiative).¹⁵ This report calls attention to drastic declines of some the most common birds in our nation's forests, grasslands, coastlines, and other habitats. A consortium of bird conservation organizations and wildlife agencies is currently working on the 2022 State of the Birds report. The consortium and report may be a model for reviewing the condition of fish and wildlife habitats and populations more broadly as part of the America the Beautiful campaign.

Climate Benefits, Co-benefits, and Trade-offs of Green Infrastructure: A systematic literature review (Journal of Environmental Management, 2021).¹⁶ This research made recommendations for planning and design of green infrastructure to maximize multiple benefits and minimize trade-offs for climate benefits and co-benefits.

EPA's Social Vulnerability Report: Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts (EPA, 2021).¹⁷ This report highlighted the degree to which four socially vulnerable populations— defined based on income, educational attainment, race and ethnicity, and age —may be more exposed to the highest impacts of climate change.

¹¹ https://ipbes.net/sites/default/files/2021-06/20210609_workshop_report_embargo_3pm_CEST_10_june_0.pdf

¹² https://www.whitehouse.gov/wp-content/uploads/2021/11/Plan_to_Conserve_Global_Forests_final.pdf

¹³ <https://www.doi.gov/sites/doi.gov/files/department-of-interior-climate-action-plan-final-signed-508-9.14.21.pdf>

¹⁴ <https://www.doi.gov/sites/doi.gov/files/report-conserving-and-restoring-america-the-beautiful-2021.pdf>

¹⁵ <https://www.stateofthebirds.org/>

¹⁶ <https://www.sciencedirect.com/science/article/pii/S0301479721006459?via%3Dihub>

¹⁷ <https://www.epa.gov/cira/social-vulnerability-report>

Incorporating Climate Uncertainty into Conservation Planning for Wildlife Managers (Earth, 2022).¹⁸ This report described current practice and thinking related to climate uncertainty and management of USFWS resources, focused on three agency domains which represent various conservation planning responsibilities: evaluating species to be listed as threatened or endangered, Habitat Conservation Plans for listed species, and land management techniques on wildlife refuges.

Seeds of Success: A conservation and restoration investment in the future of U.S. lands (Barga et al, 2020).¹⁹ The researchers identified how many sites from the Seeds of Success program burned since collection and identified 662 fires at 631 sites. If fire continues at the pace observed since 2011, an estimated 14% of collection sites will burn by 2050 and over 24% by 2080, putting genetic diversity at risk in areas where fire is linked with invasion. Analysis of 14 native forb species from the western United States found that many collections were from the warmest and driest portions of their range or from areas at the highest risk of wildfire, subsequent invasion, and local extinction.

Seeds of Success: A National Seed Banking Program Working to Achieve Long-Term Conservation Goals (Haidet, M., Olwell, P., 2015).²⁰ This article described the Seeds of Success program, a national native seed collection program, led by DOI's Bureau of Land Management in partnership with numerous federal agencies and nonfederal organizations.

Seed Sourcing for Restoration in an Era of Climate Change (Havens et al., 2015).²¹ The article discussed how plants are responding to changing climates through plasticity, adaptation, and migration, and how this may influence seed sourcing decisions. The authors recommended focusing on developing adequate supplies of "workhorse" species, undertaking more focused collections in both "bad" years and "bad" sites to maximize the potential to be able to adapt to extreme conditions as well as overall genetic diversity, and increasing seed storage capacity to ensure seed is available as further research is conducted to determine how best to deploy it in a changing climate.

Seed storage: maintaining seed viability and vigor for restoration use (De Vitis et al., 2020).²² This paper provided an overview of the key concepts in seed storage and the steps to take for effective storage of native seeds for restoration use.

