

Environmental Collaboration and Conflict Resolution (ECCR) in Support of Federal Climate Initiatives: An Assessment of Opportunities



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Morris K. Udall and Stewart L. Udall Foundation's
John S. McCain III National Center for Environmental Conflict Resolution

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—EXECUTIVE SUMMARY—

The Fourth National Climate Assessment (2018) warns that climate change presents systemic threats throughout society. It documents potential impacts to essential services, public health, water quantity and quality, important ecosystems, agricultural productivity, the livelihoods of rural and indigenous communities, coastal communities, infrastructure, outdoor recreation, economic systems, and national security. To address these challenges, the current Administration has laid out an ambitious set of goals and specific executive actions; consequently, virtually every Federal agency is adjusting aspects of its work to account for the impacts of climate change. Climate-related issues are often multijurisdictional in nature, have far-reaching impacts across social, political, and environmental spectrums, and involve large numbers of stakeholders. The magnitude of the climate challenge is, in essence, a mandate for collaborative problem solving.

For Federal agencies whose work involves climate-related matters, intra- and interagency coordination and collaboration with associated stakeholder and public engagement can require a significant investment of resources and energy. Federal agencies inevitably encounter constraints and barriers to making efficient progress on their climate-related initiatives, particularly those relating to engagement and collaboration. This assessment report identifies factors limiting progress on Federal climate initiatives and explores avenues by which facilitators and mediators, and more broadly the environmental collaboration and conflict resolution (ECCR) field, can help Federal agencies work with affected parties to overcome those barriers and support progress both within and among agencies.

This report was developed by the Morris K. Udall and Stewart L. Udall Foundation's John S. McCain III National Center for Environmental Conflict Resolution (National Center). The National Center provides impartial collaboration, consensus-building, and conflict resolution services for complex environmental challenges and conflicts that involve the Federal Government or a Federal interest related to the environment, public lands, or natural

resources. The report is based on interviews with twenty-two senior Federal agency employees working in the climate arena at sixteen different departments, agencies, or bureaus, and explores collaborative initiatives and cases that have supported climate-related work. The specific challenges and barriers to progress on climate-related initiatives identified as part of the assessment report include:

- Changing climate-related priorities and funding commitments within and across Administrations.
- Workforce development, including recruitment, retention, and training.
- Interagency coordination and collaboration, including data sharing, utility, and design.
- Collaboration with affected parties on specific climate issues, including establishing and managing constructive dialogue, coordinating follow-up on action items, finding common ground, and accessing funds to implement agreements in the field.
- Dissemination of information and tools to the public on the necessary scale, including in user-friendly formats that equip local governments and private sector entities with information they need to develop climate-related solutions, conduct reliable investment analyses, and access implementation funds.

These challenges vary across agencies but retain many common characteristics regardless of the issue or situation. This assessment report suggests approaches by which facilitators, mediators, and the ECCR community in general, might help Federal agencies overcome these common barriers and challenges. The approaches fall into five categories: facilitating interagency collaboration; consensus-building, conflict resolution, civic engagement, and related process design (which encompasses both site-specific and policy challenges,); tribal engagement; independent science and joint fact-finding; and collaborative capacity-building (e.g., training, coaching, and building agreement on systems for handling streams of similar challenges). Specific ECCR strategies to address the challenges and barriers to climate-related initiatives are identified in the report and included in the following table:

Challenge	Strategies ECCR Professionals Could Help Federal Agencies Implement
<p>Challenge 1 Changing Administration Priorities and Funding Commitments</p>	<ul style="list-style-type: none"> • Build internal agreement on climate action plans and strengthen interagency relationships. • Work with other federal agencies to identify funding gaps related to critical needs for collaborating on climate challenges and potential funding sources to fill those gaps. • Convene a conference to share ways ECCR has been used for climate initiatives. <p>Convene interagency dialogue to understand and collaborate on implementing Administration’s climate directives and climate-related aspects of Federal laws and regulations.</p>

Challenge	Strategies ECCR Professionals Could Help Federal Agencies Implement
<p><u>Challenge 2</u> Workforce Development</p>	<ul style="list-style-type: none"> • Assess the agency’s collaborative capacity and identify collaboration skills, systems, approaches, and policies to strengthen that capacity. • Institutionalize collaboration training. • Identify and institutionalize collaboration best practices. • Partner with other Federal agencies to build staff skills and knowledge. • Convene interagency dialogue to understand and collaborate on implementing Administration’s climate directives and climate-related aspects of Federal laws and regulations.
<p><u>Challenge 3</u> Interagency Coordination and Collaboration</p>	<ul style="list-style-type: none"> • Identify Federal climate information needs that could benefit from joint action. • Connect agencies to resources on interagency coordination and collaboration. • Engage in interagency collaborative problem solving at a project level. • Develop partnerships among Federal, State and Local agencies, Tribes, and intertribal associations. • Help Federal, State and Local agencies, Tribes, and intertribal associations develop interagency communication strategies, conflict resolution processes, and memorandums of understanding.
<p><u>Challenge 4</u> Collaboration with Affected Parties</p>	<ul style="list-style-type: none"> • Conduct situation assessments to identify key stakeholders, determine whether to collaborate and if so, design a collaboration approach. • Convene and facilitate multistakeholder processes to jointly formulate solutions to climate-related challenges. • Raise awareness among Federal staff about how to tell when a collaborative approach might be appropriate and how to access facilitators and mediators. • Proactively explore options for collaboration on emerging issues. • Enhance Government-to-Government Consultation and engagement. • Connect Federal personnel to collaborative resources on multiparty collaboration.
<p><u>Challenge 5</u> Information Dissemination to the Public</p>	<ul style="list-style-type: none"> • Facilitate focus groups to understand public perspectives. • Facilitate public meetings where agency personnel make informational presentations for the public. • Assess public information and education needs and develop materials and approaches to address those needs.

This report suggests several next steps to identify those climate-related conflicts and challenges that lie at the nexus of: 1) Federal climate leaders’ needs and interests (informed by this report); 2) available funding; 3) interagency and public-private partnership opportunities; and 4) collaborative approaches for working on climate initiatives that are likely to benefit from ECCR support. An immediate next step is to convene a webinar for Federal personnel in the climate arena to discuss this report’s findings and possible collaborative climate initiatives. National Center staff are available to engage in case consultations, project-specific assessments and to provide advisory support on Federal collaborative activities. Finally, the National Center will establish a service area focusing on addressing climate-related challenges with ECCR resources and will explore building a community of practice for climate collaborators.

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I. INTRODUCTION

A. Udall Foundation and National Center for Environmental Conflict Resolution

This report was developed by the Morris K. Udall and Stewart L. Udall Foundation's (Udall Foundation) John S. McCain III National Center for Environmental Conflict Resolution (National Center). The Morris K. Udall Foundation was established by the U.S. Congress in 1992 as an independent executive branch agency to honor Morris K. Udall's lasting impact on this Nation's environment, public lands, and natural resources, and his support of the rights and self-governance of Native Americans and Alaska Natives (P.L. 102-259).¹ The 1998 Environmental Policy and Conflict Resolution Act (P.L. 105-156) created the U.S. Institute for Environmental Conflict Resolution (now known as the John S. McCain III National Center for Environmental Conflict Resolution)² as a program of the Udall Foundation to assist parties in resolving environmental, public lands, and natural resources conflicts nationwide that involve Federal agencies or interests. In 2009, Congress enacted legislation to honor Stewart L. Udall and add his name to the Udall Foundation (P.L. 111-90). The agency is now known as the Morris K. Udall and Stewart L. Udall Foundation. It is headquartered in Tucson, Arizona, and maintains an additional office in Washington, D.C.

¹ In 2000, Congress authorized the Udall Foundation to conduct management and leadership education, and to provide assistance and resources for policy analysis for Native American and Alaska Native leaders (P.L. 106-568).

² In 2019, Congress enacted legislation to reauthorize the Udall Foundation and to amend the enabling legislation by renaming the U.S. Institute for Environmental Conflict Resolution as the John S. McCain III National Center for Environmental Conflict Resolution, and to include the Stewart L. Udall Parks in Focus® Program and the Native Nations Institute for Leadership, Management, and Policy as formal elements of the Udall Foundation's Education Programs (P.L. 116-94). The Udall Foundation's enabling legislation is codified at 20 U.S.C. 5601-5609.

The National Center provides impartial collaboration, consensus-building, and conflict resolution services for complex environmental challenges and conflicts that involve the Federal Government or a Federal interest related to the environment, public lands, or natural resources. It assists Native Nations, individuals, agencies, and consensus-based stakeholder groups in building their capacities to collaborate effectively where appropriate. The National Center's work enhances multiparty problem solving and decision-making by helping parties work together, build a shared understanding of issues, address concerns, and develop durable outcomes. Areas of focus include: nationally and regionally important environmental challenges; multiparty high-conflict cases where an impartial convener is needed to broker participation in a collaborative process or conflict resolution effort; collaborative efforts involving Tribes and Native people; interagency and interdepartmental collaboration; issues involving multiple levels of government and the public; issues that require substantive expertise; and projects that require funding from multiple agencies. National Center staff deliver environmental conflict resolution and collaboration (ECCR) services, as well as training and capacity-building services, both directly and through contracts with facilitators and mediators around the country.

B. Assessment Purpose

The Fourth National Climate Assessment (2018) warns that climate change presents systemic threats throughout society. It documents potential impacts to essential services, public health, water quantity and quality, important ecosystems, agricultural productivity, the livelihoods of rural and indigenous communities, coastal communities, infrastructure, outdoor recreation, economic systems, and national security.

The Intergovernmental Panel on Climate Change (IPCC)'s 2021 Physical Science Basis Report contributes additional data to the conversation and updates the potential risks and impacts of a warming climate. The report reveals that human-induced climate change currently affects every region of the Earth inhabited by humans, and that global temperatures will exceed the Paris Climate Accord's identified target of 1.5C above pre-industrial levels by the end of the century unless deep reductions in greenhouse gas emissions are made immediately (IPCC 2021).

To address challenges posed by the global climate crisis, the current Administration has laid out an ambitious set of goals and specific executive actions; consequently, virtually every Federal agency is adjusting aspects of its work to account for the impacts of climate change. Climate-related issues are often multijurisdictional in nature, have far-reaching impacts

across social, political, and environmental spectrums, and involve large numbers of stakeholders. The magnitude of the climate challenge is, in essence, a mandate for collaborative problem solving.

The National Center’s goal in conducting this assessment was to identify obstacles facing Federal agencies that are trying to address climate challenges, and to determine how those in the ECCR field — including facilitators, mediators, researchers, and teachers— can help Federal agencies overcome these challenges. Consistent with best practices in the ECCR field, this assessment is based on stakeholder interviews and initial research focused on collaborative approaches used to address recent climate-related issues in the United States. The National Center team conceptualized this assessment as the first phase in a broader initiative; as such, the interviews to date focused on senior Federal agency personnel engaged in climate-related work who have broad perspectives on the work of their respective agencies in this arena.

Following this assessment, the National Center will work with Federal partners, ECCR practitioners, and others to build upon these initial findings and focus on finding the nexus between Federal agency needs and opportunities (in part informed by this report). This includes identification of available funding, interagency and public-private partnership opportunities, promising collaborative approaches for working on climate initiatives, and within those areas of convergence, ways that ECCR practitioners might be helpful. A broad range of stakeholders and governmental entities have a stake in successfully navigating climate-related challenges; consequently, the team envisions that a much broader array of voices (including from within the agencies from which the current set of interviewees are drawn) need to be involved at appropriate points in identifying and carrying out next steps. The intent of this assessment is to point Federal agencies and organizations with ECCR interests and capabilities in the right direction for inclusive conversations to address the Nation’s most pressing challenges related to climate change.

C. Approach

Twenty-two people were interviewed for this assessment; collectively, they are associated with sixteen different Federal departments, agencies, or bureaus (Appendix A). Interviews occurred between August 2020 and February 2021. Each interviewee was asked the same set of core questions (Appendix B), with individualized follow-up questions formulated spontaneously based on their initial answers. The core questions were developed by the National Center team based on knowledge of Federal programs, policies, executive orders, and laws, as well as research into collaborative initiatives or intergovernmental agreements

at other levels of government that we thought might be referenced during interviews. Interviewees were asked to share their individual perspectives, rather than to speak on behalf of their agencies per se.

Relevant supplemental information used in crafting interview questions is collected in a separate companion document to this report entitled “Opportunities for the Environmental Collaboration and Conflict Resolution Field to Assist Federal Climate Initiatives: Background Memos.” The content of two of those memos has been included in appendices here to identify: a) potential partners for subsequent conversations; and b) collaborative initiatives that might warrant replication or expansion as part of efforts flowing from this assessment. Please see Appendix C, “Multi-Community Collaborative Initiatives in the U.S. Climate Arena,” and Appendix D, “Multi-State Collaborative Initiatives in the U.S. Climate Arena,” for more information. Appendix E, “Considerations in Determining Whether a Situation is Amenable to a Collaborative Approach,” serves as an important point of reference in exploring situations in which a facilitator or mediator is likely to be helpful. Appendix F lists several climate-related executive orders enacted by the current Administration since January 2021. Appendix G lists Federal centers that support ECCR, along with relevant contact information. Appendix H provides a list of state entities offering dispute resolution assistance and Appendix I provides information about university-based dispute resolution and collaboration governance centers of expertise.

D. Policy Context

The current Administration has made clear that building climate resilience both within the United States and abroad is a top priority, including by pledging to take swift action to tackle the climate emergency and ensure it meets the demands of science while “empowering American workers and businesses to lead a clean energy revolution” (The White House, 2021). The Administration aims to achieve a “carbon pollution-free power sector by 2035” and put the United States on track to achieve a net-zero economy by 2050 (The White House, 2021).

On April 22, 2021, the United States convened 40 world leaders in a virtual Leaders Summit on Climate (Waldman, 2021). The United States emerged from the Summit with ambitious new climate targets to help reduce emissions and contribute towards the global goal of limiting global warming to 1.5-degrees Celsius above pre-industrial levels (U.S. Department of State, n.d.). In addition, several executive orders dealing with different aspects of climate change have been issued, as listed below. For more information on the contents of these executive orders, see Appendix F.

- **Executive Order [13990](#)** – Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis – January 20, 2021.
- **Executive Order [14008](#)** – Executive Order on Tackling the Climate Crisis at Home and Abroad – January 27, 2021.
- **Executive Order [14013](#)** – Executive Order on Rebuilding and Enhancing Programs to Resettle Refugees and Planning for the Impact of Climate Change on Migration – February 4, 2021.

Federal agencies and the Federal workforce have the twin challenges of responding to the direction of the current Administration on climate-related priorities, while simultaneously identifying and developing human capital and organizational capacity to address these issues.

II. ASSESSMENT FINDINGS: CHALLENGES FACED BY FEDERAL AGENCIES IN DOING CLIMATE-RELATED WORK

This section of the report summarizes the feedback provided by assessment interviewees. While interviewees were asked 11 core questions (Appendix B), the assessment findings focus on themes from three of the questions posed, including:

- What constraints or barriers does your agency face in terms of doing climate resiliency work?
- As your agency carries out its climate resiliency work, are you aware of related conflicts or complex challenges that are difficult for your agency to address on its own?
- Do you see ways that facilitators and/or mediators could help your agency in its climate resiliency work?

