BIA Branch of Tribal Climate Resilience Regional Assessment Report

Report produced by the Bureau of Indian Affairs Branch of Tribal Climate Resilience and the United States Geological Survey National Climate Adaptation Science Center

Respondent feedback is based on the personal experiences of current and past Tribal employees who have worked on projects funded by the BIA Branch of Tribal Climate Resilience (TCR). This feedback is only a sample as not all awardee viewpoints were captured and not all BIA regions, or Tribes therein, were selected for this pilot assessment.

This report is released to inform interested parties of BIA TCR projects and to encourage discussion. The views expressed are those of the Tribal project officers and not necessarily those of the U.S. Bureau of Indian Affairs, or the respective Tribe(s) awarded. Tribal project officers were hired on by the Tribes during various stages of the BIA TCR funding process; therefore, some interviewees were not involved in the application or awarding process and were later included during project initiation and implementation. It is also important to note that these interviewees do not speak on behalf of their Tribe nor the department they work within, though they do provide valuable perspective into the status of climate efforts in these communities as well as the effectiveness of BIA TCR in supporting these climate resilience efforts.

The COVID-19 pandemic as well as climate disasters have created significant barriers in climate adaptation planning and implementation efforts, broadly speaking. The BIA Branch of Tribal Climate Resilience continued to provide maximum flexibility for COVID-19 and climate disaster related project delays by allowing Tribes to request no cost extensions to Period of Performance.

Table of Contents

Introduction & History

The Bureau of Indian Affairs (BIA) Branch of Tribal Climate Resilience (TCR) was established in 2011 to enable Tribal and BIA Office of Trust Services Programs to incorporate climate considerations into their programs' planning and decision-making (Office of Trust Services, n.d.). The TCR's purpose is to fulfill trust responsibility to Federally recognized Tribal Nations by supporting and building Tribal capacity for climate resilience efforts through both technical and financial assistance. That financial assistance includes the TCR Annual Awards Program in which over 700 awards have been distributed totaling more than $74 million as of September 24th, 2021. The TCR has funded over 250 adaptation plans and vulnerability and risk assessments over the last 11 years. Tribes can leverage TCR programs to further support their existing operations, program planning, project design, as well as incorporate Indigenous and Traditional Knowledges into their management and protection of Trust resources and Tribal economies. When funded, Tribes' capacity for climate resiliency increases. Tribal Climate Resilience technical assistance also benefits non-awardees as these Tribes pursue climate adaptation plans or advanced technical training. The deliverables of funded Tribal projects can also benefit Tribal Nations facing similar climate impacts. Individual plans will serve as templates as other Tribes embark on similar planning journeys and future Tribal adaptation planning workshops will highlight the successes and challenges of these Tribes.

Due to the availability of TCR awards and other funding, many Tribes now have climate adaptation plans. Thus, both TCR and Tribes are at a new stage compared to a decade ago and have new needs related to implementation of climate adaptation and resiliency projects. This assessment aims to evaluate the effectiveness of TCR's Annual Awards Program and technical assistance and incorporate direct Tribal input to meet Tribal needs and priorities. To provide more effective assistance to Tribal communities moving forward; BIA staff, in partnership with staff from the United States Geological Survey (USGS), interviewed Tribal employees to gather their feedback on their approaches to climate adaptation as well as their experiences with TCR services.

Annual Awards Program

The TCR Branch's cornerstone Annual Awards Program provides financial support for Federally recognized Tribal Nations and authorized Tribal organizations through a competitive funding opportunity to build Tribal resilience capacity. Alongside climate adaptation, the Annual Awards Program also offers ocean and coastal management opportunities, such as support for marine spatial planning, regional ocean partnerships, and other important efforts (Annual Awards Program, n.d.).

Over the years, TCR has utilized several awards mechanisms to fund Tribal projects, planning, training, and travel through the Annual Awards Program. The 1975 Indian Self-Determination and Education Assistance Act (ISDEAA), Public Law 93-638 (638 contracts), gave Indian Tribes the authority to contract with the Federal government to operate programs serving their Tribal members and other eligible persons. Other funding mechanisms TCR has used are Grant Solutions and PRISM through the financial assistance management systems to manage grants and cooperative agreements through an entire award cycle. The changing method for the Annual Award Program was intended to better meet the needs of Tribes in the past as stated through informal feedback and remains a notable topic in this report. Several agencies within the government use the 638-funding mechanism to provide funds for Tribal programs. (Public Law 93-638, 1996)

The TCR Branch reinforces intergenerational opportunities for internships and youth engagement in the Annual Awards Program. Additionally, TCR partners with the U.S. Fish and Wildlife Service to support Native youth in an annual congress for high school and college-aged students, called the Native Youth Climate Adaptation Leadership Congress. Lastly, TCR hosts a Tribal Student Photo and Visual Arts Contest each season for K-12 youth. These youth opportunities, as well as additional categories of funding for the current fiscal year are available on the TCR website. (Annual Awards Program, n.d.)

Tribal Climate Resilience Liaisons

In addition to the Annual Awards Program, TCR funds a network of multi-regional Tribal Climate Resilience Liaisons to assist Tribes in addressing science-based needs available through the national and regional Climate Adaption Science Centers (CASC), to improve climate adaptation planning efforts. This may include offering technical assistance to Federally recognized Tribes serving as extension agents, facilitating research, linking Tribal needs to available resources, and coordinating trainings, workshops, forums, and exchanges. Liaisons are supported through TCR's unique partnership with regional Tribal organizations that employ the Liaisons. Currently, there are 12 Liaisons spanning across seven liaison regions, and the network continues to grow in capacity (Tribal Resilience Liaisons, n.d.)

Each Liaison has a unique partnership which links them to Tribal resources. Many of the Liaisons engage with Tribal Nations through BIA partnerships with non-profit Tribal organizations, including the American Indian Higher Education Consortium (AIHEC), United South & Eastern Tribes, Inc. (USET), Affiliated Tribes of Northwest Indians (ATNI), Native American Fish and Wildlife Society (NAFWS), College of the Menominee Sustainable Development Institute (CMN SDI), and Great Plains Tribal Water Alliance (GPTWA). (AIHEC, n.d.; Great Plains Tribal Water Alliance, n.d.; Jones, 2022; NAFWS, 2021; Our Work and Partnerships, n.d.; Sustainable Development Institute, n.d.; USET, 2022).

Assessment Approach

At the start of 2022, the assessment team (team) began identifying awards from fiscal years (FY) 2015-2019 in the BIA's Northwest, Pacific, Western, and Southwest regions. These regions were chosen due to BIA staff proximity, the high number of TCR awards funded in these regions, the capacity of Tribes and TCR staff, and the overlap of ancestral lands over these regions which often are not fully encompassed

by the BIA's drawn borders. The TCR Annual Awards map (Figure 1) is an interactive tool available on the TCR website which shows the BIA regions. Each star represents Tribal Nations that applied for and have been awarded funding through the TCR Annual Awards Program. In FY 2022, TCR had 13 funding categories totaling over $6.2 million available to Tribes. Within these funding categories, awards from Category 2: Adaptation Planning, and Category 4: Ocean and Coastal Management Planning, were chosen. A total of 16 Tribes participated in this assessment.