Operation and Maintenance of Passive Acid Mine Drainage Treatment Systems: A Framework for Watershed Groups (WV Department of Environmental Protection, 2014).²³ This report discussed the need for watershed groups to develop plans for the operation and maintenance (O&M) of all their projects, including passive treatment systems, and to gather resources to carry out those plans. Sections include institutional practices supporting O&M, O&M

¹⁸ <https://www.mdpi.com/2673-4834/3/1/7>

¹⁹ <https://www.fs.usda.gov/treearch/pubs/59993>

²⁰

https://www.researchgate.net/publication/276326945_Seeds_of_Success_A_National_Seed_Banking_Program_Working_to_Achieve_Long-Term_Conservation_Goals

²¹ <https://www.jstor.org/stable/90008730>

²² <https://onlinelibrary.wiley.com/doi/full/10.1111/rec.13174>

²³ https://dep.wv.gov/WWE/Programs/nonptsources/Documents/Projects/OM_Manual.pdf

considerations through the project life cycle, common best management practices for AMD remediation and their maintenance needs, post construction inspection, monitoring, and operation, and postconstruction major maintenance.

What is the evidence that counter-wildlife crime interventions are effective for conserving African, Asian and Latin American wildlife directly threatened by exploitation? A systematic map protocol (Rytwinski et al., 2021).²⁴ This paper describes a protocol to assess the evidence that counter-wildlife crime interventions are effective at protecting targeted species using a systematic mapping approach. Systematic maps are a form of evidence synthesis that aims to provide an accurate description of the evidence base relating to a particular question. To our knowledge, this is the first systematic evidence review commissioned by USFWS.

Priority Learning Questions

- 2.1. To what extent are vulnerability assessment frameworks from the DOI Climate Action Plan being used across DOI? To what extent are they successful at capturing vulnerabilities and risks of climate change, and in projecting vulnerability and risk into the future?
- 2.2. How can DOI better define and improve the selection of metrics and indicators to monitor the effectiveness of specific, nature-based solution (NbS) strategies? What is the specific applicability of NbS (e.g., what, when and where to deploy NbS), design standards (e.g., engineering, hydraulic, economic cost-benefit considerations), and duration of project effectiveness (i.e., compared to a hardened structure)? What is the overall effectiveness of NbS to alleviate climate impacts? What are the ecological, economic, engineering, and social costs and benefits of NbS strategies?
- 2.3. What is the best approach to leveraging IT systems, including the Recreation And Permit Tracking and Online Reporting (RAPTOR) system, the Potential Fossil Yield Classification (PFYC) system, the National Cultural Resource Information Management System (NCRIMS), and the Interior Collections Management System (ICMS), to ensure heritage resources are managed for long-term resilience and stability?
- 2.4. What are the most effective strategies to increase native seed availability for restoring public lands to combat climate change and repair landscapes after wildfires or wildland fires?
- 2.5. How effective are DOI's identified High Impact Service Provider programs at improving the customer experience?
- 2.6. To what extent are various restoration techniques effective at restoring habitat in the long-term?
- 2.7. What maintenance is required, and with what frequency, to ensure that passive treatment systems constructed to address water pollution discharges from abandoned mine lands continue to be effective?
- 2.8. What is the impact and effectiveness of U.S. Fish and Wildlife Service's foreign species conservation assistance?

²⁴ <https://besjournals.onlinelibrary.wiley.com/doi/10.1002/2688-8319.12104>

- 2.9. To what extent are personnel and methodologies effective in assessing whether invasive plant and animals are under control on DOI managed lands and waters?
- 2.10. How can DOI improve data integrity in its electronic Abandoned Mine Land Inventory System to ensure the information on current and future coal AML problems is reliable and consistent?
- 2.11. How should DOI conduct a review of the condition of fish and wildlife habitats and populations, as called for by the America the Beautiful campaign, to meaningfully measure the conservation impact of that campaign and other collaborative conservation efforts of the US Fish and Wildlife Service?