It should be noted that the interviewees often used the phrase “climate resiliency” as shorthand to refer to Federal agencies’ climate-related initiatives. The intention was to use an umbrella phrase that would allow interviewees broad latitude to talk about any of their climate-related challenges and work. However, it was quickly determined that most of the interviewees interpreted that phrase to refer to only a subset of the intended subject. Therefore, in this report, the phrase “climate-related” is used as a broad placeholder for the subject, encompassing climate change, risk, resiliency, mitigation, adaptation, and related endeavors.

Interviewees identified several specific challenges and barriers to progress on climate-related initiatives, which have been grouped into five primary categories. These include Administration priorities and funding; workforce development; challenges associated with interagency collaboration; challenges associated with engaging and working with affected

parties; and dissemination of information and tools to the public on a scale commensurate with the problem. These challenges are further clarified in the following sections.

A. Administration Priorities and Funding

The primary challenge that Federal agencies face in making maximum progress on their climate-related initiatives is funding. Funding for climate programs and actions is driven by internal agency policies and direction, which are often directly connected to Administration priorities.

A Time to Rebuild and Expand Capacity. A typical interviewee comment highlighting the need for financial support was, “we do not have the infrastructure, money, people, or capacity. Foundational work is what we need, and it needs to be done in an expedited fashion.” Various interviewees talked about the funding issue in terms of “capacity,” “resources,” and “personnel.” However, it was suggested that each of these phenomena tie directly back to funding.

In the words of one interviewee, “constraints from money have caused deferred backlog and maintenance issues.” Interviewees indicated that there is a tremendous amount of climate-related work that needs to be done that currently lacks funding. Interviewees felt constrained in terms of their ability to carry out activities such as:

- Workforce training so that the workforce understands climate change impacts; the forms that resilience and adaptation can take; and how to implement adaptation approaches.
- Public education on climate-related issues (e.g., climate change, resilience, adaptation, mitigation).
- Information dissemination regarding tools already available to decision-makers, communities, and the public.
- Engaging stakeholder groups, non-Federal government entities (including Tribes and Government-to-Government Consultation with Tribes) and the public in Federal agencies’ climate-related activities.
- Engaging in interagency collaboration at the scale warranted by our climate challenges.

Need to Sustain Progress Across Administrations. Interviewees suggested that a certain amount of capacity and funding continuity is needed to sustain any project. Funding availability reflects national priorities set by the Administration and Congress. Those priorities often shift. Inconsistent funding and focus can result in costly transitions and may impede years of progress. These challenges are particularly relevant for issues associated

with divergent political perspectives, such as those surrounding climate change. As one interviewee suggested, some climate change-related programs that were created under previous Administrations either no longer exist or have shrunk due to budget cuts. For example, one interviewee reported that their agency had developed an agency-wide Climate Adaptation Plan requiring every program and regional office to develop implementation plans linked to it. However, that work was eliminated under a subsequent Administration.

Interviewees said that apart from any given Administration's priorities, adapting to the change in priorities every four or eight years is itself an impediment to progress on climate-related goals. They told us that their ability to maximize traction on climate-related work was hampered by changing priorities, inconsistency of approaches, and the resulting "stop and go" effect. The following quote is typical of this theme:

- *The biggest constraint (we face) comes from changing priorities between different Administrations. We are here to serve the public and the priorities of the Administration. If the current Administration is not interested in climate work, then we won't do it. This creates potential inconsistencies surrounding what work we are doing every four years. It also creates distrust with our partners because they don't know if they can count on us when the Administration next changes.*

In addition to learning about the new Administration's priorities, Federal managers must develop an understanding of the Administration's particular governing approach. They must discern how to be responsive to both the priorities and the governance style of the new Administration and establish relationships within the new hierarchy. These transaction costs associated with adjusting to new Administrations can slow progress on agency initiatives. As pointed out by one interviewee:

- *At the political level, each Administration is different and organizes work differently...each secretary has their approach on how they manage the agency and issues. To get things done you have to ... understand career staff and agencies and have an incentive system on how they will carry out the mission; you need political buy-in to work at that level. It's hierarchical and if you don't have a request coming from above, it doesn't become a priority... you have to work at multiple levels to accomplish things.*

While the transaction costs of change may be inherently associated with democratic governance, incoming Administrations may find it worthwhile to establish mechanisms for expediting the learning curve or institutionalizing climate-related work to extend across Administrations. However, even with funding constraints and shifting national priorities, agencies have found ways to be resourceful when addressing climate-related work.

Polarization Impedes Progress. One interviewee suggested that the political atmosphere is so divided that there is a policy paralysis on climate change matters. It is difficult to have consensus-building dialogue if participants have conflicting perspectives on the fundamental nature of climate change. It was noted that some Federal personnel have at times been concerned for their jobs if they articulate the words “climate change,” which severely constricts dialogue and debate on the issue. This person believes that basic education for the public on climate change is critical to moving past this inaction. It was noted that climate change is still a rather abstract concept to many people, but that massive floods in the Midwest and catastrophic fires in the West during recent years have elevated it in the public eye.

Another interviewee stated that regardless of the political arguments, climate change will significantly impact Federal decision-makers because Federal lands and water are affected. Therefore, it is important to have alignment on the causes and potential impacts of these issues. This interviewee said that:

- *[T]here is no question that the changes we will see and already see, will affect the Interior, the largest manager of Federal lands and water out West, and National Parks. The changes that might happen are going to constrain the decision-making space for managers and stakeholders with it. You have the wildfires out west, some of that is Federal land or land where there is a Federal interest; there are the issues with water and reservoirs not being able to fill up like they used to – The Bureau of Reclamation manages many of those, as well as irrigation projects. It is hard to imagine that these changes, should they occur and be real, would not touch decisions that Federal managers need to make. It’s clear to me that these concerns are here – whether they’re addressed is another matter.*

Direct vs. Diffuse Funding for Climate Work? One aspect of the funding challenge is the lack of direct, institutionalized funding for climate adaptation or resilience work. In most cases, there is no single source of funding, and what is available varies by agency, project, and location. As one interviewee explained, “some work is needed in adaptation but does not have a clear home in any funding stream, so obtaining funds is difficult.” Examples cited include wildfire management through prescriptive burns and additional facility design costs that take climate change into account.

However, there is a positive aspect to this. A recurring message that emerged across interviews is that Federal agencies have sustained climate-related work over the past few years by integrating it into personnel responsibilities rather than explicitly framing the work as a “climate” initiative. The following interviewee quotes illustrate this theme:

- *[T]here was a recognition that climate adaptation has to be mainstreamed into the programs, policies, and operations of all Federal agencies to ensure they are effective even as the climate changes. In this sense, climate adaptation is part of (employees') day jobs – or should be – and must be considered in the same way that other factors that affect an agency's mission – factors like population changes and economic growth – are considered on a regular basis.*
- *We try to encourage people that you do not have to have a stand-alone climate program but can incorporate climate into existing programs across the board. Then make changes to existing plans and incorporate climate into those. It is not practical to have a stand-alone program.*

Another interviewee put it differently, saying that “for most people, climate change is not part of their day job, but it *influences* their day job...” Some interviewees indicated that climate-related work had continued even when it was not prioritized at a national level because it had been integrated into assignments that were framed in other ways — e.g., considering climate-related factors during analyses conducted under the National Environmental Policy Act (NEPA). This was often a successful approach even when funding for initiatives was constrained.

Where Interviewees Feel the Funding Pinch. One example of how funding constraints play out in the field was given by an interviewee whose agency must move certain structures back from the coastline due to sea level rise. The interviewee explained that:

- *Once we understand the vulnerability (of a structure), we next need to understand what resilience and adaptation looks like (for that structure). There is a whole spectrum (of options) that might emerge for a vulnerable structure. This is all a pre-planning process – work still needs to be done to filter and clarify what best solutions will look like. All of this pre-work . . . needs to take place before project development.*

A lack of resources may affect the ability of Federal agencies to educate the workforce on vulnerability, resilience, and adaptation, or to educate the affected community. In these ways, resource constraints impact the efficiency and effectiveness of project implementation.

Another interviewee indicated that funding for the Climate Hub network has fluctuated under different Administrations, which has forced the Hubs to adapt. The Climate Hub network involves collaboration across agencies within the U.S. Department of Agriculture, with leadership provided by the Agricultural Research Service and the Forest Service. It is

tasked with developing and delivering science-based, regionally tailored information and technologies to help agricultural and natural resource managers make and implement “climate-informed” decisions. An interviewee told us:

- *Some agencies have dropped out [of Climate Hubs] and are not as involved. That is why I keep pushing within my agency. We are one of the agencies who can still get funding for the Hubs, so we need to keep supporting the Hubs. They are underfunded and understaffed overall, but still surviving and doing work that I admire. . . If anything, we found through the Climate Hubs program the demands for this work greatly exceed our ability to keep up with it. . .*

The same interviewee highlighted the importance of actively working with Climate Hubs:

- *I learned early on that we cannot stand there with our hands in our pockets and wait for Climate Hubs to give us great information that is usable. We have to work with them, provide personnel, and let them know our needs and provide funding to projects so that it is mutually beneficial.*

If Money Were No Object. When asked what they would do differently in their climate - related portfolios if the work was fully supported and resources were not an issue, most interviewees had ideas at the ready. Please see Figure 1 below for interviewee “wish lists.”

Interviewees indicated that, even as climate-related work is prioritized at a national level, the need is so large that funds will be required from a variety of sources (e.g., Federal, State and Local Governments, non-governmental organizations, and foundations). This is particularly difficult for small and low-income communities, where it may be challenging to find the capacity to locate potential funding sources, let alone to apply for and secure them. As one interviewee said:

- *I am involved in an effort with a number of states in the Chesapeake area on how to increase resilience in the community’s bay area. What I heard loud and clear was grants from the Federal Government are not enough. For low to middle income communities, it takes a lot of resources to just apply for those grants. They said they need ongoing dedicated funds focused on adaptation that is viable to lower- and middle-income communities. This is critical.*

B. Workforce Development

Several interviewees indicated that increasing turnover among Federal climate scientists and related staff in recent years has led to a shrinking Federal climate-related knowledge base. As the need for a climate-trained workforce increases, the work itself is intensifying, leading to sharp learning curves for new personnel. For example, one interviewee indicated

that acceptance of the need to adapt to climate change has expanded over the past 20 years, and that while adaptation work must intensify, mitigation work must also receive renewed focus as climate change receives increased attention on a national level.

Need to Ramp Up. Various interviewees offered observations about the steep learning curve for the Federal workforce to meet these challenges. For example, one interviewee observed that “a specific type of person may be required for these complex projects because an understanding of the science associated with vulnerabilities is needed.” This suggests that the availability of suitable training, as well as the funding and time required to send staff to them, will be critical factors in ramping up Federal activities. One interviewee indicated that having too few staff with the necessary information and understanding to address climate-specific challenges is a limiting factor in their agency’s ability to expand its climate-related planning efforts. Specifically, interviewees pointed to the need for Federal

Figure 1: Interviewee “Wish Lists”

Strengthen Staffing and Staff Capacity

- Expand staff to help more people tailor available information and tools to their local climate challenges (perhaps through the establishment of a Federal climate service to which agencies could contribute expertise according to their missions).
- Expand training for the workforce (e.g., stand-alone trainings, application-based trainings such as scenario planning, workshops, and technical training on topics such as how to use climate projections and adaptation approaches).
- Establish mechanisms that incentivize Federal agencies to share information, given limited time and capacity.
- Ensure that environmental collaboration and conflict resolution (ECCR) services are available to Federal agencies and can be used on an interagency level, depending on funding priorities and political initiatives. Having a facilitator to help move the bus forward can be very helpful. If one is able to commit to funding for a facilitator, the facilitator can drive everyone to do the work, which is what it appears managers currently do not have time to do.

Increase Program-Specific Funding

- Increase funding for the Climate Hubs network.
- Fund the National Parks Service (NPS) to build science tools that will benefit multiple parks instead of providing projections one at a time.
- Accelerate the work of the U.S. Global Change Research Program (which uses its convening power across bureaus to work on natural resource issues, explore tools and synthesize science so that all agencies and bureaus can use them); bring it to scale and ensure all agencies and units at the Department of Interior have access to the Program's work products.

Figure 1: Interviewee “Wish Lists” (continued)

Expand the Scale of Current Efforts to Evaluate Climate Change-Related Vulnerabilities

- Conduct a comprehensive evaluation of the National Park Service's (NPS's) assets with respect to climate change vulnerability, rather than the current facility-by-facility approach used on a much more modest scale. There are over 400 parks and only 20 people working on vulnerability assessments. Of the 400 parks, 100 are coastal and 40 of those have moderate-to-high exposure. Interior parks suffer from inland and river-based flooding and erosion.

Increase Climate Adaptation Planning Assistance for Those Who Most Need Help

- Provide climate adaptation planning to the U.S. Department of Defense (U.S. DoD) / Army's smaller facilities (rather than its larger installations, which are more likely to have the resources and personnel to support this task).
- Provide technical support and funding to Native American Tribes, Alaska Natives, and others located in areas vulnerable to sea level rise (e.g., those who live along coasts and large rivers) to support climate adaptation planning. Assist with managed retreat, relocation and protection from climate-related threats, especially for those with the most limited resources, such as small villages and rancherias.
- Help Tribes and Alaska Native Villages plan for wildland fire and related emergency evacuations.

Expand Public Education.

- Undertake a large-scale, ongoing public education campaign, based on best available knowledge of how various audiences process climate change information to maximize the likelihood they will act on that information (e.g., taking into consideration factors such as values, frame of reference and who is considered a trusted messenger).
- Expand information dissemination about available information and tools to support climate change mitigation and adaptation.

agency personnel to better understand vulnerability, how to use climate projections, what resilience and adaptation can look like, and how to help Local, State, and Tribal leaders tailor climate solutions to fit their unique situations.