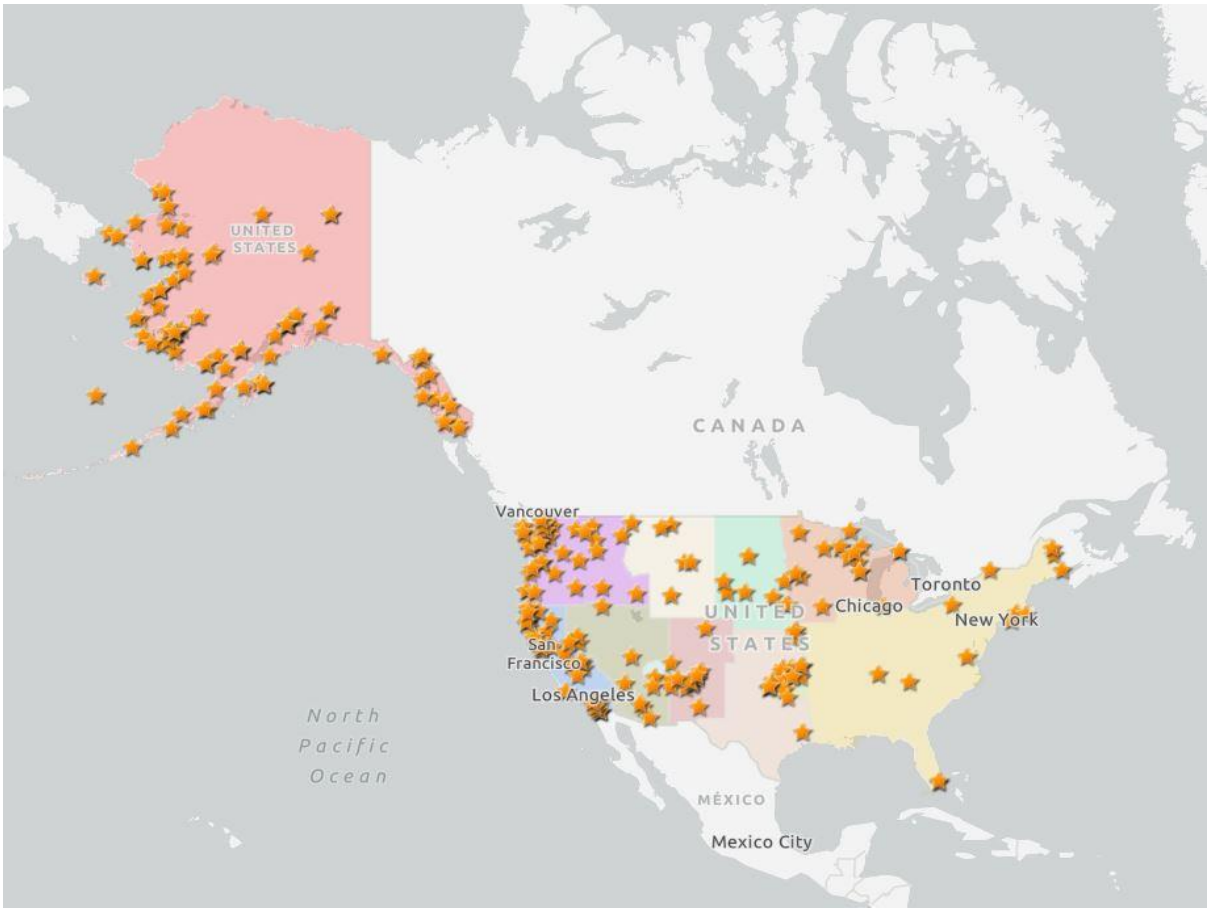

Figure 1: The TCR Awards Map (above) is an interactive map depicting all awards granted since 2011. Each star represents an award within the color-coded BIA regions. This tool is available on the TCR Website (Tribal Climate Resilience Program Awards Map, n.d.).

After identifying the awarded projects, the TCR team created interview questions, both broad and specific, centering on climate resiliency, adaptation planning and TCR services, namely the Annual Awards Program. The first few questions pertained to Tribal climate resiliency and what an ideal future for climate resiliency looks like. The assessment team then asked how Tribes measure climate resiliency including what projects are underway and what objectives within adaptation plans are being implemented on Tribal lands. The team also asked about the utility of Tribal climate adaptation plans and if there were barriers associated with implementation. Questions also asked about how plans supported Tribal decision making, Tribal climate preparedness and what successes Tribes have had since developing their adaptation plans. Some Tribes spoke only to the category 2 or category 4 TCR award identified by the team, whereas others spoke to awards in additional categories or even climate efforts

that were furthered by funding from other sources. The team created a section of questions specific to the Annual Awards Program to elicit suggestions and concerns from Tribes to ensure future changes made to the TCR program are based on the direct needs of Tribes.

Once these questions were created, the team then reached out to the BIA regional Points of Contact (POC) in the BIA Pacific, Western and Southwest regions to connect with Tribes. This approach allowed the team to build off previous connections as there are newer staff at TCR and the team wanted to continue to grow pre-existing as well as facilitate new relations with Tribes. BIA regional POCs have also worked with most of these Tribes in the past during the TCR Annual Award Program and provide additional capacity to the TCR branch. This was not possible in the Northwest due to staff turnover at the Northwest Regional Office, so email inquiries to schedule interviews were sent directly from TCR. After an introduction to the assessment with the BIA POC, the team contacted each Tribe asking to schedule interviews for an informal assessment based on their awards. In preparation for interviews, the team reviewed available resources in advance of conversations, which may have included TCR award proposals, associated climate adaptation plans and other such resources that Tribes have made available to the public.

The assessment team then conducted interviews from April to August 2022. During this process, interviews were not recorded, sensitive and sacred knowledge was not shared, and Tribes were left anonymous so they could speak candidly about their experiences. Figure 2 shows the abbreviations the team used to identify each Tribal response. The team continued this anonymity throughout the reporting process. The team also presented at the National Tribal and Indigenous Climate Conference (NTICC) on some of the key points of early respondents. Finally, a summary of each Tribe's feedback is organized by region within this report. This report aims to summarize guidance from participating Tribes to inform future changes to BIA TCR. It can also be used by Tribal leadership and staff, Federal and state agency staff, Tribal organizations, and the public to better understand Tribal needs and priorities for climate resiliency funding and technical assistance.

BIA Northwest Region Tribe 1	NWT1
BIA Northwest Region Tribe 2	NWT2
BIA Northwest Region Tribe 3	NWT3
BIA Northwest Region Tribe 4	NWT4
BIA Northwest Region Tribe 5	NWT5
BIA Northwest Region Tribe 6	NWT6
BIA Northwest Region Tribe 7	NWT7
BIA Northwest Region Tribe 8	NWT8
BIA Pacific Region Tribe 1	PRT1
BIA Pacific Region Tribe 2	PRT2
BIA Pacific Region Tribe 3	PRT3
BIA Southwestern Region Tribe 1	SWT1
BIA Southwestern Region Tribe 2	SWT2
BIA Southwestern Region Tribe 3	SWT3
BIA Western Region Tribe 1	WRT1
BIA Western Region Tribe 2	WRT2

Figure 2: Anonymous coding labels for all Tribes interviewed for the Assessment

BIA NORTHWEST REGION

NWT1 Summary

For this Tribe, climate resilience today looks like building resilience around First Foods and building a resilient landscape for Tribally significant species. For the planning outcomes of the TCR award, an ideal future in five to ten years from now for the Tribe would look like healthier ecosystems, more habitat connectivity, and abundant native species and Tribally significant species. The Tribe would like to see generational access to these species as needed for cultural purposes. Like other regions, they also considered broad community involvement and strong partnerships as a means of achieving resiliency.

The sagebrush step ecosystem is facing the threat of harmful invasive species fueled by climate change. Recovery of this area requires creating planning contingencies rather than simply mitigating climate impacts. The Tribe has achieved significant planning steps for ecosystem restoration. The Tribe is becoming more resilient by addressing habitat diversity and fragmentation as well as anthropogenic change through the lens of climate change.

Currently, the Tribe is engaged in numerous on-the-ground projects to advance climate resiliency and prepare for future impacts. Projects include restoring habitat to account for First Food species, establishing community gardens, restoring flood plains and streams to improve hydrological connectivity, recycling programs, monitoring air quality, and co-managing lands to support Tribal sovereignty. In addition, the Tribe is aiming to protect and conserve fish and wildlife populations and planning for species reintroduction efforts. The Tribe is mitigating habitat loss and increasing habitat connectivity to prevent the loss of resources important for the community's health and to prepare for future and compounding impacts, including climate change. For the Tribe's ongoing climate projects, resiliency metrics include the number of wildlife structures implemented, number of acres restored, number of animals harvested, and number of animal-vehicle collisions.

The community has faced and is encountering various challenges and barriers to informing their decision making and implementing their climate adaptation plan. Additional funds and greater staff capacity are needed to implement their adaptation plan more readily. The Tribe is seeking additional community buy-in through town hall meetings and needs more support from private landowners to implement projects. The amount of regulatory work required to implement projects presents new challenges. Staff capacity was the primary challenge as the Tribe created their adaptation plan. The respondent shared it would be helpful to have BIA TCR-specific contacts to address questions related to TCR awards as BIA's Regional Liaisons may not have the appropriate insights.

There were successes as the plan was developed. Namely, there was significant community and stakeholder buy-in. Agency personnel and NGOs were directly involved in the plan's creation and goal setting, and there was significant interest from the community and representation from local groups, local elected officials, and local landowners. The Tribe adapted meetings in response to COVID-19 relatively well, and attendees were still able to provide input on the plan through various methods.