Planned Activities

Plans for evidence-building are under development. DOI will strive to leverage existing work underway while expanding the Department's ability to track and use evidence for decisions. Initial activities include:

- A formative evaluation that will assess the Department's vulnerability assessment frameworks and their impact on vulnerability reduction efforts in programs and activities as it is being planned and implemented. The evaluation will include consulting and engaging with Tribes and affected communities to assess improvements in climate conditions. The evaluation will develop a baseline for subsequent monitoring. Under the direction of the DOI Climate Task Force, surveys, interviews, and focus group discussions among program stakeholders will be conducted. The evaluation will seek to understand the need for the assessment and what improvements should be considered. (supporting priority question 2.1)
- A review of grant reports from funds distributed by OSMRE to non governmental organizations and local and state government agencies to help operate, maintain, and rehabilitate abandoned mine land passive treatment systems that were constructed to address water pollution. The review will increase DOI's knowledge of passive treatment system maintenance requirements. (supporting priority question 2.7)
- A systematic evidence review to evaluate the effectiveness of the Department's assistance for foreign species conservation. The evaluation will support evidence-informed decision making and policy development in the financial assistance programs of USFWS International Affairs. A two-year contract is underway with the Centre for Evidence-Based Conservation to systematically assess the effectiveness of interventions funded by USFWS grants, including efforts to counter wildlife crime for species targeted by the agency's international assistance. The partnership is also intended to establish a public baseline for a new DOI Strategic Plan performance measure: the percentage of funding awarded to projects implementing at least one action with evidence of effectiveness. As resources allow, USFWS plans to build upon pilot efforts to model the return-on-investment of its financial assistance. Working with subject matter experts in academia, the International Union for Conservation of Nature (IUCN) Species Survival Commission, the conservation evidence community, and recipients of DOI/USFWS funds

for foreign species conservation, the agency aims to identify the factors that result in highest estimated impact and performance to inform and improve grant-making decisions and program strategy). (supporting priority question 2.8)

- An invasive species program review, to include field level surveys and interviews; program design/logic model(s) to describe operations on the ground; data gathering and analysis of Bureau invasive species data management processes and results from annual reporting of GPRAMA performance measures for invasive species control over time; assessment of monitoring techniques (post-treatment effectiveness, population suppression, meeting resource management objectives); and policy review (as it pertains to control, data management, monitoring, and associated training). (supporting priority question 2.9)
- Continuation of a review of the electronic Abandoned Mine Land Inventory System data and system controls to improve data consistency and reliability in the data entered by states and Tribes. This work is currently ongoing, using contractor resources, and is critical for OSMRE's planning for abandoned mine land remediation. (supporting priority question 2.10)

Strategic Goal 3: Sustainably balance the use of resources while supporting communities and the economy

As manager of one-fifth of the Nation's mineral and energy resources, including almost 2.5 billion acres of the Outer Continental Shelf (OCS), DOI plays a critical role in meeting America's energy needs and moving the Nation toward a clean energy future. The Department's lands and waters play an important role in contributing to the Nation's energy production. From oil and natural gas to renewable geothermal, hydroelectric, solar, and wind power, a comprehensive energy strategy ensures responsible energy development. Projects on DOI-managed lands are producing affordable energy to power homes, vehicles, and businesses; creating jobs; and providing on average more than \$10 billion in annual revenue supporting federal, state, local, and Tribal economies. The Department is committed to responsible energy and mineral development and resource use. As a steward of the Nation's natural resources, DOI strives for careful planning of conventional energy development projects, a transition to clean technologies to meet the energy needs of the future, and science-informed decisions on resource distribution to support communities in need. In carrying out these activities, DOI will contribute to solutions to address climate change, strengthen and decarbonize the nation's economy, and help communities transition to a clean energy future.

This goal is supported by the following strategic objectives in the FY 2022-2026 DOI Strategic Plan:

- Future energy needs will be increasingly met through renewable and sustainable sources
- Current energy needs are met through balanced resource use
- Land, water, and non-energy mineral resources support the diverse needs of communities

Related Studies and Research

Offshore Oil and Gas: Updated Regulations Needed to Improve Pipeline Oversight and Decommissioning (GAO, 2021).²⁵ This study reviewed BSEE's management of offshore oil and gas pipelines, specifically the processes for ensuring active pipeline integrity and addressing safety and environmental risks posed by decommissioning. GAO recommended that BSEE take actions to further develop, finalize, and implement updated pipeline regulations to address long-standing challenges in these areas.