Need Ability to Tailor Climate Data to Specific Locales. Designing climate solutions to meet the needs of specific regions, States, and communities is important because different parts of the country experience climate change impacts differently, and often in ways that are

influenced by pre-existing stressors in that area. The same is true of specific sectors such as water, agriculture, transportation, and infrastructure. The three interviewee quotes below illustrate this need to tailor climate solutions to specific needs:

- *The Northern Central part of the country has too much rain, which is flushing systems — even natural systems — and putting chemicals into water that is affecting these systems. Some areas are doing okay, but sort of warming up, like in the Northeast, so there could be an increase in forest growth and possible carbon sequestration opportunities there. Out West, there is a large public lands footprint and outdoor recreation industry. When systems are disrupted, so are local economies. For example, Montana lost about 3-4% of its GDP during wildfires in just one year. People just think about forest fires and loss of homes, but there are significant other losses and changes in addition to that.*
- *[T]here is a lack of resource coordination and leadership structure for Alaska Native Villages and tribes in the lower 48 that are facing managed retreat and protecting in place [and] relocation is a most pressing need. . . There is no Federal agency responsible for assisting those impacted by sea level rise to relocate. . . Relatedly, there are some resources for adaptation planning but not for implementing those plan. . . In the fire realm, we'll probably be seeing something similar... the scale of the issue where whole towns are evacuated on an emergency basis — the scale just wasn't anticipated. There is a need to coordinate and get out of our silos that impact so many sectors. Tribal and broader economies are going to become more important and pressing. We're seeing it now with relocation.*
- *Parks on seashores and coasts are observing sea level rise and the effects of storms. Larger parks have bigger staff, more scientists, and better capability; they are more able to realize, tune in, and address climate change. Small parks include small battlefields, or stream parks, and they do not have the same capacity as large parks but also don't see climate change as urgently.*

Those differences require specific data and analyses at a local level, which can be difficult to fund and do so in a sustainable manner. Communities each have their own cultures and leadership styles, economic bases, workforces, affected parties, and sources of expertise (e.g., university strengths). See, for example, the following interviewee comment:

- *We do not have a budget that provides the tailored information across the country that folks are asking for. I do not think we are necessarily the right people to provide it any way — that is where environmental mediation and conflict resolution comes in. We wanted to build the capacity to answer the questions that we hear from people. That would require tremendous resource allocation though, and a huge network of partners.*

C. Interagency Collaboration

Climate challenges are multijurisdictional in nature. It is not uncommon for climate-related work to span the authorities of multiple Federal agencies, as well as Local, State, and Tribal Governments. Because these initiatives implicate numerous decision-makers and regulators, addressing them often requires interagency collaboration, as evidenced by the following quotes:

- *In the United States, there are many agencies involved in water. The National Oceanic and Atmospheric Administration (NOAA) measures coastal waters, the U.S. Geological Survey (USGS) measures groundwater and surface water, the Natural Resources Conservation Service (NRCS) does things like snowmelt monitoring, the Bureau of Reclamation does work on irrigation and water supply. In the U.S. Army Corps of Engineers (USACE/Corps), there is navigation and flood control. People ask why there is not one agency that combines all agencies to streamline work. The difficulty is, for every decision that is made about water, one has to realize one is making decisions that are balancing competing needs. There are many different uses of water, and each type of use has different stakeholders with different opinions. A single agency would not be capable of balancing the needs of so many different water users. Each type of water use requires its own advocate because the needs are so different.*
- *Given the range of attitudes toward climate change among the 50 states and territories we work with, it could be really helpful to provide a safe space for folks with differing opinions to come together and do this difficult (climate) work together.*

Need for Cross-Agency Collaboration on Research Design, Data Collection, and Analysis.

Federal agencies often need to coordinate and collaborate to maximize the beneficial use of science, information, and skills. Several interviewees mentioned the importance of sharing critical research and information across Federal agencies. Agencies that do not study the phenomena of climate change, project future changes in climate, or assess short- and long-term trends may rely on climate information generated by another agency to help them identify potential climate change implications for the resources they manage and to perform related research. Any one agency typically will have knowledge and information, but rely on Federal agencies, consultants, or partners for some of the knowledge and information they need. For example, one interviewee stated:

- *[T]here are other skills in social science and economics — (for) evaluating tradeoffs — we could use in the social context of informing, planning, working with planners, looking at climate adaptation plans for large cities. These other large areas of science are not something we can draw on. Bringing these areas in is a challenge.*

This interviewee mentioned that, in bringing interdisciplinary groups together, the challenge is, “to speak the same language, definitions, frameworks... (it) is difficult.” It is also time-consuming; in the words of another interviewee, “Trying to work collaboratively across agencies is a full-time job!” Yet another said, “no one does not *want* to share – it is just a time and capacity issue.”

Coordination and Collaboration Across Agencies Is Hampered by Differences in Missions, Procedures, and Familiarity with the Language of Science. Differences among Federal partners with respect to technical understanding and orientation toward research or implementation often complicates collaboration on climate-related work. According to one interviewee:

- *Some agencies think that for coastal risk reduction, natural or nature-based features, such as no more concrete, jetties etc., are the answer to climate resiliency, but that is if you're only talking about high frequency events such as tidal fluctuations and circulation effects. Agencies that have no mission for water risk reduction have spent a lot of money saying this is the answer to everything. But you have non-technical people with regional differences. There is this simplistic idea that only green things look good. If it is structural, they do not like it until we have coastal storms. We're all into the full suite of measures but there are so many people in Congress saying 'but you must use these features' and I'm wondering why would we if it's going to only last during one storm? Where are natural and nature-based features appropriate? I see the need for ongoing dialogue. I think it is about communication. I would like as a science agency to come with an open mind and say how it might fit best in my program. All that dialogue has utility.*

Further, internal agency structures, systems, and procedures can impede efficient collaboration; examples include how Federal agencies are permitted to interact and share funds, information, and other resources. Such differences in organizational structure “can become a real hurdle to [getting] work done on the ground.” Several interviewees mentioned that they would like to see remedies for this type of barrier, but it would need to occur above the purview of any one agency.

Another challenge for *agencies* that rely on others for specific or tailored information is the lack of control over if and when their needs will be prioritized. For example, one interviewee stated that:

- *It has been a challenge to get other agencies to provide (data on) time scales that are important to natural resources and agriculture. They look at time scales that go 50 or 100 years into the future, but we need it at a much more down-scaled level. Our stakeholders want to know what's happening in their county 5 or 10 years from now.”*

Interviewees suggested a need for more effective collaboration across Federal agencies in shaping research projects and data calls to ensure the resulting information is as useful as possible to the Federal family. Nevertheless, many agencies are actively engaged in science partnerships to collaborate on obtaining funding, carrying out scientific research, and translating that into useful information. In the words of one interviewee, “the more collaborative we are, the more science and knowledge we can collect.” The need for scientific collaboration can be expected to continue its upward trajectory in coming years, and so anything that could be done to make that more efficient would be a good investment.

The importance of scientific collaboration applies to domestic and international challenges. One interviewee suggested that it will be important to collaborate “with allies and partners overseas who are trying to [engage in] climate resilience efforts.” International collaboration will require a “whole-of-government approach,” with the State Department as a central player.

D. Working with Affected Parties

Key to Success. Public interest in climate-related work presents complex challenges for Federal agencies. Numerous interviewees mentioned that it is important for the Federal Government to work with those affected by climate change-related actions, to determine how to best approach those actions. One interviewee stated that public interest is an “obvious concern and there are requirements (e.g., engagement requirements within the NEPA process) to involve (the public) in problem solving.” Public participation generates a plethora of different responses and opinions about a Federal agency’s work, programs, and projects. And, as another interviewee put it, “any agency responsible for public trust in managing resources will only succeed to the extent we work with our neighbors and embrace common goals.”

Work with Individual Tribes -- Essential but Under-Funded. This point encompassed working across jurisdictions, including with Native American Tribes and Alaska Native communities, as well as with a wide range of stakeholders. Each Native Nation is a unique sovereign entity with differences in government protocol. Due to the Federal trust responsibility, Federal agencies must often interact with Tribes on an individual basis. However, agencies lack the capacity or funds to do this important work effectively. The following quote illustrates this point:

- *A big challenge [is] how to support Tribes. We have been [speaking with the Tribes] through [our agency] networks. There’s a lot to do with Tribes because there are around [574]. . . Tribes and each is different, and you have to work with each on an individual basis.*

Concerns About Climate Change Impacts on Cultural Resources. Land-holding agencies and those dealing with flood risk reduction have cultural resource impacts to consider when planning for climate adaptation (e.g., if a facility that is vulnerable to sea level rise is located in a “historic district”). Often, in determining an asset’s sensitivity, the public’s perspective is heterogeneous due to differing values associated with the asset in question. Agency personnel are challenged to identify solutions that build on common ground, reflect sound science, and comply with the law. In the words of one interviewee, “nature does not care, so it is about what people care about. We are having to work for what the public wants, so we have to do something.”

Concerns About Climate Change’s Influence on Uncharacteristic Wildfire Trends. Another climate-related issue on which many stakeholders have strong views is forest management. The massive 2020 wildfires in the Western United States reflect the impact of a changing climate. According to one interviewee:

- *[T]he extreme fire situation in the West. . . is a big challenge. Ecologically speaking, some of these fires will be good for the ecosystem, but the challenge is that they are burning differently than they have in the past. Where we have large areas that have burned hot and with a high severity, we will not be able to get forests back there unless we intervene. We won’t get trees back into those areas for a very long time – like in Southern California, those areas will turn into shrublands, and we need to let them, and just keep out invasive species and establish native shrub species. In other places, we are assessing where we have the best chance to get forest back in place.... We have a reforestation backlog of over a million acres...*

Concerns About Adapting to Seal Level Rise. Another interviewee elaborated on the challenge of working on sea level rise issues at a local level:

- *On Assateague Island in Maryland, there was a parking lot on the coast behind the primary dunes that serves about 100 cars per day. The agency contemplated moving the parking lot further inland to avoid exposure and using a shuttle bus to take people to and from the beach over the bridge. However, the local population had opinions on that, so resilience opportunities became local issues.*

In the words of another interviewee, “we have choices to make, and [factoring in] the public’s voice can be challenging.” Climate-related work can take the form of “highly sensitized issues at a local level, so there is a need for high level stakeholder engagement and understanding of different approaches.” Federal agencies have many good examples of working with local communities on climate initiatives. One interviewee said that their agency “involves stakeholders as early as possible with vulnerability assessments and has seen multiple community representatives at the table during vulnerability assessments.” In

the best-case scenario, Federal agencies work with affected parties to understand project risks and vulnerabilities, partnership opportunities, and how to make sure they are “not tripping over each other.” Agencies that look for consensus and alignment to make the best decisions, given available information, will find it easier to implement solutions.

The comment “climate change makes it imperative to work with our neighbors” reflects a common perspective among interviewees. Yet despite their recognition of the importance of Federal agencies working well with affected parties in addressing climate change-related challenges, several interviewees mentioned having inadequate funding and capacity to engage affected parties on the scale warranted by climate change challenges. It was noted that if an agency does not have sufficient resources to effectively facilitate stakeholder engagement, then progress in getting work started or completed can be constrained due to differing understandings and opinions about the project.

Where Federal initiatives are controversial, it was suggested that there is a need for clear communication and to have specialized personnel on-hand to facilitate discussions. This can be difficult, particularly when the initiative is based on complex information and highly technical concepts. Interviewees observed that it can be challenging to articulate technical issues in a manner that supports public understanding and engagement. One interviewee observed that “people outside our agency don’t understand what we do. . . [and] the barrier is that many people in America are not technical. We operate on science and facts. We deal with natural systems and how natural systems are impacted by human effects.”

E. Disseminating Information and Tools to the Public

Need to Cultivate Shared Public Understanding of Climate Change. The involvement of the public and affected parties adds value to the work of Federal agencies but also requires an investment of time and energy. Integrating public input into environmental decision-making processes requires foresight, time, and attention to realize its true value. However, the appropriate involvement of these parties can enhance outcomes, improve relationships, and ultimately save government resources in the long run. To streamline these efforts across climate initiatives, interviewees suggested that there is a need to educate the public on climate change and build broad understanding and alignment around the challenges. In the words of one interviewee, “we need to try to create a basic understanding so that we develop some muscle memory in addressing this before it’s too late.”

For Those Most Impacted by Climate Change, Need to Raise Awareness of Available Climate Adaptation Tools and Resources. Significant work has already occurred to engage affected parties on climate-related challenges. Many Federal agencies have “tools that can

really empower states, local communities, and Tribes as they try to anticipate the impacts of climate change and prepare for change . . . such as decision aids for developing climate resiliency measures.” For example, one interviewee said:

- *We developed the U.S. Climate Resilience Toolkit, and have published steps to resilience with a framework to help guide decision-makers through the co-production of documents so they can look at their exposure to climate-related hazards. This helps them assess climate vulnerabilities, risks and assets, and to investigate options for mitigating their risks, set priorities, and set a plan of action.*

A large challenge is getting information and resources out to the public and decision-makers, especially for those most vulnerable to climate change impacts. In the words of one interviewee:

- *[L]ocal communities have the most resource constraints... they're the ones that need to be looking ahead and we should be helping . . . local planners and planning organizations and connecting them to Federal information sources . . . and get them to think ahead of what risks they face based on where they are geographically.*

To facilitate public access to important climate information, agencies can leverage existing databases. However, while there is helpful climate information available at large, geographic scales, it is another challenge to adapt that information for use in local areas. One interviewee noted that it is often unclear exactly how to translate global data for application at the local level. This interviewee observed substantial public interest in climate change at the global level but points out that ultimately, climate action takes place locally. If information about the local manifestation of climate change is uncertain or unreliable, decision-makers may be reluctant to use that data in their analyses.

Inadequate Staff and Networks to Disseminate Climate Change Information on Scale

Commensurate with the Need. Several interviewees indicated that they have a variety of information resources and tools, and that most are free, but that they have inadequate staff or networks to get the word out about these resources. Interviewees expressed concern about such valuable tools “sitting on the shelf.” Budget constraints may prevent an agency from providing the “tailored information across the country that folks are asking for.” Additionally, information and support are needed by managers who are positioned to make decisions in the absence of ideal data and analyses. According to one interviewee:

- *There are many components constantly changing, giving inherent uncertainty. Managers cannot wait for perfect information to make decisions, they have to assess risks, and have models to [help them] understand the cost of acting versus the cost of waiting. We spend a*

lot of time working right at the onset of research with partners and resource managers to understand problems and problem-solve some of these impacts over time, and tailor info based on that.

III. MOVING FORWARD

This assessment has identified several significant challenges that Federal agencies face on climate-related initiatives. These challenges include the shifting priorities of any new Administration and related funding constraints; workforce development; interagency coordination and collaboration; collaborating with affected parties; and information dissemination to the public. This section identifies collaborative approaches and strategies that could help address these challenges.

A. ECCR Support Available to Advance Federal Climate Initiatives

A May 2018 report from the Federal Forum on Environmental Collaboration and Conflict Resolution notes that the United States Government spends “millions of dollars and thousands of hours” annually contending with environmental conflicts (Federal Forum on Environmental Collaboration and Conflict Resolution, 2018). The Office of Management and Budget (OMB) and the President’s Council on Environmental Quality (CEQ) issued joint memoranda on Environmental Conflict Resolution in 2005 and again in 2012, which lay out steps to strengthen the Federal Government’s capacity to solve environmental problems collaboratively, and to direct Federal agencies to expand the use of ECCR (OMB and CEQ, 2005; OMB and CEQ, 2012). The 2018 report indicates that Federal agencies have used ECCR successfully in at least 3,800 cases since 2006. It also documents numerous measurable benefits associated with the use of ECCR to address such conflicts, including:

- Saving time and money.
- Strengthening relationships between the government and stakeholders.
- Improving outcomes.
- Reducing litigation.

This report explores whether there are ways to better realize such benefits with respect to climate challenges, controversies, and conflicts in which Federal agencies are involved. To that end, there are numerous ways in which facilitators and mediators can help Federal agencies in their climate-related work. Framed around the insights of Federal interviewees, these can be grouped into five categories of potential assistance:

- Facilitating and mediating interagency collaboration.
- Designing, facilitating, and mediating collaborative dialogue between Federal agencies and external parties.