The TCR award led to the creation of an adaptation plan. The Tribe has been seeking funding to implement their plan. Moving forward, the intent is for a coalition of groups to implement the plan and apply recommendations from the plan onto the landscape. The Tribe seeks to implement the plan with post-implementation monitoring and adaptive management as needed.

NWT2 Summary

To NWT2, climate resiliency looks like managing for seven generations and beyond including youth engagement in cultural practices and continuing intergenerational traditional practices and ways of knowing. Like NWT1, they also prioritize building resilience around First Foods and building a resilient seascape for those Tribally significant species. This Tribe also spoke heavily on Tribal infrastructure and enterprises that are adapted to, relocated from, or protected from severe climate impacts. This conversation largely centered around Tribal fisheries. The respondents specifically noted that climate resiliency looks like a future with viable, sustainable salmon populations.

The Tribe is already experiencing climate impacts, but some impacts are being managed well due to their adaptation plan and projects being implemented. The Tribe is experiencing sea level rise, bluff erosion and increasingly intense storms and rainfall. Sea level rise and associated bluff erosion is being managed well, and families and Tribal housing on the bluffs are being re-located to safer areas. The Tribe is using BIA funding to conduct research on juvenile salmonid species related to low water oxygen levels and associated salmonid respiratory stress and increased predation rates. Furthermore, the Tribe is following up on erosion and disaster planning using ongoing data related to earthquakes, landslides, and soil quality.

In five to ten years, the Tribe envisions being climate resilient in several ways. For one, the goal is to have most homes relocated away from bluffs to safer areas. Tribal council members and teams are planning and implementing this effort. The Tribe aims to relocate its water tower to an area not under threat of landslides. The community wants to achieve resiliency for salmon and fisherman and is currently working with their casino and Tribal businesses to fund fisherman and provide processing equipment to sell locally caught fish at their hotel. Furthermore, traditional lifeways are threatened, including subsistence lifestyles and youth engagement in cultural practices. Thus, the Tribe is striving to keep their youth in the community through partnering with academic groups and state agencies to work on certificate programs for Tribal citizens to boost their higher education opportunities. When additional funding is available, the Tribe wants to address protecting shellfish, and raise clams if necessary.

The Tribe is implementing climate resiliency metrics for their Tribal seafood and fisheries enterprises. The measurements are based off their Community Economic Development Plan (CEDP) – which includes natural resources and the Tribal seafood enterprise. They're tracking traditional fishing practices and the Tribal hotel's purchases of seafood caught by Tribal members.

The respondents shared various challenges the Tribe has faced related to climate change and creating their climate adaptation plan, and what additional resources are needed to support their climate resiliency. For Tribal fishers, declines in fish and shellfish has led to more conflict with state managers and more intertribal disputes, as there's not enough fish and shellfish resources for the community to

harvest equitably. Additional funding is needed for shellfish resiliency. It has also been difficult to prepare Tribal youth adequately for climate impacts. The Tribe needs additional expertise to advise on which beaches will have the highest rates of erosion to inform relocation planning. While creating the climate adaptation plan, the biggest challenge was accounting for future population growth, as climate refugees are projected to move to the area under more extreme climate change scenarios. Since the Tribe depends on the land for subsistence, they're trying to determine if undeveloped areas will urbanize over time. They're working with county governments and a state environmental council to acquire funding for this work.

The Tribe has experienced some successes related to their climate adaptation efforts. They can rely on the TCR awards and EPA funding for climate change impact assessments, vulnerability assessments, and adaptation plans. They're currently hiring a contractor to update those plans, with the intent to update them every three years. Their planning tools are being used by the Tribe and will be updated this year. The Tribe can utilize other agency's data on changes in snowpack and associated impacts on streams, salmon, and other resources. The contractor they worked with on their adaptation plan was incredibly helpful. While the respondents considered these to be successes, they strongly believe that the Federal government needs to do more to address climate change and support Tribal climate resilience efforts.

Looking to the future, some next steps for this Tribe to advance climate resiliency include continuing and monitoring their housing relocation efforts, preparing to examine climate impacts on shellfish, revisions to their adaptation plans, hosting additional community meetings, and working with partners on monitoring changes to mountain streamflow and temperature.

NWT3 Summary

Climate planning began at a grass roots level for this Tribe to evaluate and act on citizen concerns. This included outreach at events, online questionnaires, education, and outreach utilizing national data. Over 100 species have been listed alongside human health (smoke/heat), facilities and infrastructure, and how culture will be impacted by climate change. With this information, the Tribe applied for and received a TCR award to create a Coastal Vulnerability Assessment. Within the Tribal territory, they have modeled sea level rise and shellfish impacts as well as mapped habitats where cultural use is frequent on public and quasi-public lands. They are working with partners to consider those impacts when making management decisions. They have also partnered with groups like the state's Department of Natural Resources for access to areas for education, harvest, and other uses.

Like NWT2, NWT3 reported that climate resiliency looks like youth engagement in cultural practices and continuing intergenerational traditional practices and ways of knowing. Like the first two Tribal respondents, they also work to build resilience around First Foods and build a resilient landscape and/or seascape for those Tribally significant species. This Tribe also shared that broad community involvement and strong partnerships have been identified as a means of resiliency. NWT3's human services focus on human health where natural resources focus on current and future use including First Foods and cultural resources though these two areas often go hand in hand. The goal five to ten years from now is to make resources accessible to present and future generations.
The respondent shared that they are developing one-to-five-page concepts to reduce the Tribe's carbon footprint, preparing for high heat days and other climate impacts, and creating a vetted list of shovel

ready projects while applying for implementation funds. They are increasing their fleet of electric vehicles and have funding for solar to offset energy cost and reduce reliance on fossil fuels. Awareness and access of other state lands is growing. The Tribe is also developing materials for safety on high smoke level days. Soon, they hope to offer filters for folks in their homes during fire season. Their planning department is developing a facilities plan that includes energy use and climate change for retrofitting and building new structures. NWT3 recently completed a Hazard Mitigation Plan through FEMA. Unfortunately, FEMA guidelines were too specific to incorporate climate directly, so the Tribe created an addendum to include sea level rise, heat dome effects, and climate impacts on cultural sites and more. The Tribe has also discussed declaring a climate emergency to focus additional resources on climate resiliency planning.

Metrics for NWT3's Coastal Vulnerability Assessment and other climate efforts include the creation of plans, resolutions, assessments, and other documents that guide adaptation planning. One of the deliverables from their Climate Vulnerability Assessment is a GIS sea level rise tool which has been used to analyze coastal infrastructure. In this way, the Tribe is also contributing tools and resources to shared climate knowledge and management planning within their geographic area. This online resource allows folks to input their specific area of concern and doesn't save those data with the intent to keep data safe. They continue to update the tool as new science becomes available, such as the IPCC sea level rise estimates. Additional metrics include solar output for electricity and hot water at the Tribe's RV Park, on small rooftops, and on the laundry room. Solar is sold back to the grid at a higher rate than the amount used. They are tracking energy use comparisons over time and a contractor is helping develop additional ideas about further reducing energy use. The Tribe seeks to further the quantifiable data of their assessment and energy independence efforts.

To advance climate resiliency, the Tribe is increasing their electric fleet and adding solar infrastructure to charge the fleet. They received a small grant from the Department of Energy (DOE) which funded a part-time employee on the tail end of the Obama administration (Department of Energy, n.d.). The projects they worked on during this time were based on their TCR funded Adaptation Plan. During this political transition, DOE reached out to change the language from climate change to sea level rise and other related issues. The Tribe did not state whether this has created any specific issues. However, when looking back on previous Tribal efforts, it is important to recognize this coded language and understand that climate change has been at the center of their planning for some time. NWT3 has also done research on sea level rise, climate impacts on kelp forests, (cultural and habitat keystone) and moved to land-based plant species management planning, all while building off past projects.

Many challenges have been faced by the Tribe, largely due to the immediate threat of sea level rise and other climate impacts. For example, the RV Park is waterfront property and is in danger of sea level rise. They are considering managed retreat from lower sites and have sewage and electrical infrastructure that would have to be re-located before the water comes in. There is serious concern about the time frame of such efforts, but the community recognizes that it's an immediate issue. They have had to pump sea water to a small nearby city to mitigate impacts. The town understands the immediate need as well, though there are still times to overcome disagreements in management approaches. An effort to address the immediate threat of sea level rise was the Tribe's beach restoration project which elevated the area a bit and buys the community some time. This project also gives clams a place to migrate. Like all Tribal respondents, NWT3 finds staff capacity constantly stretched thin. They also find it

nerve racking to keep folks employed if they need to replace funding for staff every year. If expanding capacity, there is concern that as the department grows, it may impact other Tribal departments. Implementation funding has been a challenge too. The Tribe is tapping into infrastructure funding for solar and other efforts as TCR funding has been used mainly for planning efforts. Implementation funding requires shovel ready projects, but sometimes there is a gap between planning and implementation that creates an additional obstacle to addressing climate concerns.