Federal Lands Snapshot: Hardrock Mining Systems (GAO, 2021).²⁶ This study described the systems used to manage mining on federal lands. It also provided examples of the challenges and opportunities for improvement related to managing such mining, particularly in the areas of environmental stewardship, governance and transparency, and administrative resources.

²⁵ <https://www.gao.gov/products/gao-21-293>

²⁶ <https://www.gao.gov/products/gao-22-105438>

Oil and Gas: Interior Should Strengthen Management of Key Data Systems Used to Oversee Development on Federal Lands (GAO, 2021).²⁷ This study reviewed the data systems DOI uses to oversee oil and gas development on federal lands and waters. GAO recommended that DOI develop a plan to improve data sharing among its key data systems and that DOI update its guidance for developing new data systems to address how program offices are to implement agile development.

The Bureau of Land Management Did Not Review the Federal Exclusions List Before Issuing Federal Mineral Leases (DOI OIG, 2022).²⁸ DOI's Office of Inspector General found that BLM did not review the federal exclusions to determine if mineral lease recipients were suspended or debarred before issuing leases. Also, BLM did not have policies or procedures in place to determine if a lessee was excluded from doing business with the Federal Government. DOI's OIG recommended that BLM comply with federal regulations and reduce the risk of issuing federal mineral leases to entities that are suspended or debarred.

2020 BLM Specialist Report on Annual Greenhouse Gas Emissions and Climate Trends (DOI BLM, 2020).²⁹ This report estimated greenhouse gas emissions from coal, oil, and gas development that is occurring, and is projected to occur, on the federal onshore mineral estate. This information supports evaluation of the cumulative impacts of GHG emissions from fossil fuel energy leasing and development authorizations.

2021 Assessment of Undiscovered Oil and Gas Resources of the Nation's Outer Continental Shelf (BOEM, 2021).³⁰ This report assessed undiscovered oil and gas resources for the U.S. Outer Continental Shelf (OCS). The 2021 assessment considered relevant data and information available as of January 1, 2019 and builds upon previous OCS resource assessments. This assessment provided an estimate of undiscovered, technically and economically recoverable oil and natural gas resources outside of known oil and gas fields on the OCS considering recent geophysical, geological, technological, and economic information.

Future Water Priorities for the Nation—Directions for the U.S. Geological Survey Water Mission Area (National Academies of Sciences, 2018).³¹ This NAS report identified key water resources challenges and corresponding strategic opportunities on which the USGS could focus to achieve its long-term goals. In the report, the committee defined a series of questions to help address priority water science and resource challenges for which USGS science could make the most difference.

Impacts of turbine and plant upsizing on the levelized cost of energy for offshore wind (National Renewable Energy Laboratory, 2021).³² This analysis explored the levelized cost of energy impacts of turbine ratings between 6 and 20 MW and plant capacities between 250 and 2,500 MW for fixed-bottom offshore wind using techno-economic cost models for foundation,

²⁷ <https://www.gao.gov/products/gao-21-209>

²⁸ <https://www.doioig.gov/reports/inspection-evaluation/bureau-land-management-did-not-review-federal-exclusions-list-issuing>

²⁹ <https://www.blm.gov/content/ghg/>

³⁰ <https://www.boem.gov/2021-assessment-undiscovered-oil-and-gas-resources-nations-outer>

³¹ <https://www.nap.edu/catalog/25134/future-water-priorities-for-the-nation-directions-for-the-us>

³² <https://www.nrel.gov/docs/fy21osti/78126.pdf>

electrical, installation, and operation and maintenance costs, along with annual energy production.

Offshore Wind Market Report: 2021 Edition (DOE, 2021).³³ This report detailed information on the U.S. and global offshore wind energy industries to inform policymakers, researchers, and analysts about technology and market trends. The scope of the report covered the status of over 200 global operating offshore wind energy projects through December 31, 2020, and provided the status of, and analysis on, a broader global pipeline of projects in various stages of development. This report also tracked the most significant domestic developments and events from January 1, 2020, through May 31, 2021.