- Tribal engagement.
- Independent science and joint fact-finding.
- Collaborative capacity-building.

Each category of potential ECCR assistance is briefly described below. These ideas are intended to create process efficiencies so Federal personnel and affected parties can focus on the substantive and strategic aspects of their climate initiatives. Based on a combination of interviewee suggestions and National Center experience, ECCR practitioners could provide the following types of assistance to support the success of Federal climate initiatives:

1. Facilitating and Mediating Interagency Collaboration: When a climate-related challenge requires the skills, resources, and information embedded in multiple Federal agencies, or agencies at multiple levels of government, facilitators can help convene the right agencies, establish efficient procedures to guide the interagency collaboration, facilitate meetings, support joint learning to develop a shared vocabulary and understanding of the problem at hand, and document progress. This category includes facilitating the sharing of best management practices and decision-making methods across agencies and interagency working groups to inform secretarial orders, executive orders, and policy initiatives. Facilitators also may be able to assist Federal agencies in planning when and how to engage non-Federal entities to work toward shared goals. An example of this process is provided in Figure 2.

Figure 2: Example of Facilitated Interagency Collaboration

As directed by the 2012 Office of Management and Budget (OMB) & Council on Environmental Quality (CEQ) Environmental Collaboration and Conflict Resolution (ECCR) Policy Memorandum, the National Center in collaboration with CEQ convenes quarterly interagency forums of departmental staff to provide advice and guidance and facilitate information exchange on ECCR. This body submits annual data on the use of ECCR within their agencies and the National Center analyses this data across all participating agencies. In 2018, a working group of Forum participants produced the report, *Environmental Collaboration and Conflict Resolution (ECCR): Enhancing Agency Efficiency and Making Government Accountable to the People*. The report is available at http://ceq.doe.gov/docs/nepa-practice/ECCR_Benefits_Recommendations_Report_2015-02-018.pdf

2. Designing, Facilitating, and Mediating Collaborative Dialogue Between Federal Agencies and External Parties:

Facilitators and mediators can help Federal agencies work with Tribes, government entities and stakeholders at the local, regional, and state level to plan and manage meaningful dialogue to address site-specific climate challenges (e.g., a lighthouse

at risk of inundation from sea level rise, or development of a climate adaptation plan for a particular county). They often can help participants resolve, narrow, or define areas of conflict and build consensus on issues of mutual concern. Facilitators can also help design and manage public input and civic engagement events and compile the input to make it easily accessible to decision-makers.

Facilitators' consensus-building skills can help stakeholders build agreement on climate policy matters at any governmental level, or simply engage in exploratory policy dialogue to think freely and creatively together about the range of possible ways to address a policy challenge. Further, facilitators can design and convene processes that link work being done at multiple scales and within multiple jurisdictions (e.g., linking Federal and Tribal climate action plans). When tensions rise, mediation can help defuse the situation and enable stakeholders to find common ground. Where consensus is not possible, facilitators can help structure discussion that all feel is constructive even if participants agree to disagree. An example of collaborative dialogue is provided in Figure 3.

Figure 3: Example of Collaborative Dialogue Between Federal Agencies and External Parties

In 2014, the National Center assisted the U.S. Forest Service in engaging Federal and non-Federal partners in a collaborative process focusing on the South Fork American River Cohesive Strategy in the Eldorado National Forest. The Strategy had several goals. It was intended to restore and maintain landscapes, as well as to reduce the threat of wildfire through landscape-scale fuel reduction. It also sought to create more fire adapted communities, and to improve wildfire emergency response.

Many facilitators and mediators are also skilled at “systems design.” This involves developing, in collaboration with stakeholders, conflict resolution systems for addressing ongoing streams of similar disputes or complex challenges. For example, a collaborative systems design project might be a good fit for an ongoing stream of disputes over a particular type of permit, or the complex challenge of relocating communities due to sea level rise.

Impartiality and independence are key characteristics in a facilitator to ensure trust and confidence in the process. While many Federal personnel are skilled communicators and facilitators, the public may feel that the process would be better served by a facilitator that is not affiliated with an agency or any other affected party. In these situations, external facilitators, mediators, and ombudspersons may be invaluable in the role of “honest (information) broker”

and trusted not to “judge the rightness or wrongness of participants’ intentions or outcomes that they are after,” as suggested by various interviewees.

3. Tribal Engagement: Native Nations are critical partners on Federal climate initiatives. ECCR practitioners can help Federal agencies engage with Native Nations and Tribal organizations that express interest in the topics expected to be discussed in a Federal climate initiative.³ ECCR practitioners can work with Federal agencies and Native Nations to support understanding and implementation of processes that engage Native Nations as sovereign entities distinct from “stakeholders.” ECCR practitioners can help foster a shared understanding of the distinctions and considerations involving Government-to-Government Consultation and collaborative forms of engagement. Facilitators can help Federal personnel determine the most appropriate way to engage and coordinate with Native Nations and Tribal organizations throughout a Federal climate initiative. Facilitators also can work with indigenous communities in planning the format of the engagement in a way that factors in the role of Native Nations as distinct governmental entities and is culturally responsive. For both site-specific and policy challenges, facilitators can design collaborative learning initiatives that embrace multiple “ways of knowing,” such as Western science and indigenous knowledge and wisdom. They can help participants from a range of backgrounds hear and understand what each person is trying to say. This increases the likelihood that the engagement outcome will truly reflect participant input and thus be more widely acceptable. An example of facilitative Tribal engagement is provided in Figure 4.

Figure 4: Example of Facilitating Tribal Engagement on Federal Projects

The United States Geological Survey’s (USGS) Southeast Climate Science Center (SE CSC) wanted to build a shared vision among key parties about how the SE CSC would serve their science needs. They wanted to enlist Landscape Conservation Cooperatives (LCCs) and agencies in shaping and prioritizing the science questions to inform the current year’s call for proposals, engage Tribes in the Stakeholder Advisory Council, and inform effective Tribal Consultation and outreach in the regional CSC. The National Center assisted the SE CSC with process design and facilitation for the Stakeholder Advisory Council, the Science Implementation Panel, and the LCC Science Coordinators. In addition, the National Center developed a Tribal outreach and Consultation plan that included Tribal roundtable sessions with the thirteen southeastern Tribes within the reach of the SE CSC.

³ For purposes of this report and based on responses the terms Native Nations, Tribes, and Tribal Governments are used interchangeably to refer to the indigenous sovereign nations of the United States.

4. Independent Science and Joint

Fact-Finding: The need to collaborate on identifying and addressing data gaps on climate issues will continue to be important in the coming years. There are a multitude of ways in which ECCR practitioners can help Federal agencies work with one another and with external parties to address scientific challenges. They can facilitate joint fact-finding efforts and forums in which participants present and discuss research on a topic of shared importance. They can help parties work together on the design of research initiatives and data calls to maximize the utility of the information gathered for all potential users. They can help

agencies work together to explore the implications of the information collected, identify priority information gaps, and plan for when and how to engage non-Federal entities in working toward shared goals. An example of an independent science process is provided in Figure 5.

Figure 5: Example of an Independent Science Process

The National Center manages facilitation and independent scientific support for the Missouri River Recovery Implementation Committee, which provides consensus-based recommendations to the United States Army Corps of Engineers and the United States Fish and Wildlife Service (the “Lead Agencies”) on how to manage the Missouri River in a way that supports recovery of threatened and endangered species while minimizing the human impact on the river. The Lead Agencies and Committee members work together to frame scientific questions to pose to an independent panel of experts in seven specific disciplines. The panel is managed by a Third Party Science Neutral – a scientist with a broad understanding of the Missouri River, who harnesses the panelists’ efforts in developing answers to the Committee’s questions while avoiding interference with the substance of the panel’s answers. By developing shared questions and receiving a unified response from an independent panel of experts, participants avoid “battles of the experts.” The Committee can draw upon the panel’s answers to formulate recommendations to the Lead Agencies, who draw upon the panel’s answers and the Committee’s recommendations in charting a course for river management.

5. Collaborative Capacity-Building: A key approach for enhancing collaboration on climate-related work is to institutionalize ECCR approaches within agency structures and build collaborative skills within the Federal workforce. This might entail assessing the existing collaborative capacity of an agency or program and working with key parties to develop a plan for strengthening it. It might include designing new systems or procedures for handling conflicts, or for readily finding facilitators and mediators. It might take the form of training and coaching. Many facilitators offer trainings on meeting management, interest-based negotiation, and facilitation skills; some of those trainers also offer courses in engaging Tribes constructively, including conducting formal Government-to-Government

Figure 6: Example of Collaborative Capacity-Building

Consultation. Many Federal personnel working on climate change-related initiatives will need these skills to be effective. Facilitators can also offer negotiation training to affected parties, whether in stand-alone workshops or applied in the context of a particular collaborative project. See Figure 6 for an example of collaborative capacity-building.

In the early 2000s, Dr. DuPraw provided facilitation, coaching, and training support for the development of the National Ecological Observatory Network (NEON). She also managed planning and facilitation for a series of five NEON workshops, each focusing on a specific “grand ecological challenge” identified by the National Research Council and involving 20-30 leading scientists from various fields. Workshop participants jointly identified top priority research questions that would inform the NEON design process. Dr. DuPraw also provided facilitation and coaching support for a year-long consensus-building process through which approximately 140 people worked together in 15 committees to develop recommendations on the key scientific questions NEON should enable ecologists to address, how these questions will improve forecasting capacity, the data and infrastructure needed to address these questions, and related education plans.

B. Specific Facilitation and Mediation Strategies to Help Overcome Interviewee-Identified Challenges

The following section identifies specific ECCR strategies that facilitators and mediators could use to help Federal agencies and other affected parties overcome each of the five challenges identified by interviewees. Each strategy would require follow-up efforts to ensure appropriate scope, scale, and implementation. There are many resources available to support agencies in refining these strategies, including the National Center, Federal agency-specific conflict resolution offices (Appendix G), state-based dispute resolution centers (Appendix H) and university-based collaborative governance programs (Appendix I). A table summarizing the challenges and strategies discussed is provided below in Figure 7.

Challenge 1: Changing Administration Priorities and Related Funding Limitations

Interviewees told us that the changing priorities that are inherent to a new Administration are challenging with respect to sustaining progress on policy goals. This can lead to a dramatic change in climate-related policy goals every four or eight years. Federal agencies are working to navigate a new climate landscape to determine how to implement the Biden Administration’s climate priorities.

Strategies: Four strategies by which facilitators and mediators could assist with this challenge include:

- Facilitate internal consensus-building on a particular agency or unit’s climate action plan.
- Facilitate Federal dialogue (whether within one agency alone or in collaboration with others) to identify areas where there is a lack of Federal funding to support needed collaborative work in the climate arena and options to address those funding gaps (e.g., through agency pooling, public-private partnerships, or private funding). Diverse collaborators can help to sustain progress on policy goals during the ebbs and flows of funding by sharing resources and leadership.
- Convene a conference, potentially hosted by the National Center, for Federal agency employees, facilitators, and mediators that highlights different ways ECCR has been used for climate work. Publish a post-conference report memorializing these highlights for Federal colleagues.
- Facilitate interagency dialogue to understand and navigate any given Administration’s climate directives, climate-related aspects of Federal laws and regulations, and their implications for agency collaboration and coordination. Facilitation would likely be helpful in implementing the outcome of such dialogue as well (e.g., helping agencies collaborate and coordinate with one another on implementing specific components of an Administration’s executive orders).

The strategies above could also benefit Federal climate initiatives by strengthening working relationships and partnerships. This usually does happen in the course of any collaborative project, but sometimes a facilitator is asked to convene, plan, and facilitate events specifically to develop partnerships. Alternatively, agencies could work without the support of an independent neutral party to identify and address areas of need to support better collaboration and coordination.

As part of their climate action plans, Federal agencies could consider identifying existing relationships to strengthen and new ones to initiate that are key to interagency collaboration on climate. In addition, Federal agencies might consider developing guidance and policies to incentivize and support internal and external collaboration and coordination on climate-related initiatives to help institutionalize best practices that transcend changing national political priorities.

Challenge 2: Workforce Development

There is an urgent need for new and strengthened human capital within Federal agencies to respond to climate-related direction from The White House and from Congress. Meeting those challenges will involve more than recruiting climate scientists. There is also a need to cultivate climate literacy throughout the Federal workforce because virtually all agencies have some form of climate-related responsibility.

Strategies: Because making meaningful progress on climate policy goals requires extensive collaboration both among and between agencies and external parties, climate literacy must include collaboration skills as well as substantive aspects of climate science and policy. Thus, several strategies present themselves, both on the “process” side and on the “substantive” side:

- Federal agencies, potentially with the support of ECCR practitioners, can conduct collaborative capacity assessments to determine areas of need with respect to collaboration skills, approaches, and policies within agencies and build agreement on approaches to address those needs.
- Those facilitators and mediators who offer training in collaboration and consensus-building skills can help Federal agencies identify and develop critical collaborative capacity-building materials and activities. For example, ECCR trainers could offer courses, informational resources, and case studies tailored to Federal personnel working on climate issues. ECCR trainers could also deliver trainings, or help an agency institutionalize the content within its own training program (e.g., providing training-for-trainers, etc.). Agencies also might consider partnering with other Federal agencies to build staff skills and knowledge.
- Federal agencies can work with staff to collectively identify collaboration “lessons learned” and best practices to develop strategies and approaches to institutionalize those practices.
- The facilitated interagency dialogue suggested to help agency personnel understand and navigate any given Administration’s climate directives, climate-related aspects of Federal laws and regulations, and their implications for agency collaboration and coordination that addresses Challenge 1 would also directly address Challenge 2.

Challenge 3: Interagency Coordination and Collaboration

Interviewees told us that interagency coordination and collaboration can be burdensome, inefficient, and complex, and that it requires an added dimension of focus and funding. One example was a collaborative initiative that has been going on for years but for which success remains elusive – in other words, participants laboring on without reaching a satisfactory conclusion. Interviewees suggested that the time required for coordination results in less time to do substantive work. Interviewees also cited the distinctions between science and non-science agencies, including contrasts in organizational cultures, methods of approaching a task, and difference in terminology; these differences can exacerbate an already challenging collaboration.

Strategies: Several ways in which ECCR professionals could help with this challenge include:

- Identify critical climate information needs across the Federal landscape that could benefit from joint data collection actions. A facilitator could assist agencies in doing that, as well as the subsequent step of planning the joint data collection and analysis efforts. At times, facilitation and mediation can make the difference between success and failure when undertaking substantial, focused interagency coordination and collaboration.
- Connect Federal agencies to resources such as case studies, ECCR professionals, and training services that support interagency coordination and collaboration. ECCR professionals can help develop new collaboration resources to meet agency needs.
- ECCR professionals can help convene and facilitate project-level problem solving and decision-making between Federal agencies in the context of specific projects. Many climate challenges impact multiple agencies and stakeholders, requiring a high degree of coordination and collaboration between the agencies involved.
- Federal agencies can support long-term and replicable collaborative actions to address climate-related challenges through partnership development with other Federal, State, and Local Government agencies, Tribes, and intertribal associations. Partnerships can be strengthened through facilitated dialogue leading to the development of interagency communication strategies, conflict resolution processes, and memoranda of understanding.