In conclusion, the initial funded planning effort has identified several directions of subsequent planning and funding to pursue. NWT3's sea level rise tool is helping make decisions on land acquisition. There is immediate risk to known cultural sites in island areas as erosion is increasing. The reliability of funding and ability to build on the initial project and keep momentum going over the years has contributed to the success of this Tribe's efforts. These plans and projects center around Tribal citizen participation – Elders, young people, and everyone in between – who offer invaluable knowledge and dedicate their time to this cause. Likewise, building relationships in the community and local area as well as within natural resources spaces and Intercultural Departments contributes to their climate resilience successes.

Tribal-identified next steps by NWT3 include bringing on a part-time archeologist to do assessments on at-risk coastal sites and create a monitoring plan with those data. By doing this, the Tribe can guide future restoration efforts and consider spiritual work necessities. If funded in the future, a monitoring plan will be part of the goal to evaluate success over time. Currently, the Tribe performs occasional check ins for areas of concern.

NWT4 Summary

This Tribe received TCR funding for a long-term Climate and Phenology Study where they have begun to collect long-term monitoring data to measure impacts on timing and distribution of species to determine what adaptive changes are, and will be, required in a changing climate. The respondent summarized, "If we can monitor what the [identified species] is doing in terms of ripening, we can be more proactive in protecting it in the future." Currently, there's not a lot of background data on the phenology of this culturally significant species, so in five to ten years from now, this Tribe aims to close this data gap. Contributing to overall species data sets alongside researchers across the region will inform modeling and climate actions for the Tribe, their partners, and other natural resource managers in the region. The respondent states that they are becoming more climate resilient since they're starting to have these conversations with the board of trustees, executive leadership, and general council (Tribal members). This indicates that they are making management decisions for their First Foods and services for Tribal government despite the changing climate.

A related, non-TCR funded, project of the Tribe focuses on pollinator presence, access, and type. They have contracted an entomologist to determine which pollinators are utilizing the plant species identified in the TCR-funded project and how the community can protect them. The data identify largely ground nesting bees, which are negatively impacted by the invasive grasses. This further supports the need for other management strategies and shows that, "all of these issues spider web together so the data is addressing many different areas." Because annual invasive grasses are one of the largest issues facing this identified species, the Tribe is having nurseries collect seeds from native plants and First Food species to reseed disturbed land areas. Reducing the seed load when planting gives native species a

better chance in species competition. This creates healthier ungulate habitat too. A multiple method approach of herbicides, mowing, grazing, and revegetation is utilized to give the species the best possible chance and improve the landscape for other culturally significant vegetation and fauna. They are also considering assisting in species relocation to ensure the survival of this cultural species and availability and access of it for cultural use by future generations. To better support the health of the landscape, the Tribal farming enterprise is working on more regenerative agriculture, alternating cover crops and cover fields. They will require several more years of data from this study before it can inform management decisions. In addition to the Tribe's TCR funded Climate and Phenology Study, NWT4 is working on alternative energy programs (solar, geothermal) through their environmental sciences program.

Several metrics are used in this project including the number of growing degree days which has the greatest impact on achieving pheno-phases. This is how early the flowers bloom, the berries ripen, and the end of the harvest season. NWT4 is conducting soil temperature and soil moisture monitoring in conjunction with the timeline of pheno-phases. The Tribe is also collecting several weather parameters through weather stations which has informed day to day field operations such as site access for their studies and they believe they can be used for additional purposes. Due to climate change, the timing of Tribe's cultural celebrations centering these Tribally significant species continues to be earlier and earlier in the year. This cuts into the collection time of other First Foods. This is a significant issue as there are already many barriers for Tribal members in First Foods collection and climate change is exacerbating those barriers.

The most significant challenges during this project have been facing the COVID-19 pandemic as well as climate emergencies. The pandemic caused up to two years of delay for multiple climate-focused efforts, even when continuing studies in the field while wearing masks and other personal protective equipment. In addition to the pandemic, weather station installation was delayed due to the danger of fire season in the summer months which pushed the timeline back to fall and winter installation. This posed its own challenges. There was also little instruction on the use of equipment so there was significant time spent simply learning how to use it before reliable data could be collected. These weather stations are spread over a large radius, so data are now collected by computers on site to minimize the need to drive approximately two hours to each location (dedicating entire days). Another barrier is land ownership on the selected study sites and ensuring there are no negative impacts to other cultural resources and that it doesn't challenge Tribal values to access those areas. This takes significant time and planning with already stretched capacity due to staff turnover and knowledge gaps. NWT4 received funding in 2015 for a Climate Vulnerability Assessment as well as 2018 funding to create a Climate Adaptation Plan, but they are still waiting for internal Tribal approval on this effort and cannot build on the adaptation plan yet for this or other relevant projects. This is proving to be a barrier as well.

Moving forward with this study, NWT4 will continue to collect data and begin data development and analysis. They will also seek research partners who would utilize data that's being collected. The Tribe plans to apply for more TCR funding to hire sub-contractors or work with academics to extrapolate data when there is a sufficient data pool. This would include hiring a subcontractor or partnering with other researchers for a quality check of their collected data. They also aim to put a data sharing agreement in place for the next round of funding and partnership building. Whether through TCR, the U.S. Forest Service, or other funding sources, NWT4 hopes to sponsor summer interns to fill their capacity gaps and

provide resume building opportunities to young community members. If possible, they hope to increase staff capacity through permanent positions.

NWT5 Summary

The Tribe's biggest hurdle is communication and increasing understanding within the community of the scale of climatic changes and timing. Just because one year looks one way, doesn't mean the next will be the same. The overall trends show us how things will change over time. Climate resiliency therefore would mean having that increased understanding for Tribal members, council, and the broader community. This is key to implementing on the ground action to support climate adaptation and increased resiliency efforts. The Tribe's planning project includes aspects of floodplain reconnection and changing forestry management approaches to adapt to climate change and tap into the potential impacts on hydrology and water quality. In five to ten years from now, NWT5 aims to have an engaged and active community that is beginning to come to consensus around the most important climate adaptation steps they can take. They are currently in the beginning efforts for outreach and communication. The Tribe's TCR funded planning project includes aspects of floodplain reconnection and changing forestry management approaches to adapt to climate change and tap into the potential impacts on hydrology and water quality. The respondent remarked, "The assessment included detailed, high-resolution information about what the future may hold for the watershed under a number of different climate scenarios."

Currently, metrics are largely qualitative rather than quantitative to track community understanding and involvement in climate resilience efforts. Quantitative measurements include the creation of two peer-reviewed publications from initial projects as well as the development and linking of two mathematical models for adaptation measures and strategies in their local watershed. This information is being used to analyze what near-term and long-term adaptation measures and strategies will look like. The Tribe is now sharing this information, working with other resource managers, and acting on these assessments. They noted that folks are perceptive in integrating this work into their efforts across partner groups as well as somewhat perceptive across Tribal departments.

Barriers include institutional momentum. Because things were planned long ago, and climate aspects were not necessarily a concern then, there will have to be re-evaluation, especially regarding commerce. Another barrier is that the Tribe doesn't have decision making authority over, or access to, all ancestral lands. This is a significant hurdle for projects. Without jurisdiction, they rely on communications, outreach, and partnership building. There were also logistical challenges to this project as only a small number of people can create and understand the mathematical models needed for this assessment. Finding those people was expected to be a challenge but luckily, they had the right connections to get started. Staff turnover, capacity, and the COVID-19 pandemic all caused delays and other obstacles affected the effort.

Factors that contribute to the success of this project include the support of Tribal council, the team of Tribal staff partnering on this project, building partnerships, and funding largely from TCR but also from other programs.