Report on the Federal Oil and Gas Leasing Program (DOI, 2021).³⁴ Prepared in Response to Executive Order 14008, this DOI report identified significant reforms that should be made to ensure onshore and offshore oil and gas programs provide a fair return to taxpayers, discourage speculation, hold operators responsible for remediation, and more fully include communities and Tribal, state, and local governments in decision-making.

Oil and Gas: Federal Actions Needed to Address Methane Emissions from Oil and Gas Development (GAO, 2022).³⁵ This report described the steps federal agencies have taken to reduce methane emissions from oil and gas development on federal lands and implementation challenges; the actions selected industry entities are taking to reduce methane emissions; and how selected states regulate methane emissions and to what extent those efforts could inform federal actions.

Priority Learning Questions

- 3.1. What are the critical processes to establish or revise in order to effectively build DOI's offshore wind energy capabilities?
- 3.2. How can DOI develop awareness and increase capacity to augment the percentage of NEPA decision documents that incorporate merits, drawbacks, analysis of impacts, and mitigation measures of DOI actions to people, such as through socioeconomic and environmental justice analyses?
- 3.3. How can DOI identify and document an increase in carbon sequestration in net carbon budgets with a majority of projects or decisions (pairing development projects with conservation)?
- 3.4. What is an effective approach to build corporate-level dataset monitoring and diagnostic resources and data science tools that could improve hydropower power program efficiency and effectiveness to allow DOI to better assess and refine asset management strategies and implementation? What is an effective way to share and aggregate high-resolution datasets for the hydropower program in a secure, timely manner?

³³ https://www.energy.gov/sites/default/files/2021-08/Offshore%20Wind%20Market%20Report%202021%20Edition_Final.pdf

³⁴ <https://www.doi.gov/sites/doi.gov/files/report-on-the-federal-oil-and-gas-leasing-program-doi-eo-14008.pdf>

³⁵ <https://www.gao.gov/products/gao-22-104759>

- 3.5. How effective are DOI's processes for reviewing and approving feasibility studies for water reclamation and reuse projects?
- 3.6. To what extent are non-energy mineral resources appropriately sourced from public lands in order to maintain balanced use if other domestic sources are not adequate? To what extent is sufficient economic data available on an appropriate level of domestic production on public land by commodity/mineral?
- 3.7. Are USGS's water mission area projects successfully addressing National Academies of Sciences' recommendations, meeting technical requirements, and achieving priority goals laid out in the program roadmaps?
- 3.8. What are the environmental impacts associated with the construction and initial operations of the first tranche of offshore windfarms in federal waters, and what mitigation strategies can be undertaken to allow for long term sustainability and mutual co-existence of offshore wind with commercial and recreational fisheries?

Planned Activities

Plans for evidence-building are under development. DOI will strive to leverage existing work underway while expanding the Department's ability to track and use evidence for decisions. Initial activities include:

- Pilot projects in collaboration with federal and industry partners to look into corporate-level dataset monitoring and diagnostic resources and data science tools for USBR's hydropower program. (supporting priority question 3.4)
- An assessment of a sample of water reclamation and reuse projects to determine to what extent the review process for associated feasibility studies followed established procedures and to what extent the process was impacted positively or negatively by timeframes set by statute. Efficiently managing the feasibility study review process helps to increase the number of eligible projects which, in turn, benefits water conservation capacity to address drought. (supporting priority question 3.5)
- To build evidence for the USGS assessment to understand how Water Mission Area projects are addressing National Academies of Sciences' (NAS) recommendations, meeting technical requirements, and achieving intermediate objectives laid out in the program roadmaps, DOI assesses progress during quarterly management reviews that summarize the entire set of program projects and review program progress. Annually, during the fourth quarter review, program managers will be asked to add an assessment component to the overall success of project activities in meeting NAS recommendations, program technical requirements, and achieving priority goals laid out in the program roadmaps. This will be compiled and summarized for each science portfolio: the Water Resources Availability portfolio and Water Observing Systems portfolio. (supporting priority question 3.7)
- Realtime Opportunity for Development Environmental Observations (RODEO): To understand the environmental impacts of offshore wind development and operations, the Bureau of Ocean Energy Management has undertaken a multi-year monitoring and

data collection effort. The purpose of the Realtime Opportunity for Development Environmental Observations study is to make direct, real-time measurements of the nature, intensity, and duration of potential stressors during the construction and initial operations of selected offshore wind facilities. The purpose also includes recording direct observations during the testing of different types of equipment that may be used during future offshore development to measure or monitor activities and their impact producing factors. (supporting priority question 3.8)