Challenge 4: Working with Affected Parties

Interviewees mentioned the ever-present need to work with affected parties to make meaningful progress. With climate issues, the number of affected parties can be large and the issues complex, with many scientific uncertainties. Determining what form of collaboration to use and how to organize it can be overwhelming. Managing such efforts can be time-consuming. Facilitators and mediators can shoulder much of the “process management” load, freeing up agency personnel to work on the substantive aspects of the initiative.

Strategies: Facilitators and mediators specialize in helping decision-makers and affected parties work together to find areas of common ground and build upon them. Thus, Federal agencies may wish to:

- Enlist the help of facilitators and mediators to design, convene, and facilitate multiparty, collaborative processes to craft broadly supported approaches for

- addressing climate-related challenges. ECCR practitioners may conduct situation assessments to help identify key stakeholders, underlying interests and needs, points of contention, and possible paths forward on a variety of issues.
- Raise awareness among Federal personnel about how to recognize a situation that may be amenable to a collaborative approach and how to access facilitators and mediators.
 - Explore options for collaboration and ECCR support on emerging issues such as the intersection of climate and environmental health. This might take the form of a facilitated interagency dialogue to identify emerging public health issues linked to climate change and explore strategies to address those issues. Cross-sector and interdisciplinary dialogue could help address emerging climate-related issues and minimize unintended impacts associated with problem-solving efforts.
 - Enhance Government-to-Government Consultation and engagement. Native Nations are key partners on climate initiatives. Federal agencies would benefit by ensuring that Government-to-Government relationships are appropriately strengthened to work with impacted Native American Tribes and Alaska Native communities. ECCR practitioners with experience working with Native Nations may help assess Tribal needs and interests, develop or inform Consultation policies and approaches, and facilitate conversations between Native Nations and Federal agencies. Agencies may choose to explore the possibility of working with Tribal partners to plan and convene policy dialogues on key issues in a manner that respects Tribal rights and interests.
 - Connect Federal personnel to resources that support multiparty collaboration, such as case studies, ECCR professionals, and training.

Challenge 5: Information Dissemination to the Public

Interviewees described three aspects of this challenge. The first is the scale of the information dissemination need – i.e., educating the American public about the climate changes they can expect, how to minimize negative impacts, and what adaptation strategies they might consider. The second is the scientific challenge of tailoring global data in a scientifically valid manner for use by local communities. The third aspect of this challenge is understanding how different subsets of the American public take in information; this is necessary to format the information in a manner that will allow its recipients to absorb and implement it.

Strategies: Three strategies through which ECCR practitioners might help Federal agency personnel address this challenge include:

- Facilitators can convene focus groups to help agency personnel learn more about the perspectives of various subsets of the public.

- Facilitators can design and implement public involvement processes, including convening public meetings where agency personnel make informational presentations and engage in follow-up discussion with members of the public.
- ECCR professionals can provide valuable support in helping assess public information and education needs, and in developing materials and approaches to address those needs. As part of this approach, Federal agencies, potentially with ECCR practitioner support, may develop strategic communication and public education plans. Federal agencies, either individually or collectively, could consider working with international partners to identify and adapt proven communication and outreach materials.

Figure 7: Potential Facilitation and Mediation Strategies to Address Identified Challenges

Challenge	Strategies ECCR Professionals Could Help Federal Agencies Implement
<p><u>Challenge 1</u> Changing Administration Priorities and Funding Commitments</p>	<ul style="list-style-type: none"> • Build internal agreement on climate action plans and strengthen interagency relationships. • Work with other federal agencies to identify funding gaps related to critical needs for collaborating on climate challenges and potential funding sources to fill those gaps. • Convene a conference to share ways ECCR has been used for climate initiatives. • Convene interagency dialogue to understand and collaborate on implementing Administrations’ climate directives and climate-related aspects of Federal laws and regulations.
<p><u>Challenge 2</u> Workforce Development</p>	<ul style="list-style-type: none"> • Assess the agency’s collaborative capacity and identify collaboration skills, systems, approaches, and policies to strengthen. • Institutionalize collaboration training. • Identify and institutionalize collaboration best practices. • Partner with other Federal agencies to build staff skills and knowledge. • Convene interagency dialogue to understand and collaborate on implementing Administrations’ climate directives and climate-related aspects of Federal laws and regulations.
<p><u>Challenge 3</u> Interagency Coordination and Collaboration</p>	<ul style="list-style-type: none"> • Identify Federal climate information needs that could benefit from joint action. • Connect agencies to resources on interagency coordination and collaboration. • Engage in interagency collaborative problem solving at a project level. • Develop partnerships among Federal, State and Local agencies, Tribes, and intertribal associations. • Help Federal, State and Local agencies, Tribes, and intertribal associations develop interagency communication strategies, conflict resolution processes, and memoranda of understanding.

Challenge	Strategies ECCR Professionals Could Help Federal Agencies Implement
Challenge 4 Collaboration with Affected Parties	<ul style="list-style-type: none"> • Conduct situation assessments to identify key stakeholders, determine whether to collaborate and if so, design a collaboration approach. • Convene and facilitate multistakeholder processes to jointly formulate solutions to climate-related challenges. • Raise awareness among Federal staff about how to tell when a collaborative approach might be appropriate and how to access facilitators and mediators. • Proactively explore options for collaboration on emerging issues. • Enhance Government-to-Government Consultation and engagement. • Connect Federal personnel to collaborative resources on multiparty collaboration.
Challenge 5 Information Dissemination to the Public	<ul style="list-style-type: none"> • Facilitate focus groups to understand public perspectives. • Facilitate public meetings where agency personnel make informational presentations for the public. • Assess public information and education needs and develop materials and approaches to address those needs.

C. Specific Projects Suggested by Federal Interviewees

Interviewees suggested numerous ways that facilitators and mediators could assist Federal climate change-related initiatives – i.e., reaching agreement, getting traction, maximizing impact, and replicating successful approaches at larger geographic scales. Specific projects that interviewees mentioned are listed below, by agency. The list below is not exhaustive; it is intended to stimulate readers’ thinking about tangible ways in which ECCR can help.

U.S. DEPARTMENT OF COMMERCE / NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION



- Assist in conveying climate information to various audiences in terms they can understand (e.g., listen to what an audience wants to know, find the relevant climate information and distill it into tailored descriptions of impacts pertaining to that audience).
- Provide environmental conflict resolution and facilitation at state, local, and regional levels.
- Provide consensus-building support to design effective delivery systems for Federal climate-related services that draws upon expertise from many agencies.

U.S. DEPARTMENT OF DEFENSE (DOD) / DEPARTMENT OF THE ARMY (ARMY)

- Provide facilitation and mediation for Army installations and adjacent communities where desired outcomes for an installation differ.

U.S. DOD / ARMY CORPS OF ENGINEERS (USACE)



- Help design the collaborative process and foster dialogue in situations focused on managing unavoidable change (e.g., managing wildfires; planning for relocation⁴ and managed retreat – i.e., formulating incentives that make sense to stakeholders, their families, and communities and enable tax base stability).⁵
- Facilitate collaboration on the design of research and science agency outputs so they are useful to decision-makers at multiple agencies.

U.S. DEPARTMENT OF INTERIOR (DOI)



- Focus facilitation assistance on situations where affected parties have shared goals, or a reasonable likelihood of articulating shared goals.
- Mobilize an interagency effort to bring ECCR resources to the Administration's attention to help them see the connection to their priority initiatives.
- Create space for dialogue between governments, scientists, and environmental policy advocates, helping them recognize those topics where the need for dialogue to achieve lasting solutions outweighs the urge to fight.

DOI / FISH AND WILDLIFE SERVICE (FWS)

- Facilitate multiparty collaboration to update the National Fish, Wildlife, and Plants Climate Adaptation Strategy

⁴ This interviewee mentioned that the Council for Environmental Quality (CEQ) had a working group on relocation in 2014 and 2015.

⁵ An example offered by this interviewee was a project in response to tidal flooding in Norfolk; the proposed project would transform abandoned shopping malls into multi-family housing with solar, public transportation, and access to grocery stores and restaurants; it will reduce future drain on Federal dollars associated with emergency response and recovery.



- Facilitate interagency coordination related to helping Tribes and Alaska Natives relocate when necessary in response to sea level rise. This includes organizational efforts and follow-up on action items, given the number of entities trying to collaborate on this urgent challenge.
 - Facilitate dialogue on how to enhance the Tribal Climate Resilience Network, with an eye toward maximizing participation, identifying actionable next steps, and coordinating follow-up.
 - Facilitate consensus-building on a national framework to guide relocation driven by sea level rise, building on existing efforts such as work by the Denali Commission and BIA.
- Raise awareness among Tribes and Alaska Natives about available facilitation resources to assist with climate adaptation planning (e.g., creating space for all voices to be heard and helping bring priorities into focus).



- In place-based collaborative initiatives that already have facilitators or mediators but are not framed as focusing on climate change, consider whether it would be valuable to integrate climate change variables into the dialogue (in keeping with the concept of treating climate change as another source of uncertainty in all types of analyses).
- Integrate climate change considerations into various aspects of water operations and planning.
- Facilitate or mediate efforts to effectively translate global climate change data for local applications (e.g., communicating with customers and stakeholders in various subcommunities of practice).

DOI / NATIONAL PARK SERVICE (NPS)



- Help NPS “keep the ball rolling” on its climate projects by engaging stakeholders, property owners and local communities in resilience and adaptation projects.
- Facilitate interagency work between NPS and other DOI bureaus and Federal agencies at the program level.
- Facilitate NPS-hosted community meetings where participants build consensus on adaptation-related changes to park infrastructure.
- Facilitate Federal agencies’ information-sharing processes (supplementing managers’ efforts or freeing them up for substantive work).
- Coordinate the climate research-sharing process so scientists can focus on the science and not the process. This could accelerate results from the U.S. Global Change Research Program by working across bureaus in developing tools and science that is helpful to all agencies and bureaus.

DOI / BUREAU OF OCEAN ENERGY MANAGEMENT (BOEM)

- Convene scientists and decision-makers from across the Federal Government – not just the science agencies – to identify the state of knowledge on climate change, highlight critical climate change research questions, and determine where to go next in producing decision-relevant information in the most useful possible form.

DOI / U.S. GEOLOGICAL SURVEY (USGS)



- Provide convening and facilitation to help agencies and their partners work collaboratively on mission-specific mandates (particularly where some – like USGS – are research-oriented and others are not).
- Provide mediation and facilitation support to interagency working groups tasked with implementing Secretarial Orders or other policy initiatives.

U.S. DEPARTMENT OF AGRICULTURE (USDA)



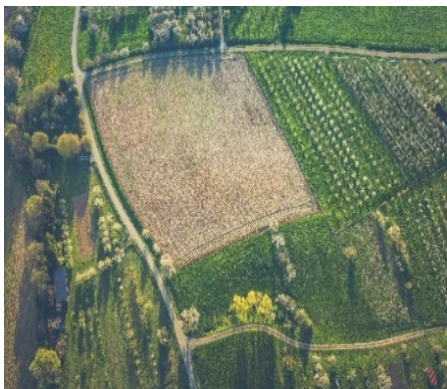
- Facilitate enhanced interagency research-sharing when USDA must rely on other agencies for critical research.
- Facilitate forums in which USDA reframes important discussions to help the agricultural sector see opportunities associated with climate change (e.g., new markets for renewable fuels, farm energy, and carbon capture), not just the risks.
- Facilitate Tribal and underserved community engagement in USDA's climate projects.

USDA / FOREST SERVICE (FS)



- Facilitate and/or mediate where the Forest Service is working to balance science, mandates to extract natural resources, and public values.
- Work with affected parties to think through options, assess risks, and make decisions for both the long and short term.
- Facilitate stakeholder engagement in NEPA processes (e.g., arrange for effective presenters who can help communities understand what is being proposed).
- Facilitate interagency collaboration so that climate work is shared broadly across regions and among staff.

USDA / NATURAL RESOURCES CONSERVATION SERVICE (NRCS)



- Provide facilitation support for agency leadership (e.g., strategic planning; programmatic priority-setting; determining how to achieve measurable results on climate-related matters).
- Facilitate strategic interagency meetings (e.g., between Climate Hub leaders and agencies within USDA to clarify what Climate Hubs can do, identify their needs, funding sources to support those needs, and how to achieve measurable results).



- Facilitate community initiatives, help them find Federal information sources and learn about the risks they need to consider to develop resilience strategies.
- Assist in convening affected parties for webinars, workshops, and conferences to increase awareness of available Federal information and resources for dealing with climate change.
- Provide collaboration and conflict resolution services for U.S. EPA and other Federal agencies, Tribes, and states for issues related to climate change impacts.

D. Next Steps and Help Immediately Available

Based on the assessment interview findings, the focus of next steps should be on working both independently within agencies and collectively across the Federal Government to target climate-related conflicts and challenges that could benefit from the collaborative support of facilitators, mediators, and the ECCR community. Numerous potential project ideas have been identified as part of this report, and additional dialogue may help reveal additional opportunities that lie at the nexus of:

- Federal climate leaders’ needs and interests (in part informed by this report).
- Available funding.
- Interagency and public-private partnership opportunities.
- Promising collaborative approaches for working on climate initiatives.

The intent of this effort is to encourage Federal leaders in the climate arena to use collaboration professionals and approaches to overcome barriers, strengthen traction on climate initiatives, and take successful models “to scale.” Implementation of the strategies suggested in this report may uncover critical resource gaps that need to be filled to maximize the Nation’s ability to meet its critical climate change challenges but identifying gaps can also be a step forward itself. Recommended next steps include:

1. Webinar to Discuss Report Findings and Possible Collaborative Federal Climate Initiatives

The National Center will convene a webinar to discuss this report’s findings and potential opportunities for collaborative action on Federal climate initiatives. Invitees will include senior Federal personnel who work in the climate arena. During

the webinar, presenters will share information on resources available from the ECCR field and collaborative models that have been used effectively to address climate-related challenges or challenges with similar characteristics. In a facilitated dialogue, participants will: a) reflect on report findings and share perspectives on opportunities for collaboration on Federal initiatives, as well as related challenges, funding, and knowledge gaps; and b) suggest actions that could support effective collaboration in the climate arena and/or specific climate-related projects and initiatives.

2. Case Consultations, Project-Specific Assessments, and Advisory Support

The National Center has staff available to consult with Federal colleagues who are establishing climate-related initiatives that would benefit from collaboration services, or who are facing complex challenges or conflicts that they think would benefit from the support of a facilitator or mediator. A consultation involves a 1:1 conversation with a Federal facilitator or mediator. There is no cost for the consultation. National Center personnel will listen to a description of the situation and explore whether a collaborative approach or collaboration training might be appropriate. (Factors supporting collaboration are included in Appendix E.)