NWT6 Summary

This coastal community is building a TCR funded Sea Level Response Plan alongside their other climate resilience efforts. The respondent reported that the Tribe is aware of all risks they may encounter now up to the end of the 22nd century with current models. With that information, they can now plan for the future. This Tribe is always looking ahead, "The world is not going to end in 2100, we need to know what our shorelines, our Tribe will look like during that time." Like others, NWT6 stated that climate resiliency looks like Tribal sovereignty and self-determination.

They are currently acting on sea level rise and resiliency on Tribal treaty rights with the recommendations from the Sea Level Rise Response Plan. Their biggest concern is that the Tribe will see significant loss around First Foods, like shellfish, as the waters rise. NWT6 has vested interests at risk, including enterprises centering on seafoods, sea life nurseries and tidelands managed by the Tribe with nearly exclusive access. The respondent reflected on sea-level rise, "About 20% of Tribal members earn their living on beaches so economics and ways of living will be impacted." Around 20-30% of the county they are located within works in aquaculture so it's not only the Tribal economy that will feel the effects. Before the focus on sea level rise, the Tribe began studying harmful algal blooms, shifted to general water quality (nitrate loading from human impacts) and then ocean acidification and mitigation management in addition to aquaculture. They spent two years on sea level rise, specifically species utilization of the near-shore area, due to the economic interest in shellfish and forage fish. The forage fish use the area for spawning, feeding, protection and are also a source of sustenance for other species. NWT6 has several recent projects looking at shellfish - how to utilize shellfish and impacts on water quality as well as an actionable pilot project for a clam garden study. These efforts all help with adapting to sea level rise and identify habitat use and availability for nearshore forage fish. From 2014-2023, the Tribe's youth engagement projects center around these topics as well. Youth conduct summer surveys around freshwater mussel monitoring as freshwater mussels are endangered and there's not a lot known about them. They're also climate indicators due to how they spawn and their selectiveness on water quality. These species live over one hundred years so shell dating tells researchers a lot about the region. Including this effort, NWT6 has conducted four climate-focused youth projects.

With recommendations from the Sea Level Response Plan, the Tribe seeks to acquire lands that are higher or require less armoring of shorelines. Where that may not be possible, armoring can reduce impacts. Soft armoring would look like placing large woody debris, bark, and other natural materials along the shoreline. The Response Plan also recommends the purchase of estuaries as a form of climate resiliency to allow inundation to occur naturally. Species can move up if there is favorable habitat more easily accessible in estuarian habitat. The Tribe is building above the one-hundred-year floodplain and focusing on the protection of infrastructure rather than purchase. They plan to continue conversations with Tribal council about land acquisition considerations relating to climate.

Like NWT3, metrics include the creation of plans, resolutions, assessments, and other documents that guide adaptation planning. Alongside the Response Plan, NWT6 has a sea level rise chapter in their Climate Adaptation Plan and an Ocean Acidification Plan. Drought, wildfire, and air quality are all concerns for the Tribe and are represented as extensions of their adaptation plan too. The plan has distributed chapters, but it has not been publicized in final format. The plan must be finalized to move forward on action items. The climate assessment supports their sea-level rise study where their Tribal hydrologist observes impacts moving onto creeks and streams. They are also recording sea-level impacts

on infrastructure including the community's day care center, hospital and housing which puts into consideration future access and management of these areas. Additionally, they are preparing for managed retreat, relocation, or protect in place. NWT6 is also having conversations with Tribal council and noting the overall awareness of legislation and regulations moving down the line that impacts Tribes such as America the Beautiful Initiative and the Climate Commitment Act (America the Beautiful, 2022; Climate Commitment Act, n.d.). This respondent reflected, "A lot of Tribes or small organizations may think they need a climate adaptation plan before taking any action, but sometimes there are steps to take along the way during development." Like how they incorporate many issues into the one plan.

To better convey findings and recommendations around climate mitigation and adaptation strategies, NWT6 relies on their interactive StoryMap, "because nobody wants to read our 50-page report." The success of the Sea Level Rise Response Plan is attributed to this tool which has been across Indian Country and may serve as a model to other science communicators. Tribal council members credit the department with this effort due to uniqueness and the way it reaches across age and other demographics within the Tribe and beyond. The Tribe's 2018-2020 sea-level rise efforts were brought across the country to Washington D.C. where they shared postcards that visualized the 2020 versus 2100 shoreline impacts on shellfish. This made clear the 41%+ change in shellfish habitat over the years and included a link to their StoryMap to provide a more in-depth perspective to state senators. This level of outreach has led to a lasting impact on the sea level rise work the Tribe is doing and has furthered awareness of sea level rise impacts across Indian Country.

The report is not currently a part of their strategic plan, but they use it to make recommendations to Tribal council and hope that it will further inform Tribal decision making as a part of Tribal code or issuing resolutions in the future. They plan to finalize their Climate Adaptation Plan before moving forward on this. NWT6 also hopes to create something relating to reducing emissions in the future but believe this will be a challenge due to the small size of the Tribe. Like all assessment respondents, capacity is the Tribe's most significant barrier. As they put it, "There is no time to develop a regulation or code when also doing research or grants work". This capacity barrier was noted by all respondents of this assessment. Despite these barriers, their program was fully funded in 2022. They noted that TCR funding helps to advocate for additional climate funds down the line.

NWT7 Summary

This Tribe has identified climate impacts in many Tribal program areas including planning and community development, health, and natural resources. They organized a TCR funded project to address hazards such as wildfire and flooding with specific focus on the operation of plans to predict what emergency response will look like in their community. To NWT7, climate resiliency looks like building capacity and training Tribal staff for these response rolls. Their response plan is being built out and complements related projects done by their natural resource department and the FEMA natural hazard mitigation plan. Their next steps include finishing and implementing the plan as well as training folks on it to increase community preparedness.

Barriers including capacity restraints and COVID delays were resounded by NWT7 as well as across all Tribal respondents in this TCR Assessment. However, this respondent uniquely shared, "An

unanticipated benefit of COVID is that we've become more familiar with working with other agencies" as NWT7 has cross-trained staff to fill other roles while facing significant capacity restraints.

NWT8 Summary

According to the NWT8 respondent, "Cultural survival is central to resilience for the Tribe, but they also want economic survival. The Tribe is determined to protect wild species that matter for subsistence, spirituality, and economic vitality to continue. In fact, it is their responsibility to reciprocate the gifts that nature has bestowed upon them." Their identified TCR funded project focuses on wildlife movement where they aim to create a framework for monitoring traditional plants and expand on limited existing data on prairie species. "There hasn't been a wildlife/cultural/traditional plant collaboration before," the respondent affirmed while speaking broadly to the Tribe's climate efforts. The Tribe is now monitoring traditional plants and working with new partners to raise awareness and access about the needs of traditional gatherers, the need for better data for adaptive management, and the climate related threats and potential management options for traditional plants. The Tribe has been involved in wildlife and fish recovery and protection efforts for decades. However, there is a data, funding, and capacity gap in protecting traditional foods and their habitats, and the potential to significantly improve wildlife passage and gene flow, and corridors within their Indian Claims Commission (ICC). The respondent reflected, "We don't have specific projections for many species of culturally significant plants, but they will all be impacted by climate change. They will shift up slope, community members will have to adjust gathering practices, and some plants will likely require help moving to more suitable habitats, active management, and hydrological restoration to persist. Most of these plants occur in wetlands and riparian areas, many in endangered prairie ecosystems, and since wetlands contain more carbon and are the most important habitats for biological diversity in the West, and since grasslands, prairies, and old-growth timber stands are endangered, have high species richness, and are the second and third most important carbon sinks in this region, early efforts are focused on restoring, protecting, and increasing connectivity of these habitats. Resiliency looks like people having the opportunity to gather, knowing where to gather, harvestable populations of fish/wildlife/plants, and the ability of the landscape to have enough diversity and refugia within it to support species on the move."

The Tribe is also concerned about forest fires, floods, and other infrastructure issues. Invasion of weeds and habitat conversion to industrial agriculture is impacting hydrology, biodiversity, and more in their area. Water pollution is present as well due to herbicides, agricultural and industrial runoff, and land use changes. There is concern around that impact on culturally significant species. NWT8 also has deep concern around rising water temperatures and habitat destruction which increasingly devastates fisheries. In the next five to ten years, the Tribe aims to be energy independent with their own production and storage to move away from regional reliance on hydropower which has decimated fish populations. Although NWT8 has no species-specific goals for wildlife that require wetlands or riparian areas, they applied for FY22 funding from a regional nonprofit to investigate the value of sequestering carbon in wetlands as they hold more carbon acre to acre than any other habitat. This would help store water which is critical given reduced snowpack over time and would also improve the groundwater recharge rate which is impacted by current agricultural practices.