- Fisheries Mitigation Strategy for Offshore Wind Development: Currently there is no overarching federal or state guidance for fisheries mitigation for offshore wind development. Some states, using authorities under state regulations, have required offshore wind developers to establish compensatory funds to offset potential impacts to the fishing industry, to fund research programs aimed at better understanding those potential impacts, and to provide navigation enhancements and safety training. Mitigation has thus differed from project to project, and state by state. To standardize mitigation approaches and find effective strategies, the Bureau of Ocean Energy Management (BOEM), in consultation with the National Marine Fisheries Service and affected coastal states, is developing national guidance to inform plans and environmental reviews for mitigating impacts from offshore wind projects on fisheries. BOEM recently conducted a series of virtual public meetings with representatives from states, federal agencies, the fishing community, and the offshore development community to inform development of mitigation measures that will help reduce or eliminate potential negative impacts that offshore wind development could have on commercial and recreational fisheries. (supporting priority question 3.8)

Strategic Goal 4: Serve and honor the public trust

Trust and confidence are cornerstones of DOI's unique and expansive mission, which includes a geographically distributed workforce, a vast set of management responsibilities, and diverse stakeholders with varying needs and responsibilities. The American people have entrusted DOI with the sustained use of critical natural resources, the preservation of iconic places, and the science to ensure robust decision making, all of which require assurance and fairness at the highest levels. This includes promoting a culture of ethical and inclusive decision-making grounded in the best available science to ensure that departmental operations are safe, effective, and optimized for the changing environment. Beginning with a workforce that mirrors the diversity of the Nation that it serves, DOI will prioritize service delivery and performance improvement to redress inequities and systemic barriers to environmental justice and participation in DOI's programs and activities. This includes actively seeking ways to create opportunities for traditionally underserved communities to enjoy increased access to and benefits of public lands and waters, resources and opportunities.

This goal is supported by the following strategic objectives:

- People, communities and organizations benefit from DOI data, science, and information
- Access to opportunities, services, and resources is equitable and just
- The DOI workforce is diverse, safe, engaged, and committed to the DOI mission
- There is confidence and satisfaction in the U.S. Department of the Interior

Related Studies and Research

U.S. Department of the Interior Law Enforcement's Body Camera Policy and Practices Are Not Consistent With Industry Standards (DOI OIG, 2018).³⁶ This study evaluated DOI's draft body camera policy and bureau body camera practices and determined that they were not consistent with industry standards. The OIG identified two leading authorities on law enforcement use of body cameras—the International Association of Chiefs of Police and the Police Executive Research Forum—and concluded that by adopting their recommendations, the Department and bureaus will strengthen their body camera policies and practices.

The U.S. Department of the Interior Needs To Strengthen Governance Practices To Improve Its Management of Geospatial Data (DOI OIG, 2020).³⁷ This study evaluated DOI's progress in implementing the objectives of the Geospatial Data Act of 2018. The OIG found DOI made progress in meeting 11 of the 13 Geospatial Data Act requirements but that DOI did not implement Department-wide controls to ensure that geospatial data purchased from third parties met quality standards and did not ensure that bureaus regularly searched the GeoPlatform before expending federal funds to purchase geospatial data from a third party.

³⁶ <https://www.doioig.gov/reports/evaluation/us-department-interior-law-enforcements-body-camera-policy-and-practices-are-not>

³⁷ <https://www.doioig.gov/reports/evaluation/us-department-interior-needs-strengthen-governance-practices-improve-its>

Natural Hazard Mitigation Saves: 2019 Report (National Institute of Building Sciences, 2019).³⁸ This report provided a benefit-cost analysis of natural hazard mitigation, from adopting up-to-date building codes and exceeding codes to addressing the retrofit of existing buildings and utility and transportation infrastructure.