If such an initial conversation indicates that a collaborative approach might serve the situation and project goals, the National Center typically will offer process options and explore resources available to the agency, including potentially undertaking a more rigorous project-specific assessment to confirm that the situation is amenable to a collaborative problem-solving approach and to map out the most constructive approach.

The National Center may also suggest other Federal or State-led programs or offices that could be helpful and discuss possible private sector resources to help address the challenge. See, for example, a list of Federal ECCR centers (Appendix G), a list of state offices of dispute resolution (Appendix H), and a list of university-based collaborative governance programs (Appendix I). National Center staff also can help Federal agencies connect with facilitators and mediators who are experienced in working with Tribes. The National Association for Community Mediation can identify local dispute resolution centers that provide facilitation and mediation for community-level environmental challenges (www.nafcm.org).

3. Community of Practice for Climate Collaborators

The National Center, perhaps in partnership with other Federal ECCR centers, could establish and cultivate a community of practice for those seeking to catalyze,

support, or participate in collaborative initiatives for addressing climate challenges. This community of practice could include individuals from within government agencies, businesses, and non-governmental organizations. The purpose of the community of practice would be to strengthen capacity to effectively address climate challenges through collaborative problem-solving methods. Key strategies could include workshops, symposia, and conferences; publications highlighting different ways ECCR can be used for climate work; and training, coaching, and mentoring to assist sponsoring agencies, private sector leaders, and partners in using these strategies effectively.

4. Climate Service Focus at the National Center for Environmental Conflict Resolution

The National Center will move forward immediately to develop an enhanced and focused service area for bringing ECCR assistance to bear on climate-related challenges.

References

- American Farmland Trust. (2021). *Smart Solar Siting Partnership Project for New England*.
<https://farmland.org/project/smart-solar-siting-partnership-project-for-new-england/>
- Audubon. (2020). *2016 – 2020 Audubon Strategic Plan*.
http://strategicplan.audubon.org/assets/SP16_Full_Web_Res.pdf
- Bianco, N., Litz, F., Saha, D., Clevenger, T., & Lashot, D. (2020). *New Climate Federalism: Defining Federal, State, and Local Roles in a U.S. Policy Framework to Achieve Decarbonization*. World Resources Institute. <https://files.wri.org/s3fs-public/new-climate-federalism-working-paper.pdf>
- Federal Emergency Management Administration. (2020). *Building Resilient Infrastructure and Communities (BRIC)*. <https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities>
- Federal Forum on Environmental Collaboration and Conflict Resolution, 2018 – OMB memos 2005, 2012.
- Bureau of Ocean Energy Management. (2018). *Strengthening the Intergovernmental Renewable Energy Task Forces. Office of Renewable Energy Programs*.
<https://www.boem.gov/sites/default/files/renewable-energy-program/Strengthening-the-Task-Forces-Final-4.2-%281%29.pdf>
- Bureau of Ocean Energy management (2020). *Environmental Studies Program Strategic Framework*. <https://www.boem.gov/sites/default/files/documents/about-boem/ESP-Strategic-Framework-Final-FY20.pdf>
- Center for Climate and Energy Solutions. (2019, September 4). *Solutions Forum*.
<https://www.c2es.org/our-work/solutions-forum/>
- Climate Program Office. *Communication, Education and Engagement*. National Oceanic and Atmospheric Administration. Retrieved August 8, 2021, from <https://cpo.noaa.gov/Meet-the-Divisions/Communications-Education-and-Engagement>
- Climate Program Office. *Cooperative Institutes*. National Oceanic and Atmospheric Administration. Retrieved August 8, 2021, from <https://cpo.noaa.gov/Our-Work/Partnerships/Cooperative-Institutes>
- Conservation International. (2021). *U.S. Government Policy*.
<https://www.conservation.org/about/us-government-policy>.

- Conservation International. (2020). *Engaging America's leaders on global conservation issues*. <https://www.conservation.org/projects/engaging-americas-leaders-on-global-conservation-issues>
- Conservation International. (2020). *Partnering with Communities, Institutions and Governments*. <https://www.conservation.org/about/partnering-with-communities-institutions-and-governments>
- Exec. Order No. 13990, 3 C.F.R. 7,037 (2021)
- Exec. Order No. 14008, 3 C.F.R. 7,619 (2021)
- Exec. Order No. 14013, 3 C.F.R. 8,839 (2021)
- Federal Emergency Management Agency, *Building Resilient Infrastructure and Communities (BRIC) grant program* [Infographic]. https://www.fema.gov/sites/default/files/2020-07/fema_bric_infographic.pdf
- Federal Emergency Management Agency. (2020). *BRIC Partnership Activities*. https://www.fema.gov/sites/default/files/2020-08/fema_bric-partnership-activities_support_document_08-2020.pdf
- Federal Emergency Management Agency. *2018-2022 Strategic Plan*. https://www.fema.gov/sites/default/files/2020-03/fema-strategic-plan_2018-2022.pdf
- Federal Emergency Management Agency. (2017). *Planning for a resilient community*. https://www.fema.gov/sites/default/files/documents/fema_planning-resilient-communities_fact-sheet.pdf
- Federal Forum on Environmental Collaboration and Conflict Resolution. (2018). *Environmental Collaboration and Conflict Resolution (ECCR): Enhancing Agency Efficiency and Making Government Accountable to the People*. https://ceq.doe.gov/docs/nepa-practice/ECCR_Benefits_Recommendations_Report_%205-02-018.pdf
- Fisichelli, N. A., Schuurman, G. W., & Hoffman, C. H. (2015). *Is 'Resilience' Maladaptive? Towards an Accurate Lexicon for Climate Change Adaptation*. *Environmental Management*, 57(4), 753-758. doi:10.1007/s00267-015-0650-6
- Institute for Water Resources. (2014, June 19). *New Climate Preparedness and Resilience Community of Practice Established*. U.S. Army Corps of Engineers. <https://www.iwr.usace.army.mil/Media/News-Stories/Article/485614/new-climate-preparedness-and-resilience-community-of-practice-established/>

- IPCC, 2021: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J. B. R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press
- Keyes, A. T., Lambert, K. F., Burtraw, D., Buonocore, J. J., Levy, J. I., & Driscoll, C. T. (2019). *The Affordable Clean Energy rule and the impact of emissions rebound on carbon dioxide and criteria air pollutant emissions*. *Environmental Research Letters*, 14(4), 044018. doi:10.1088/1748-9326/aafe25
- National Highway Traffic Safety Administration. (2020, March 31). Corporate Average Fuel Economy. <https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy>
- National Park Service. (2020, May 14). *Climate Change Response Program*. Retrieved August 04, 2020, from <https://nps.gov/orgs/ccrp/index.htm>
- National Park Service. (2019). *National Park Service Climate Response Program Strategic Plan*. Retrieved August 4, 2020, from <https://www.nps.gov/orgs/ccrp/upload/CCRP-Strategic-plan-508-smaller.pdf>
- Northern Arizona University. *Tribes & Climate Change Program*. Institute for Tribal Environmental Professionals. <http://www7.nau.edu/itep/main/tcc/>
- Office of Management and Budget. (2020). *A Budget for America's Future: Major Savings and Reforms*. U.S. Government Publishing Office. https://www.whitehouse.gov/wp-content/uploads/2020/02/msar_fy21.pdf
- Office of Management and Budget & President's Council on Environmental Quality. (2012). *Memorandum on Environmental Collaboration and Conflict Resolution*. https://www.udall.gov/documents/Institute/OMB_CEQ_Memorandum_2012.pdf
- Office of Management and Budget & President's Council on Environmental Quality. (2005). *Memorandum on Environmental Conflict Resolution*. https://www.udall.gov/documents/Institute/OMB_CEQ_Memorandum_2005.pdf
- Rocky Mountain Institute. (2020, October 9). *Carbon Free Cities & States*. <https://rmi.org/our-work/carbon-free-cities-states/>
- The Climate Group. (2021). *Policy Action*. <https://www.theclimategroup.org/policy-action>

- The Nature Conservancy. (2020, July 22). *Uniting Shellfish Growers Around Climate: A Conversation with Sally McGee*. <https://www.nature.org/en-us/what-we-do/our-priorities/tackle-climate-change/climate-change-stories/shellfish-growers-sally-mcgee/>
- The Nature Conservancy. (2020, February 28). *Our Federal Policy Work in the United States*. <https://www.nature.org/en-us/about-us/who-we-are/how-we-work/policy/conservation/>
- The Nature Conservancy. (2021, June 7). *Meeting the Challenge of Climate Change*. <https://www.nature.org/en-us/about-us/who-we-are/how-we-work/policy/smart-climate-policy/>
- Trump, D. (2017, March 28). *Remarks by President Trump at Signing of Executive Order to Create Energy Independence*. Retrieved August 12, 2020, from <https://www.whitehouse.gov/briefings-statements/remarks-president-trump-signing-executive-order-create-energy-independence/>
- Trump, D. (2019, July 8). *Remarks by President Trump on America's Environmental Leadership*. Retrieved August 12, 2020, from <https://www.whitehouse.gov/briefings-statements/remarks-president-trump-americas-environmental-leadership/>
- U.S. Army Corps of Engineers. Climate Preparedness and Resilience. U.S. Army Corps of Engineers Headquarters Website. Retrieved August 27, 2021, from <https://www.usace.army.mil/corpsclimate/>
- U.S. Army Corps of Engineers. *Responses to Climate Change Program*. Retrieved August 27, 2021, from https://www.usace.army.mil/corpsclimate/Responses_to_Climate_Change/
- U.S. Department of State. *Leaders Summit on Climate*. Retrieved July 20, 2021, from <https://www.state.gov/leaders-summit-on-climate/>
- U.S. Geological Survey. (n.d.). *CASC Partnerships*. Retrieved August 18, 2020, from <https://www.usgs.gov/land-resources/climate-adaptation-science-centers/casc-partnerships>
- U.S. Geological Survey. (n.d.). *Climate Adaptation Science Centers*. Retrieved August 17, 2020, from <https://www.usgs.gov/land-resources/climate-adaptation-science-centers/science>
- U.S. Geological Survey. (n.d.). Land Change Science Program. (n.d.). Retrieved August 17, 2020, from <https://www.usgs.gov/land-resources/land-change-science-program>

U.S. Geological Survey. (February 10, 2020). *President Proposes \$971.2 Million FY 2021 Budget for USGS*. <https://www.usgs.gov/news/president-proposes-9712-million-fy-2021-budget-usgs>

United Nations. (2020). *Conference of the Parties (COP)*. <https://unfccc.int/process/bodies/supreme-bodies/conference-of-the-parties-cop>

United Nations Paris Climate Agreement, 2016, 1-27, https://unfccc.int/sites/default/files/english_paris_agreement.pdf

Wallach, P. A. (2019, March 22). *Where does US climate policy stand in 2019?* Brookings Center. <https://www.brookings.edu/2019/03/22/where-does-u-s-climate-policy-stand-in-2019>

The White House. (2021, January 27). *Fact Sheet: President Biden Takes Executive Actions to Tackle the Climate Crisis At Home and Abroad, Create Jobs, and Restore Scientific Integrity Across Federal Government*. <https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/27/fact-sheet-president-biden-takes-executive-actions-to-tackle-the-climate-crisis-at-home-and-abroad-create-jobs-and-restore-scientific-integrity-across-Federal-government/>

The White House. (n.d.). *The Biden-Harris Administration Immediate Priorities*. Retrieved July 20, 2021, from <https://www.whitehouse.gov/priorities/>

Appendices

Appendix A

Interviewees' Agency Affiliations

Appendix A
Interviewees' Agency Affiliations⁶

Department of Agriculture
Department of Agriculture / Natural Resources Conservation Service
Department of Agriculture / United States Forest Service
Department of Commerce / National Oceanic and Atmospheric Administration
Department of Defense / Army
Department of Defense / United States Army Corps of Engineers
Department of Energy
Department of Interior / Bureau of Indian Affairs
Department of Interior / Bureau of Ocean Energy Management
Department of Interior / Bureau of Reclamation
Department of Interior / Fish and Wildlife Service
Department of Interior / National Park Service
Department of Interior / Office of Collaborative Action and Dispute Resolution
Department of Interior / United States Geological Survey
Department of Homeland Security/ United States Coast Guard
Environmental Protection Agency

⁶ Note that interviewees were asked to share their individual perspectives, rather than to speak on behalf of their agencies per se.

Appendix B

Interview Questions

Appendix B

Interview Questions

1. How does climate resiliency relate to your agency's mandate?
2. Do you work on climate resiliency yourself? How does your work relate to climate resiliency?
3. Has your agency taken any actions to institutionalize or codify a climate resiliency policy or approach? What kind of resources has your agency allocated to climate resiliency efforts?
4. How are climate impacts and climate resiliency addressed in your agency's work? What accomplishments in this arena are you / your agency proud of?
5. How does climate resiliency work vary between regions in your agency? Are some places doing more work than others? What kinds of work are they doing?
6. What constraints or barriers does your agency face in terms of doing climate resiliency work?
7. As your agency carries out its climate resiliency work, are you aware of related conflicts or complex challenges that are difficult for your agency to address on its own?
8. Do you see ways that facilitators and/or mediators could be of help to your agency in its climate resiliency work?
9. Is there anything else you would like us to know?
10. Are there others in your agency with whom we should speak?
11. Is there anything you have told us that you would like us to keep confidential?

Appendix C
Multi-Community Collaborative Initiatives in the U.S.
Climate Arena

Appendix C

Multi-Community Collaborative Initiatives in the U.S. Climate Arena

This appendix focuses on collaborative initiatives that involve multiple communities working together in the climate arena. The information is based on a modest amount of web research. It should not be construed as representing a comprehensive list of such initiatives in the U.S. However, it could serve as a useful starting place for a more exhaustive inventory with the goal of identifying effective models for potential expansion or replication and/or potential partners in a broad national initiative aiming to gain traction in addressing our climate challenges.

American Forests

This non-profit conservation organization focuses on building a reforestation movement in the U.S. It creates **place-based partnerships** in cities and rural landscapes in order to effectively work with others to develop and implement science-based data and plans related to forests or trees.

- Forest-Climate Working Group (FCWG): American Forests co-chairs and staffs this working group to advance climate change solutions in the forest sector. At the Federal level, coalition members work with agencies and lawmakers. At the state level, the group helps the U.S. Climate Alliance states with their commitments related to forest-climate solutions. FCWG leads monthly webinars to share best climate-smart practices and tools being developed across the forest sector. The Chief Strategy Officer for the FCWG is Rebecca Turner; Rebecca's email is rturner@americanforests.org.

World Resources Institute (WRI)

WRI is a global research organization that focuses on several critical issues at the intersection of environment and development, with climate being one of these issues. Several WRI projects in the United States (WRI U.S.) include:

- Policy Solutions & Pathways: WRI U.S. conducts peer-reviewed research and convenes stakeholders to help policymakers identify practical policy solutions to reduce U.S. greenhouse gas emissions.
- New Climate Federalism: WRI U.S. seeks to inform states and local governments committed to climate action through **engagement** and **analysis**. State, local, and Federal leaders are convened to develop a practical model for climate Federalism. According to WRI, addressing climate change effectively will require decarbonization of the U.S. economy, therefore WRI presents 'new climate Federalism' as a framework for the Federal, state, and local governments to work together and address climate change as this issue is too large for one level of government to take on. The climate Federalism

model attempts to present a solution as to how Federal policymakers should allocate roles between Federal, state, and local government to achieve decarbonization (Bianco et al., 2020).