Centering forestry and fire, the Tribe's Forest Plan includes climate related practices to reduce fuels, increase snow retention and overall create healthier forests. They noted that the Forest Service lands around the Tribe are not being managed that way. In addition, the Tribe shared that they received funding for restoration specific to water quality and climate resilience in a recently burned area. NWT8

also plans to work on community infrastructure to restore culverts, bridges, and other structures as well as turn community centers into air quality centers to escape extreme heat and provide clean air when facing wildfire smoke.

Like most Tribes interviewed, NWT8 shared that they do not have formal metrics and milestones, but that they track climate resiliency through their investments (time and money) in climate resilience projects. They also measure climate resiliency through education offered to Tribal councilmembers and staff around these topics and the establishment of new climate-focused jobs, departments, and subcommittees such as their climate change and energy subcommittee. They noted that having a climate change coordinator to find opportunities and make connections helped bring their TCR funded project about. Paired with other funding, this project has expanded to include educational camps to teach youth about their culture and climate adaptation planning. NWT8 will continue to apply for TCR funding in the future, but they also reach beyond the BIA and don't solely rely on Federal funding. Private donors are reaching out and providing funding based on their past successes. Securing long-term funding is crucial to expand the Tribe's capacity to further their climate efforts.

Regarding the identified TCR award, the Tribe has drafted a vulnerability assessment and are in the process of writing a climate change adaptation plan with recently awarded funds with the full support and involvement of Tribal Council. They want to do more management on the ground and there is a need for habitat restoration, weed management, and corridor building. They are also implementing education for gatherers and monitoring traditional plants. The Tribe has produced two StoryMaps, some short films, and a website that are publicly available, and they have gathered partners to meet face to face and discuss the vision for further implementation of habitat connection. This is already informing some decision making within the Tribal government as well as informing land manager decision making processes.

Some factors that contribute to the success of this Tribe's efforts include the determination of Tribal staff as well as skilled partners. Choosing those partners wisely and building strong ties is invaluable. Climate denial is still huge in the area, so coordination with other agencies is relatively difficult in comparison to states with large, well-funded, and politically supported climate change planning efforts. Focusing on things that impact people such as healthy soil, floods, fire, and energy independence - without strictly saying "climate" with partners helps make things relevant and relatable. NWT8 is leading the charge in climate planning for their area as there is no state-wide climate planning and very few cities within the state are engaged in climate-specific planning, although, some of these entities are responding to changing conditions in ways that will build resilience. In addition, regional and local universities are also leading the charge on climate related research and planning, and the Tribe is involved in these efforts. However, this can also be a challenge in gaining momentum for change and getting local groups on board with climate efforts.

BIA PACIFIC REGION

PRT1 Summary

For this Tribe, climate resiliency means speaking with Tribal leaders, scientists, and the greater community to collaboratively co-develop and envision what the Tribe and community would like to see in the future. The aim is to have an informed Tribal community that understands their regional climate-

related challenges, including increasingly severe and frequent wildfires, drought, and extreme heat events. To exercise their Tribal sovereignty, the Tribe is working with other regional Tribes and organizations on climate adaptation efforts and plans to develop their energy independence through developing power microgrids and battery back-up systems, ideally within the next ten years, to be prepared for future power outages. They intend to develop more capacity for both wildfire prevention and response, especially in light of a recent wildfire that destroyed much of their ancestral lands. This will be done through additional funding for a fire station, emergency operations center, and a disaster coordinator. Thus, they can be better prepared for future fire impacts and more climate resilient.

Additional ways the Tribe plans to become more climate resilient and self-sufficient is through better understanding its water supply and providing additional community support services in the future. The Tribe would like to improve its knowledge of the underground aquifer it relies entirely upon, as there is no external water source for the Tribe. The aim is to conduct additional studies of this aquifer to understand the current and projected future states of their water supply to become better prepared for future increasingly severe droughts. Furthermore, the Tribe aspires to provide additional support services in response to extreme events in the future. The interviewee noted that extreme weather events increase psychological strain. For example, increases in domestic violence have been documented during extreme heat events. Thus, the Tribe wants to provide additional resources for community members to be better prepared for such events and increase community resilience.

Ultimately, the goal is for the Tribe to increase its self-sufficiency and resiliency to help preserve their culture and traditions, and the plants and animals that are integral to sustaining them. Particularly, the Tribe wants to ensure there are abundant, sustainable, harvestable stocks of culturally important tree species on their lands in the future. This can be achieved through increased funding and capacity to hire additional resiliency staff and improving Tribal members' collective understanding of their resources at risk so they can come together as a community to address their shared challenges. A cohesive climate adaptation plan that is actively used and integrated across all Tribal departments is key to achieving this goal.

Thus far, the Tribe is working on multiple fronts to increase its climate resiliency. The community is building a new fire department and emergency operations center, developing a new water management and drought plan, and meeting regularly with other regional Tribes to collaborate on on-the-ground climate adaptation projects to gain different perspectives. The Tribe recently submitted a grant proposal to a regional Tribal Chairman's Association to coordinate resiliency work with other area Tribes and is engaged in educational initiatives to increase climate awareness amongst regional Tribal Nations. For instance, participating in the third southwestern Tribal climate summit. These collective efforts are advancing the greater community's resiliency.

Resiliency metrics have not been developed yet. However, the Tribe intends for its climate adaptation plan to be a living document that is continually revised and updated. The aim is to host regular meetings with Tribal members, as well as conduct regular outreach to the Tribe through distributing surveys and questionnaires to assess whether Tribal climate adaptation needs are being met. As for future metrics, the Tribe would like to measure if there are increases in water stored in the local aquifer and the number of firefighters and other emergency and disaster preparedness personnel on staff. Another possible measure of success will be if other Tribal departments incorporate climate resiliency and adaptation into their work plans so there is a community-wide and regional level effort to address

climate impacts. Overall, the community intends to assess if it's able to respond to climatic changes properly and if it achieved the goals outlined in the climate adaptation plan.

The Tribe's plan has provided a strong framework for moving the community forward, but several barriers prevent it from being fully utilized. For one, its large size has prevented the Tribe from fully using the plan and it has spent too much time "sitting on the shelf." Thus, the Tribe plans to distill the plan down to short informational sheets (one-pagers) that outline the top ten things community members can do to address and adapt to climate change. These one-pagers will be used during Tribal leadership meetings to make the plan more accessible. In addition, Tribal members hold differing opinions on the extent of and cause of climate change. Therefore, gaining buy-in from the entire community has been challenging. Limited funding and staff capacity has also prevented the plan from being fully utilized. There is a need to consistently fund staff dedicated to working on and revising the plan and implementation of projects. Tribal leadership's overall support of the plan and working with partners such as the Climate Science Alliance has helped make it successful.

PRT2 Summary

Overall, this Tribe is still determining the details behind what climate resiliency would look like for their community in the future. One resiliency objective is to continue to have resilient estuaries that support sustainable, harvestable stocks of culturally important fish species in the waterways that run through their lands. Another objective is to support healthy elk populations through addressing a disease impacting the species. In addition, the Tribe intends to relocate culturally important infrastructure that is being threatened by an eroding bluff. The community foresees implementing projects to increase water retention in the landscape and production numbers at their fish hatchery, such as retrofitting the hatchery. To better envision future climate resiliency, the Tribe needs to better understand the status of their local resources, gather baseline data, and complete a climate adaptation plan. Their challenge is gathering reliable baseline data as climatic changes are occurring. Ultimately, resiliency means ensuring resources are conserved and sustained for future generations.

The Tribe has not yet established resiliency metrics. However, possible future metrics to measure advances in climate resiliency could include measuring to see if fish counts are monitoring for increases in stream flows. To establish effective metrics, the Tribe needs to gather information and collect data to update their knowledge of their local resource base, update baselines, and identify gaps of what additional information is needed to increase future resiliency. The lack of baseline data is the most significant challenge for the community to advance resiliency efforts. Existing data gaps made it difficult for the respondents to address questions of climate resiliency and metrics. The Tribe's Council intends to address resiliency metrics in the next five to ten years.

PRT3 Summary

The Tribe views climate resiliency for their community as taking actions today to reduce their fossil fuel consumption and ensure culturally relevant species remain healthy and accessible in the future. Ensuring their health entails thinning out forest stands to reduce drought stress and wildfire risk, reducing the density of encroaching tree species to increase the survival of drought-tolerant trees, and

ensuring there's sufficient water to sustain healthy wildlife populations. Forester work crews travel in the same vehicle to reduce fuel consumption and dependence.