Department of the Interior Strategic Plan to Advance Diversity, Equity, Inclusion, and Accessibility in the Federal Workforce (DOI, 2022).³⁹ This plan presents DOI's strategy to identify funding and resources to build capacity and deploy actions that advance equity across the Department, both for the workforce that delivers the missions and for all Americans who are beneficiaries of those missions.

Priority Learning Questions

- 4.1. How can DOI improve the public benefit of the Department's data, science, and information resources, especially among vulnerable communities?
- 4.2. How can DOI achieve better data and science equity, and increase the use of evidence and data in DOI decision making?
- 4.3. How can DOI remove barriers to participation and ensure equitable access to the Department's grant and contracting opportunities for historically underrepresented populations?
- 4.4. How can the Department increase stakeholder engagement to improve environmental justice outcomes for infrastructure investments?
- 4.5. To what extent are the Department's recruitment and hiring practices adequate to attract and retain a diverse and highly skilled workforce?
- 4.6. What are the primary challenges to retaining a diverse, highly skilled workforce capable of delivering the Department's mission?
- 4.7. How can DOI strengthen public trust and confidence in Interior's public safety programs?

Planned Activities

Plans for evidence-building are under development, including a comprehensive mix of evaluations, studies and data analysis to answer the Department's learning questions. DOI will strive to leverage existing work underway while expanding the Department's ability to track and use evidence for decisions. Initial activities include:

- An evaluation to identify current and potential "use cases" for Earth MRI data and products, using both internal subject matter expert input and selected stakeholder input. For current use cases, interviews and surveys will focus on identifying what Earth MRI products are being used, how beneficial that information is, and whether different types of data or products that the program could produce would be more useful. For potential use cases, cases where scientists or stakeholders believe Earth MRI data

³⁸ <https://www.nibs.org/reports/natural-hazard-mitigation-saves-2019-report>

³⁹ <https://www.doi.gov/ppa/equity>

should be useful but where it is not yet being used, interviews and surveys will focus more on “bottom up” descriptions of what data would be helpful for those use cases. Stakeholder groups will be interviewed or surveyed, using standard social science methods and following appropriate guidance for collection of data from human subjects. (supporting priority question 4.1)

- An initial evaluation to include data and analysis related to awards, applications and determining whether a specific step in the process of grant award and management process demonstrates a statistically significant disparity of underrepresented groups. This evaluation will also explore whether a specific step in the process demonstrates a statistically significant disparity increase. DOI will conduct extensive stakeholder outreach, surveys, and other data gathering. (supporting priority question 4.3)
- A proposal to use evaluation funds for a longitudinal tracking study of students in USGS internships following them from school through internships and into careers (supporting priority question 4.5)
- Using existing demographics data from the different points in the employee life cycle to establish a baseline for Department-level and organization-level performance in workforce diversity. DOI’s DEIA Council will review performance of other Federal agencies, and National and state-level census information to benchmark the relative success of DOI in attracting, hiring, promoting, and retaining talent. Using this information, DOI decision makers can identify gaps and opportunities to improve diversity, with appropriate outcomes based on differences in mission area, geography, and other factors. Data insights will inform requirements for more in-depth analysis, identification of potential barriers, and need for immediate corrective action. DOI will also assess effective models in promoting Federal workforce diversity, consult with subject matter experts in academia and industry, and use findings to identify promising strategies for the Department. (supporting priority questions 4.5 and 4.6)
- An Office of Wildland Fire evaluation to include surveying human resources staff at multiple organization levels; surveying fire managers and supervisors at multiple organization levels; surveying applicants and new hires; analyzing data from staffing databases and other systems which support recruitment and onboarding; conducting focus group follow-up based on outcomes of surveys and data analysis; reviewing relevant research findings regarding effective best practices for recruitment; consolidating findings; making recommendations for actions needed; and presenting report and briefing fire management leadership on findings and recommendations. (supporting priority question 4.7)