The National Audubon Society

This organization protects birds and their environment through the use of science, advocacy, education, and on-the-ground conservation. There is representative leadership in 18 states and regional offices, as well as chapters and members in all 50 states. The national staff works with local offices and partners to find solutions that make sense per region. For example, in 2019, New York signed the Climate Leadership and Community Protection Act (CLCPA) into law; Audubon New York and other chapters and environmental partners had advocated for this climate bill that puts the state on a path to achieve high reductions of greenhouse gases by 2050.

- Climate Initiative: A key element to this initiative is advocating for significant public policy change at the local, state, and Federal level; Audubon will engage bipartisan membership to ultimately support state and local efforts to lower carbon emission. According to their 2016-2020 Strategic Plan, Audubon intends to leverage climate science to create a greater demand for conservation change at the local, state, and national levels (Audubon, 2020). Through focused conservation and targeted engagement initiatives, Audubon's goal is to increase climate conversation in the long-term. Audubon will build relationships with public leaders to broaden the range of voices for climate solutions. They also will develop and deliver a series of campaigns that engage and leverage their conservation network. Specific kinds of collaboration that Audubon does with the Federal government is unclear.

Conservation International (CI)

This organization empowers societies to care for nature, global biodiversity, and the well-being of humanity responsibly and sustainably. It works with businesses and governments to account for their impacts on forests; enables private investment in forest protection initiatives; and helps local and indigenous communities protect forests on their lands.

- Engaging U.S. Leaders on Global Conservation Issues: CI works with several U.S. executive branch departments⁷ and agencies⁸ to build bipartisan support for international conservation and provides information and advice on policy priorities such as U.S. funding for international conservation, ocean conservation, wildlife trafficking,

⁷ The Department of State, the Department of the Treasury, and the Department of Interior

⁸ U.S. Agency for International Development, the National Oceanic and Atmospheric Administration, the National Aeronautics and Space Administration

and sustainable supply chains. CI is well positioned to advise members of the U.S. House and Senate, congressional staff, and committees responsible for crucial decision-making on international conservation. Additionally, CI's initiative, [Our Direct Connection](#), works to raise awareness on the "role of nature in promoting economic, national and global security, and enhancing the well-being of people" by educating and communicating examples of natural resource impacts and security risks to decision-makers (Conservation International, 2021).

Land Trust Alliance

The Land Trust Alliance is a national land conservation organization that represents more than 1,000-member land trusts and their 4.6 million supporters nationwide. This organization brings stakeholders together to share ideas and resources on conservation. Partners include key Federal agencies, nonprofits, and businesses with expertise in conservation.

- Gulf Coast Partnership: The Alliance formed a coalition of over 30 conservation groups in five states to protect and restore the coastal region along the Gulf of Mexico. The aim of this coalition was to strengthen land trusts, improve public policies, and facilitate collaboration and enable landscape-scale conservation.

Center for Climate and Energy Solutions (C2ES)

C2ES is a leader and convener on critical climate and energy challenges. Their mission is to advance strong policy and action to reduce GHGs emission, promote clean energy, and strengthen resilience to climate impacts.

- C2ES Solutions Forum: The C2ES Solutions Forum "convenes leaders and experts around the country to help explain clean energy, reduce greenhouse gas emissions, and strengthen resilience to climate change"(Center for Climate and Energy Solutions, 2019). This is done through a series of public and private forums around the country to explore critical issues, develop collaborative approaches, and create a set of practical solutions. C2ES works with governments, businesses, and other partners to examine climate impacts and identify priorities for action.

American Farmland Trust (AFT)

AFT is a national agricultural organization committed to the farmers and ranchers who steward the land and sustains the country. AFT's mission is to protect farmland, promote sound farming practices, and keep farmers on the land. The organization believes in dialogue and collaboration; they seek to unite people, and to partner with a broad array of other groups around farming and food issues.

- Smart Solar Siting Partnership Project: This New England project aimed to reduce conflict over siting of solar facilities by reaching agreements among multi-stakeholders

on smart solar siting principles, policies, and programs. AFT offered a consensus-based, solutions-oriented approach to advance smart solar siting policies and programs (American Farmland Trust, 2021).

Rocky Mountain Institute (RMI)

RMI works with other cohorts of cities and states on pathways to climate neutrality. RMI is working to tackle climate change and deliver economic, health, and resiliency opportunities to all global citizens. They deliver a holistic suite of services to cities, including research and analysis, facilitation of diverse stakeholders, and access to industry experts throughout their network.

- American Cities Climate Challenge Renewables Accelerator: RMI and the World Resources Institute (WRI) works with cohorts of cities grouped around key renewable procurement methods so that assistance, knowledge, tools, and peer learning can be delivered, and clean energy solutions can be implemented.

The Nature Conservancy (TNC)

TNC works in partnership with individuals, local communities, government agencies, and the private sector to protect the Earth's natural landscapes and biodiversity. TNC emphasizes cooperation across agency, political and organizational boundaries. In the United States, TNC works with governments to show how renewable energy can grow economies while reducing carbon emissions. TNC also works with states to implement clean energy transition policies, and to educate key Federal legislators about the need for Federal action on reducing greenhouse gas emissions. Additionally, TNC works at the local and state levels to build support for climate action.

- Smart Climate Policy: TNC is “fostering collaboration among nonprofits, corporations and lawmakers to reduce carbon emissions and invest in cleaner, more reliable energy systems” (The Nature Conservancy, 2021). For example, TNC is using its convening power to increase support for renewable energy in states such as New Hampshire and Pennsylvania.
- Women on Climate: This initiative brings women leaders together in innovation labs, facilitated networks, and policy workshops to generate a coalition of climate change problem solvers.
- Shellfish Growers Climate Coalition (SGCC): This coalition is comprised of U.S. shellfish growers, small business owners from coastal communities, policymakers, and more from 20 U.S. states. Climate-related changes, such as ocean acidification or warming ocean temperatures, threatens shellfish populations. Because shellfish are vulnerable to climate change, these groups work together in partnership with TNC to advocate for sound climate policy to ensure a low-carbon future that will benefit and sustain shellfish

populations. TNC and a group of shellfish growers launched SGCC in 2018 after the Director of TNC's Northeast Marine Program, Sally McGee, met with shellfish growers concerned about their livelihood and fate of their business in a changing climate (The Nature Conservancy, 2020).

Water Utility Climate Alliance

The Water Utility Climate Alliance (WUCA) is made up of twelve of the Nation's largest water providers, which work together to make responsible water management decisions and enhance climate change research. Through WUCA, members prepare water utilities to respond to climate change effects and position them to protect water resources within and beyond their jurisdictions. Several engineering case studies documenting WUCA's dedication to making climate science applicable to climate adaptation projects in practice are:

- [Climate Resiliency Standard Operating Procedure](#) – Developed by the New York City Department of Environmental Protection to address the threat of sea level rise and other extreme climate change-related events.
- [Drinking Water Cooling System](#) – In response to multiple high heat days and record drought, the Tarrant Regional Water District devised a resilient system to pump drinking water from supply reservoirs to its service area.

Appendix D
Multi-State Collaborative Initiatives in the U.S.
Climate Arena

Appendix D

Multi-State Collaborative Initiatives in the U.S. Climate Arena

This appendix focuses on multi-state collaborative initiatives in the climate arena. The information is based on a modest amount of web research. It should not be construed as representing a comprehensive list of such initiatives in the United States. However, it could serve as a useful starting place for a more exhaustive inventory with the goal of identifying effective models for potential expansion or replication and/or potential partners in a broad national initiative aiming to gain traction in addressing our climate challenges.

The U.S. Climate Alliance (USCA / the “Alliance”) is a bipartisan coalition made up of 25 governors⁹ committed to reducing greenhouse gas emissions that are consistent with the goals of the international Paris Agreement. The three core principles of the Alliance are for states to continue to lead on climate change, state-level climate action that will benefit the economy and communities, and for states to show the rest of the Nation and the world that ambitious climate action is achievable. By joining the Alliance, each state commits to implementing policies that advance the goals of the Paris Agreement, tracking and reporting progress, and accelerating new and existing policies to reduce carbon pollution and promote clean energy deployment. Policies created by states through the Alliance encourage clean energy, energy efficiency, and climate resilience. The priority sectors of the Alliance include climate resilience, clean energy finance, power sector modernization, product energy efficiency standards, advanced transportation, natural & working lands, and short-lived climate pollutants.

The USCA Impact Partnership is a model for delivering targeted technical assistance to states in order to achieve their climate and clean energy priorities. Through this Impact Partnership, the Alliance invites partners with specialized expertise and works closely with states to provide demand-driven technical and analytical support. The purpose of these partnerships is to positively impact communities, the economy, and the climate through the implementation of climate action.

The Alliance member states have strengthened existing measures and implemented new policies to combat climate change through several mechanisms. Some include:

- Adopting new or strengthened greenhouse gas (GHG) emissions reduction targets; and
- Strengthen community resilience through training programs, grants, and tools.

⁹ This number may change with time as more states consider joining or leaving the Alliance.

There are three areas the USCA focuses on when partnering and working with other organizations: deep decarbonization, natural & working lands, and resilience. Some of the existing partnerships are:

American Farmland Trust (AFT)

- This is a national conservation organization that protects farmland, promotes environmentally sound farming practices, and keeps farmers on the land through the **Farmers Combat Climate Change** initiative. AFT assists Alliance states by developing effective policies and programs on carbon sequestration and the reduction in greenhouse gases on agricultural lands to improve farm resilience and productivity. One way AFT will help is through convening agricultural and conservation experts in key Alliance states to gather and share knowledge.
- The contact for the AFT is Jennifer Moore-Kucera, Climate Initiative Director at jmoorekucera@farmland.org

American Forests

- This forest conservation organization works to create healthy and resilient forests across North America. American Forests is the convener of the **Forest-Climate Working Group** and it leads collaboration across the U.S. forest sector to overcome the threats climate change poses on forests. The partnership between American Forests and USCA occurs by hosting Learning Labs that bring together state policymakers with scientists, carbon investors, foresters, and other experts.
- The contact for American Forests is Rebecca Turner, Chief of Staff at Rturner@americanforests.org

Coalition on Agricultural Greenhouse Gases (C-AGG)

- This is a US multi-stakeholder organization that focuses on creating voluntary, market-based, and incentive-based sustainable agriculture and climate change solutions for farmers, ranchers, and society. Its collaborative forum builds consensus and promotes the development of science-based policies, programs, tools, and methodologies and decision support systems. Their forum offers engagement opportunities between the agricultural sector and value chains to help them develop policies and programs.
- The contact for C-AGG is Debbie Reed, Executive Director at debbie@c-agg.org

The Nature Conservancy (TNC)

- This is a global conservation organization that conserves lands and waters. It uses a collaborative approach that engages local communities, governments, the private sector, and other partners.
- The contact for the Nature Conservancy is Tim Sullivan, Climate Director, North American Region, at tim_sullivan@tnc.org
- Another contact is Cathy Macdonald, North America Climate Solutions Director in the Oregon TNC office at cmacdonald@tnc.org or ph. 503-802-8100

Trust for Public Land

- This Trust empowers state climate action leadership in the land sector. It pursues new and innovative public policies and funding for natural climate solutions. The **Land's Geographic Information Systems** team works to identify the best parcels of land in Climate Alliance states that can sequester and store carbon.
- The contact for the Trust for Public Land is Linda Orel, Senior Conservation Finance Director at Linda.Orel@tpl.org

World Resources Institute (WRI)

- This is a fact-based, non-partisan policy research organization that works with governments, businesses, and civil society to produce transformative solutions that protect the earth and improve people's lives. WRI helps states to protect and enhance carbon sequestration.
- The contact for WRI is James S. Mulligan, Associate II at jmulligan@wri.org

Other Multi-State Initiatives

Pacific Coast Collaborative (PCC). <http://pacificcoastcollaborative.org/>

This is a cooperative agreement among leaders of Alaska, California, British Columbia, Oregon, and Washington to reduce the effects of climate change on their regional economy by leveraging clean energy inaction and low-carbon development. The participating jurisdictions coordinate, propose and adopt policy to generate investments in climate resilience and renewable energy.

Transportation & Climate Initiative (TCI). <https://www.transportationandclimate.org/>

This is a regional collaboration that seeks to improve transportation, develop the clean energy economy, and reduce carbon emissions from the transportation sectors. The participating states are Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, and the District of Columbia. The TCI is directed by state and district agencies. The TCI Clean Vehicles and Fuels workgroup allows states to share best practices and engage with experts and stakeholders on policies enabling adoption of cleaner vehicles.

Regional Greenhouse Gas Initiative (RGGI). <https://www.rggi.org/>

This is the first mandatory market-based program in the U.S. to reduce greenhouse gas emissions (GHGs) and it administers through the non-profit RGGI, Inc. Several states work together to cap and reduce CO2 emissions from the power sector. This is a cooperative effort between the states Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. RGGI, Inc. provides administrative and technical services to support the development and implementation of each RGGI State's CO2 Budget Trading Program. RGGI participating states have periodic program reviews by holding stakeholder meetings to consider the program's impacts, successes, and design elements. The last stakeholder meeting held appeared to be in 2017 (according to their website). RGGI has been releasing reports and press releases as of this year so the program remains active.

Western Climate Initiative (WCI). <https://wci-inc.org/>

The nonprofit WCI, Inc. provides administrative and technical assistance to support the implementation of state and provincial greenhouse gas trading programs. The participating jurisdictions are the State of California, and the Provinces of Québec and Nova Scotia. WCI, Inc. provides administrative support through a variety of ways for the participating jurisdictions. For example, the WCI website says that WCI, Inc. personnel "facilitate activities and meetings of its working groups, committees, and Board of Directors."

Western Governors' Association (WGA). <https://westgov.org/>

This is a nonpartisan organization made up of governors of 19 Western states and 3 Pacific Territories. WGA is a tool for information exchange and an instrument for Governors to develop bipartisan policy and collective action on issues in the Western U.S. WGA addresses policy and governance issues in the West and advances the role of the Western states in the Federal system. Policy is developed and programs are carried out in areas such as natural resources and the environment. There is an active WGA Working Lands Roundtable which is examining policy issues and engaging stakeholders to advance natural resource-focused initiatives. There have been past initiatives on national forest and rangeland management, species conservation and

the Endangered Species Act, and drought. There are several areas of focus which include water, wildfires, environmental management, etc. on the website where bipartisan policy work (policy resolutions, testimony, letters, and related news) is shared by the Western Governors. The 2020 WGA Annual Report is accessible at:

https://westgov.org/images/editor/FINAL_2020_Annual_Report.pdf

Under2 Coalition. <https://www.theclimategroup.org/under2-coalition>

Climate Group is an international non-profit that is the Secretariat for the Under2 Coalition. The Group builds networks and holds organizations accountable on their commitments to drive climate action and move the world towards net zero carbon emissions by 2050. The Under2 Coalition comprises of state and regional governments committed to the climate action that is in line with the Paris Agreement. Over 220 governments make up the coalition and each have committed to keep global temperature rises to well below 2°C with efforts to reach 1.5°C. Nineteen state and regions in the Coalition have committed to reaching net zero emissions by 2050 or earlier. One of the projects, Climate Pathways provides technical support and resources to assist governments in developing long-term emission reduction plans. The Under2 Coalition also helps to accelerate climate policy development for state and regional governments; this is done by “facilitating government-to-government peer learning and by connecting policymakers to essential information and resources” (The Climate Group, 2021). Additionally, there is a Transparency workstream that supports signatories to strengthen their greenhouse gas (GHG) accounting capacity and increase transparent disclosure of climate change mitigation progress.