In five to ten years, the Tribe would like to see various actions taken to improve their climate resiliency to protect its natural resources and community members. For one, the goal is to have reduced tree density across their forested landscapes. Second, the Tribe wants to establish major fuel breaks around their community to minimize direct wildfire impacts. The Tribe is developing and improving their Tribal timber program to ensure there are trained personnel to implement these projects. In addition, the Tribe would like to have a safe, comfortable space for community members, especially children and the elderly, to go to during temperature extremes or poor air quality days. The goal is to have go-to community gathering spaces where folks can actively engage with one another while having access to essentials like food and water. Beyond safe community spaces, the Tribe would like to provide appropriate care for its members, both mentally and physically, when major climate impacts occur to help folks cope with loss and significant change.

The Tribe has not yet implemented their climate adaptation plan. Once it's approved, the Tribe intends to find commercial harvest opportunities or grant funding to improve forest stand density and re-create formerly open woodland areas. To make the plan actionable, the Tribe would benefit from slash disposal machines such as chippers and masticators to treat non-commercial woody fuels, as well as a fire crew and burn boss to implement prescribed fire treatments. Award funding spanning multiple years would be useful to consistently fund fuel hazard and oak woodland encroachment projects. The Tribe anticipates facing barriers to implementing their plan, including limited funding, project costs, and limited staff capacity and training.

In 50 to 100 years, the Tribe envisions climate resiliency as continuing and building upon prior actions. Forest thinning will still occur regularly, fuel breaks will be continuously maintained, and community centers will be well established and updated. There will also be systems in place to provide the community with reliable, clean water if there is prolonged drought.

Climate resiliency metrics are currently in development for this Tribe. Tribal staff are conducting forest thinning and removing encroaching conifers to reduce drought stress and fire risk. Currently, they're measuring how many acres of land receive fuels reduction treatments per year. Within that, they're measuring the amount of fuel consumed per acre treated. The Tribe will increase its resiliency over time through establishing and maintaining a larger number of miles of fuel and fire breaks.

Broadly speaking, healthy wildlife, game populations, and forest stands are also serving as indicators of climate resiliency. In addition, the establishment of accessible community centers and built safe spaces will be another indicator of increased resiliency.

The Tribe did not note particular areas for improvement for the TCR Annual Awards Program. They had a designated point of contact during the application process that addressed questions and provided feedback. The Tribal staff who worked on the award found this helpful.

BIA SOUTHWEST REGION

SWT1 Summary

The Tribe would like to continue their climate resiliency efforts and have completed phase one which is to create their climate adaptation plan. Phase two will be to implement the plan. The Tribe has two more plan phases to complete. As part of their climate resiliency, the Tribe would like to have active communication between departments for climate adaptation planning and implementing their climate adaptation plan into existing Tribal plans. The community has been involved in adaptation planning efforts and will continue to be involved in future projects. The Tribe would like to incorporate energy development such as solar into future planning efforts. Furthermore, greater collaboration from Tribal departments is necessary to design an energy plan for Tribal use. Future grant opportunities will help further the Tribe's energy development. Also, gathering data on culturally significant species which are vital for ceremonies and other cultural activities is a great concern to the Tribe as the climate continues to change. The Tribe has installed weather stations which has allowed them to gather data for climate resiliency monitoring. Due to a lack of capacity, the Tribe has not been able to further their effort and will continue to look for funding opportunities for data analysis.

The Tribe looks to further develop their climate resiliency as they have completed phase one of three phases. They plan to implement the adaptation plan with the collaboration of multiple departments and continue to gather data such as for a greenhouse gas (GHG) inventory, emissions inventory, and weather station data.

SWT 2 Summary

The Tribe will continue to develop adaptation planning needs due to a shift in the environment on Tribal lands. The Tribe would like to develop partnerships with government and non-government entities across reservation boundaries such as to create Memorandums of Agreement and Memorandums of Understanding in place with the U.S. Forest Service, National Park Service, counties, and other entities to utilize resources. The Tribe would like to have greater collaboration across departments for adaptation planning to further climate resiliency such as identifying funding opportunities for solar installations, updating HVAC systems for more energy efficient heating and cooling, and updating infrastructure. Local air quality has been affected by wildfire smoke which has impacted community health due to topography as the community lies within a valley where the smoke settles. There has been a growing concern for Tribal resources that are disappearing which are culturally significant for Tribal ceremonies. The Tribe would want to consult with Elders about the disappearing species and how they can work together to gather more data and restore these significant cultural and traditional species. The Tribe continues to push for climate resiliency by presenting at climate conferences and other events.

With the completion of their climate adaptation plan the Tribe has implemented certain portions of the plan. With that, there are metrics in the works to continue to utilize the plan and the Tribe is beginning to ask questions related to certain species being used for traditional purposes and if these species can be measured traditionally. The Tribe would like to further their climate efforts by measuring air quality as it can be affected by wildlife smoke and other contributors. Lastly, measuring for water pollutants which can contribute to poor water quality is a great concern to Tribal departments and Tribal members.

SWT 3 Summary

Climate resiliency looks like incorporating climate into the Tribe's various planning efforts, including emergency management plans. As the Tribe developed their climate adaptation plan, they wanted the

plan to be community-based. They received input from Elders and various Tribal members to voice concerns and observations they have noticed taking place within the reservation due to climate change. The Tribe has received attention from a state governors office for their Tribal climate adaptation plan to possibly incorporate or use as a template for state climate plans. The Tribe would like to continue to develop and protect their water rights and resources. They have implemented many programs and monitoring to maintain their water quality. Preserving and protecting wildlife and plant species that have been impacted by climate variability is imperative to the Tribe. Due to water availability being lower over the last decade, the Tribe has implemented water catchments to support wildlife populations. In the future, the Tribe would like to continue to improve water and air quality and accessibility to advance their climate resiliency.

Water rights adjudication is a big component to securing water availability and for improving water quality for the Tribe. Creating opportunities to include solar energy in community and business projects is another goal for the Tribe. Native plant cultivation is another component they want to integrate into climate resiliency as more plant species are being affected by ongoing climate impacts.

BIA WESTERN REGION

WRT1 Summary

The Tribal representatives interviewed shared various thoughts on actions that have been taken, and what climate resiliency looks like today and in the future for the Tribe. Thus far, the Tribe has created their climate adaptation plan and implemented a program to create fuel breaks in fire-prone areas. Today, resiliency looks like increased self-reliance and more attention directed towards extreme weather events.

In five to ten years, the goal is to have improved protection of natural and community resources and infrastructure. Proposed infrastructure improvements include Leadership in Energy and Environmental Design (LEED) certification for their buildings, updating to fiber optics, installing shade coverings over sections of the Tribes' canal system to mitigate evaporation, and repairing outdated utility equipment (LEED Rating System, n.d.). The community would also like to ensure people have safe, comfortable places to go during extreme heat and possible power outages. They would like to see additional efforts by state and Federal government agencies on advancing climate resiliency on Tribal lands. A National Climate Strategy would help the Tribe prioritize efforts. In fifty years and beyond, the ultimate vision and goal of resiliency efforts is ensuring the Tribe can remain on their traditional and ancestral lands, as leaving their lands would erode their identities. Having a sustainable water supply and efforts to ensure the survivability of culturally important plant and animal species are key to achieving this vision.

The Tribe has not established resiliency metrics. Possible future metrics could be measuring increases in agricultural production and outputs, and improved infrastructure. Sharing metrics established by other Tribes could be useful to help establish clear, smart metrics and goals. In the future, they see the primary way of assessing improvements in climate resiliency as whether the community and its members remain healthy in the face of climatic changes, and if the Tribe can maintain its sovereignty.

The Tribe hasn't implemented its climate adaptation plan. The major barrier to plan implementation is a lack of coordination with and direct input and buy-in from other Tribal departments. The Tribe's Department of Environmental Quality (DEQ) has no influence on other Tribal departments, and only DEQ worked on the plan from start to finish. In addition, other Tribal departments have different obligations. Additional barriers include a lack of dedicated leadership, capacity, time, and staff turnover. Furthermore, there was a focus on public participatory meetings and community input when the plan was being written, but no establishment of achievable outcomes transpired from these meetings. The respondents' understanding is that there were no staff dedicated to the plan, and the plan's writing and research was contracted out. They recommended that there should be a full-time advisor when climate adaptation planning work is contracted out. The Tribe's next steps to implement the plan include sharing it with other Tribal departments and revising the plan to make it more actionable. There needs to be full-time, dedicated staff to move the plan into action through coordinating with Tribal leadership and other departments. Ultimately, the Tribe doesn't have the funding, staff capacity, or expertise to implement the plan.