Powering Past Coal Alliance (PPCA). <https://poweringpastcoal.org/>

This is a coalition of national and subnational governments, businesses, and organizations working to advance the transition from coal power to clean energy. PPCA aims to secure commitments from governments and the private sector to phase out coal, shift investment from coal to clean energy, and achieve coal phase-out in a sustainable and economically way that supports workers and communities. Government and private sector members engage in peer-to-peer knowledge exchange and diplomatic outreach. There is a Finance Taskforce that works to cease new investments in coal power by engaging in joint advocacy among policy makers and businesses to reach their goal. The Just Transition Taskforce engages big coal users.

U.S. India State and Urban Initiative. <https://www.csis.org/programs/wadhvani-chair-us-india-policy-studies/past-india-chair-projects/us-india-state-and-urban>

The Center for Strategic and International Studies (CSIS) leads the U.S. India State and Urban Initiative. The CSIS Initiative works toward the goal of promoting energy security and energy sector reform through direct engagement between U.S. and Indian subnational entities. It also establishes close and sustainable working relationships between Indian subnational officials

with their U.S. counterparts, civil society organizations and the private sector. This initiative provides a platform to facilitate innovative subnational energy partnerships between India and the U.S. The Secretariat of this initiative is led by the Energy Security and Climate Change Program and the Wadhvani Chair in U.S.-India Policy Studies.

Office of Energy Efficiency and Renewable Energy Initiatives.

<https://www.energy.gov/eere/about-us/initiatives-and-projects>

The Department of Energy has a suite of programs to look at. The Office of Energy Efficiency and Renewable Energy has collaborated with private organizations, researchers, and other counties to support energy efficiency and renewable energy research.

Collaboration for the Colorado River Delta. <https://raisetheriver.org/collaboration-for-the-colorado-river-delta/>

The Colorado River is an endangered river system as water is taken up by upstream dams and water diversions for agricultural and municipal needs. The river does not always meet its natural end in the Gulf of California, and the Colorado River Delta is dry. In 2012, a bi-national collaborative effort occurred to revive the dry delta landscape and a binational agreement between the U.S. and Mexico was passed to restore the habitat and dedicate water to the Delta. The U.S. Mexico sections of the **International Boundary and Water Commission (IBWC)** and **La Commission International de Limites y Aguas (CILA)** are Federal agencies that negotiate and implement binational water treaties and water allocations. In 2012, these two groups negotiated an agreement, Minute 319, that helped the U.S. and Mexico better implement the 1944 U.S.-Mexico Water Treaty under current basin conditions. After Minute 319 was signed, Colorado River stakeholders and a multinational, multidisciplinary, multi-organization science team worked on its implementation. Ongoing scientific monitoring of results was needed to inform effective applications of environmental water in the future. A binational team of scientists included the University of Arizona, Sonoran Institute, The Nature Conservancy, and El Colegio de la Frontera Norte (COLEF). Raise the River, a coalition of conservation organizations, worked to protect and restore the Colorado River Delta. Members of Raise the River include: The Nature Conservancy, Pronatura Noroeste, the Sonoran Institute, National Audubon Society, The Redford Center, and Restaremos El Colorado. Minute 319 concluded in December 2017 however, government officials, researchers, and coalition members of Raise the River negotiated a successor agreement, Minute 323, to support continued cooperative work between Mexico and the U.S. over a nine-year period through 2026. The Minute 323 agreement commits the U.S. and Mexico to work together to address potential Colorado River water shortages and meet any new water conservation and storage objectives.

Appendix E

Considerations in Determining Whether a Situation is Amenable to a Collaborative Approach

Appendix E

Considerations in Determining Whether a Situation is Amenable to a Collaborative Approach

All the parties can be identified.
The number of parties is manageable.
Parties can effectively advocate for themselves.
Parties are inter-dependent (they cannot “win” alone).
Each party has a source of power.
There is room for negotiation (there are multiple pieces to the situation or dispute).
There is sufficient time, resources, and information.
All key parties are willing to participate.

Appendix F
Climate-Related Executive Orders of the Biden
Administration

Appendix F

Climate-Related Executive Orders of the Biden Administration

- **E.O. [13990](#) – Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis.** This Executive Order prioritizes science, public health, environmental protection, greenhouse gas emission reduction, and environmental justice to bolster resilience to climate change impacts. It focuses specifically on the prioritization of environmental justice and job creation to deliver on the Administration’s goals. It also orders agency heads to review rules and regulations that “are or may be” inconsistent with the policies set forth in this order and establishes an Interagency Working Group on the Social Cost of Greenhouse Gases. The Working Group will be Co-Chaired by the Chair of the Council of Economic Advisers, Director of Office of Management and Budget, and the Director of the Office of Science and Technology Policy.

- **Executive Order [14008](#) - Executive Order on Tackling the Climate Crisis at Home and Abroad – January 27, 2021.** This Executive Order directs the Federal Government to take “ambitious” climate action domestically and internationally by, among other things:
 - Rejoining the Paris Climate Agreement;
 - Hosting an “early Leaders’ Climate Summit,” work from which will inform the 26th UN Climate Change Conference of the Parties (COP26);
 - Creating a new Presidentially appointed Special Presidential Envoy for Climate (John Kerry) to promote “innovative approaches, including international multi-stakeholder initiatives”;
 - Prioritizing “enhanced climate ambition and enhancement of climate considerations” across groups including the G7, G20, and others;
 - Pledging to work in partnership with States, localities, Tribes, territories, and other U.S. stakeholders to advance U.S. Climate diplomacy;
 - Tasking the Secretary of State to seek advice and consent from the Senate to ratify the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer;
 - Prioritizing climate in foreign policy and national security;
 - Laying out a government-wide approach to the climate crisis under which the Federal Government will pursue a coordinated approach from planning to implementation, paired with substantive engagement by stakeholders, including State, local, and Tribal governments;

- Establishing the White House Office of Domestic Climate Policy (Climate Policy Office) within the Executive Office of the President, which will:
 - Coordinate the policy-making process with respect to domestic climate policy issues;
 - Coordinate domestic climate policy advice to the President;
 - Ensure that domestic climate policy decisions and programs are consistent with the President’s stated goals and that those goals are being effectively pursued;
 - Monitor implementation of the President’s domestic climate-policy agenda; and
 - Establishing a National Climate Task Force, chaired by the National Climate Advisor.
- **E.O. [14013](#)- Executive Order on Rebuilding and Enhancing Programs to Resettle Refugees and Planning for the Impact of Climate Change on Migration – February 4, 2021.** Although this Executive Order primarily concerns immigration and refugee policy, it also directs senior officials to compile and deliver to the President a report on climate change and its impact on migration, including forced migration, internal displacement, and planned relocation. The report will detail many implications of climate change on migration and will highlight opportunities for the United States to work collaboratively with other countries, international and non-governmental organizations, and localities to respond to migration resulting directly or indirectly from climate change.

Appendix G

Federal Centers That Support Environmental Collaboration and Conflict Resolution

Appendix G

Federal Centers that Support Environmental Collaboration and Conflict Resolution

1. Udall Foundation / National Center for Environmental Conflict Resolution

130 South Scott Ave.

Tucson, AZ 85701

www.udall.gov

2. Conflict Prevention and Resolution Center (CPRC)

U.S. Environmental Protection Agency

1200 Pennsylvania Ave NW (MC-2388A)

Washington, DC 20460

(202) 564-2922

3. Collaborative Action and Dispute Resolution (CADR)

U.S. Department of the Interior

801 N. Quincy St., Suite 400

Arlington, VA 22203

Internal Mail Stop: MIP 5123

4. Dispute Resolution Service (DRS)

Federal Energy Regulatory Commission

888 First Street, NE

Washington, DC 20426

1-844-238-1560

Ferc.adr@ferc.gov

5. Collaboration Public Participation Center of Expertise (CPCX)

Collaboration and Public Participation Center of Expertise

Institute for Water Resources

U.S. Army Corps of Engineers

7701 Telegraph Road

Alexandria, VA 22315

(703) 428-9071

Appendix H

State Resources for Dispute Resolution

Appendix H

State Resources for Dispute Resolution

State	Office Name	Website
AL	Alabama Center for Dispute Resolution	https://www.alabamaadr.org/
CA	Consensus and Collaboration Program	https://cce.csus.edu/contact-info-pod/contact-us-42
FL	Florida Conflict Resolution Consortium (FCRC)	https://consensus.fsu.edu/
HI	Center for Alternative Dispute Resolution	https://www.courts.state.hi.us/services/alternative_dispute/alternative_dispute_resolution
IA	Iowa Mediation Service	http://www.iowamediationservice.com/
ME	The Office of Court Alternative Dispute Resolution	https://www.courts.maine.gov/programs/adr/index.html
MD	Mediation and Conflict Resolution Office (MACRO)	https://mdcourts.gov/macro
MA	Massachusetts Office of Public Collaboration	https://www.umb.edu/mopc
NE	Nebraska Office of Dispute Resolution	https://supremecourt.nebraska.gov/programs-services/mediation-restorative-justice
NJ	Office of Dispute Resolution	https://www.nj.gov/dep/odr/
NC	Natural Resources Leadership Institute	https://projects.ncsu.edu/nrli/
NM	Office of Public Facilitation	https://www.env.nm.gov/office-of-public-facilitation/
OH	Ohio Commission on Dispute Resolution	https://www.supremecourt.ohio.gov/Boards/disputeResolution/
OK	Institute for Dispute Resolution	https://www.ok.gov/mediation/AboutUs/
OR	Oregon Consensus Program	https://oregonconsensus.org/
TX	Center for Public Policy Dispute Resolution	https://law.utexas.edu/cppdr/
UT	ADR Program for the State of Utah	https://www.utd.uscourts.gov/adr-program
VA	Institute for Environmental Negotiation (IEN)	https://www.arch.virginia.edu/ien/about-ien
WA	William D. Ruckelshaus Center	https://ruckelshauscenter.wsu.edu/

Appendix I
University-Based Collaborative Governance
Programs

Appendix I
University-Based Collaborative Governance Programs

State	Program
Arizona	<p>Collaborative Governance Program University of Arizona School of Government & Public Policy 306 Social Sciences Building Tucson, AZ 85721 http://collaborativegovernance.arizona.edu/</p>
Arkansas	<p>Center for Public Collaboration University of Arkansas at Little Rock School of Public Affairs 2801 S. University Ave. Little Rock, AR 72204 http://ualr.edu/publicaffairs/publiccollaboration/</p>
California	<p>Davenport Institute for Public Engagement and Civic Leadership Pepperdine University Pepperdine School of Public Policy 24255 Pacific Coast Highway Drescher Campus Malibu, CA 90263 http://publicpolicy.pepperdine.edu/davenport-institute/</p>
Colorado	<p>Conflict Resolution Institute University of Denver 2201 South Gaylord Street Mary Reed Bldg, Room 312 Denver, CO 80208 http://www.du.edu/conflictresolution/</p>
Florida	<p>FCRC Consensus Center Florida State University 2035 East Paul Dirac Dr. Morgan Building, Ste 236 Tallahassee, FL 32310 http://consensus.fsu.edu/</p>
Idaho	<p>James A. & Louise McClure Center for Public Policy Research University of Idaho Office of the President 714 W. State Street Boise, ID 83702 https://www.uidaho.edu/president/direct-reports/mcclure-center</p>

State	Program
Indiana	<p>O’Neill School of Public and Environmental Affairs Indiana University 1315 E. Tenth Street Bloomington, IN 47405 https://spea.indiana.edu/</p>
Massachusetts	<p>Massachusetts Office of Public Collaboration University of Massachusetts – Boston John W. McCormack Graduate School of Policy and Global Studies 100 Morrissey Boulevard McCormack Building, Room 627 Boston, MA 02125 http://www.mopc.ump.edu/</p>
Nebraska	<p>Negotiation and Conflict Resolution (NCR) Program Creighton University Department of Interdisciplinary Studies, Creighton Graduate School 2500 California Plaza Omaha, NE 68178 https://law.creighton.edu/wener-institute</p>
New York	<p>Program for the Advancement of Research on Conflict and Collaboration (PARCC) Syracuse University Maxwell School of Citizenship and Public Affairs 400 Eggers Hall Syracuse, NY 13244 http://www.maxwell.syr.edu/parcc.aspx</p>
North Carolina	<p>Natural Resources Leadership Institute North Carolina State University North Carolina State University NC Cooperative Extension 214 Patterson Hall, Box 7569 Raleigh, NC 27695 http://www.ncsu.edu/NRLI</p> <p>Public Dispute Resolution Program University of North Carolina, Chapel Hill School of Government Campus Box 3330, Knapp-Sanders Building Chapel Hill, NC 27599 https://www.sog.unc.edu/resources/microsites/public-dispute-resolution</p>

State	Program
Oregon	<p>Oregon Consensus, National Policy Consensus Center Portland State University Hatfield School of Government NPCC – 720 URBN, P.O. Box 751 Portland, OR 97207 http://oregonconsensus.org/</p> <p>Oregon’s Kitchen Table, National Policy Consensus Center Portland State University College of Urban and Public Affairs 506 SW Mill URB 720 Portland, OR 97201 http://www.oregonskitchentable.org</p>
Texas	<p>Center for Public Policy Dispute Resolution University of Texas, Austin University of Texas Law School 727 E. Dan Keeton Austin, TX 78705 https://law.utexas.edu/cppdr/</p>
Utah	<p>Environmental Dispute Resolution Program University of Utah University of Utah S.J. Quinney College of Law – Wallace Stegner Center for Land, Resources and the Environment 332 S. 1400 E., Room 101 Salt Lake City, UT 84112 http://law.utah.edu/projects/edr/</p>
Virginia	<p>Institute for Engagement and Negotiation University of Virginia School of Architecture PO Box 400179 Charlottesville, VA 22904 https://www.arch.virginia.edu/ien</p>
Washington	<p>William D. Ruckelshaus Center Washington State University & University of Washington 901 5th Ave., Suite 2900 Seattle, WA 98164 http://ruckelshauscenter.wsu.edu/</p>

State	Program
Wyoming	Ruckelshaus Institute of Environment and Natural Resources University of Wyoming Haub School of Environment and Natural Resources 1000 E. University Ave. Laramie, WY 82071 http://www.uwyo.edu/haub/ruckelshaus-institute/