The respondents did not have many recommendations on how to improve the TCR Annual Awards Program, as they were not involved in nor employed by the Tribe during the process. It's their understanding that the process overall went well, but they could not speak to the Tribe's overall satisfaction with the Annual Awards Program. They suggested the TCR Branch update its Tribal contacts regularly so the Notice of Funding Opportunities (NOFOs) would be sent to the appropriate contacts. In addition, they recommended adding a category specifically for hiring dedicated Tribal personnel to implement plans.

To make the Tribe's climate adaptation plan actionable, the Tribe needs additional funding, dedicated staff capacity and expertise, and further direction on priorities. Since climate change has such wide-ranging impacts, expert leadership on where to start, and what and how to prioritize adaptation efforts would be incredibly beneficial.

WRT2 Summary

The respondent shared what climate resiliency looks like for the Tribe today, as well as in the future. Today, climate resiliency includes conservation of the Tribe's cultural resources, including the local watershed and important tree and fish species, and additional climate adaptation planning through collaboration with other agencies. The Tribe has started a native plant nursery and a fire crew to conduct cultural and prescribed burns. Community members would like to see cultural fire revitalized and more cultural knowledge incorporated into climate planning and implementation efforts. In the future, the Tribe would like to preserve and restore one of its culturally important tree species, which is an important food source for the community. The Tribe plans to restore existing forest stands, save seeds, and possibly expand the range of the species to higher elevations through tree plantings to help it adapt to changing conditions. Furthermore, the intent is to have a well- established orchard of the species in the future to help the tree continue to persist on their ancestral lands. To support restoration efforts, Tribal staff hope to have well-established citizen science projects, additional community involvement, and more individuals employed by the Tribe in the next fifty to one hundred years.

The Tribe is implementing projects to advance climate resiliency but has not yet established metrics to measure advances in resiliency. Currently, the Tribe is supporting the expansion of 'Purple Air' air quality monitoring efforts to protect their Elders and the greater population from the increasing impacts of wildfire and associated smoke. The Tribe would like to conduct groundwater monitoring in the future to measure the level of water consumption by coniferous trees. They would also like to measure the success and extent of restoration of their culturally important tree and fish species.

This Tribe hosted a Tribal Climate Resilience event, rather than developing a climate adaptation plan with the TCR award funding. Barriers to hosting the symposium included a lack of Tribal staff capacity and greater community involvement. However, the Tribe views the symposium as largely successful, as it has led to the Tribe collaborating more with external government agencies and forming new partnerships. The Tribe now has a 'seat at the decision-making table' with other non-Tribal agencies with land management authority in the region, whereas they were previously largely excluded from such conversations. The Tribe has since been contacted to assist with grant proposals or has been included in grant proposals. There is now also more support from the greater community for restoration projects. Other Tribes have since inquired with their staff regarding guidance on developing climate resiliency efforts, such as navigating Stewardship Agreements with the U.S. Forest Service. All in all, it put the Tribe 'on the map' as a leader in Tribal climate resilience in the region.

The interviewee couldn't speak to how the TCR Annual Awards Program could be improved in the future, as they were not employed by the Tribe during the application process. They were not aware of any funding issues associated with the TCR award. However, speaking generally about BIA awards, the respondent remarked that it's often difficult to get ahold of and maintain open lines of communication with BIA personnel. In addition, BIA reporting requirements have often been unclear.

BROAD TRIBAL TAKEAWAYS

Overall, the Tribal staff interviewed for this assessment shared various experiences and realities that are impacting Tribes across multiple BIA regions. Tribal Nations have immediate climate concerns, as cultural and natural resources, lifeways, and traditions are already being impacted by climate change. While some communities have not started their climate adaptation processes, others are ready to implement and update their plans. Cross-departmental support and community buy-in and successfully communicating adaptation planning efforts have either been significant barriers or success factors for Tribes. A lack of consistent funding, robust Tribal staff capacity, and shared perspectives on climate change also prevent Tribes from more readily advancing climate resiliency. Most Tribes in this assessment have not established climate resiliency metrics, and the biggest overarching concern for Tribal communities is ensuring species and their community members remain resilient in the face of future climatic change. A resounding theme throughout interviews is that many different focus areas are incorporated into climate adaptation plans because there is a deep understanding of the interconnected nature of climate impacts across Tribal communities and the region at large. This is one way in which climate resiliency can lead to overall community resilience.

Tribes Have Immediate Climate Concerns

Many of the interviewees shared that Tribes have very immediate climate concerns that are hindering their ability to adequately plan and prepare for climate change-related impacts. Tribal infrastructure and enterprises are already at risk due to various climate impacts (NWRTs 2, 3, & 4). Some Tribes are already relocating buildings, pumping out sea water, and 'building up' their communities to buy time from the impacts of sea level rise and coastal erosion. They're also considering climate impacts in land acquisition decisions (NWRT3). Tribal lifeways are being affected. Tribal cultural sites are at immediate risk, and the timing of cultural celebrations is being influenced by changes in seasonal shifts for harvesting important species (NWRTs 3 &4). In addition, climate refugees are moving into the regions around some Tribe's ancestral and traditional homelands, creating new problems for the Tribes and surrounding communities. This is leading to concern of whether areas will urbanize over time (NWRT2). Although climate concerns are immediate, solutions to them can have mutual benefits across Tribal departments. One interviewee remarked "All these issues spider web together so the data [collected] is addressing many different areas" (NWRT4). Solutions to these pressing concerns can benefit multiple aspects of Tribal operations.

Tribes are at Varying Stages in their Climate Adaptation and Planning Efforts

Tribes are at varying stages of their respective climate adaptation planning and implementation processes. While some Tribes haven't started their adaptation planning process due to a lack of baseline data, funding, and capacity (PRT2), others have draft climate adaptation plans in place that they would like to implement and update within the next five years (WRT1). One Tribe is updating several climate-related plans and assessments this year but is concerned that a lack of capacity and financial barriers will prevent their Tribe from continuing to update them (NWRT2). Another Tribe is exploring what spiritual work must be performed to implement their adaptation plan (NWRT3). Most Tribes interviewed are committed to building off of or expanding upon their adaptation plans, growing their partnerships, and advancing their implementation efforts. For many Tribes, adaptation plans are spending too much time 'sitting on shelves' resulting in delays in implementation or action due to a lack of capacity or strong partnerships, or the sheer size of the plan. The TCR Annual Awards Program should take into consideration that Tribes are at different stages in their adaptation planning and implementation when developing future award cycles.

Tribal Cross Departmental Communication and Community Buy-In Are the Most Significant Success Factors or Barriers

Many Tribes across BIA regions noted that they have coordinated across Tribal departments and with Tribal leadership, as well as with local community partners, academic institutions, and other Tribal, county, state, or regional government entities (WT1/NW1). This inter-departmental and institutional collaboration has sometimes led to roadblocks due to the additional time and capacity needed to build trust and relationships, as well as opposing views on climate concerns and possible adaptation actions

arising across entities. Some Tribes in the BIA Pacific & Western regions spoke to a lack of inter-departmental communication on adaptation planning efforts which has led to a lack of buy-in and adaptation plans not being used. For other Tribes, cross-department cooperation and support from Tribal leadership was the key factor that led to the creation of their climate adaptation plans.

Funding, Capacity, COVID-19, and Shared Perspectives Pose Barriers to Advancing Climate Adaptation

Most interviewees spoke to a lack of consistent and non-competitive funding for climate adaptation resiliency initiatives and other efforts. Furthermore, interviewees spoke broadly to the difficulty of navigating various funding application processes, beyond just the TCR awards. Navigating the different application processes and requirements for different awards and grant funding takes significant amounts of time and staff capacity. For some Tribes, their staff are funded by awards and grants, so their very ability to do the work may be lost if they aren't continuously applying for additional funding. The time spent on navigating and applying to awards takes away Tribal capacity to work on climate adaptation planning and implementation, which has hindered some Tribes' ability to advance climate resiliency. For some Tribes, it's difficult to transition from applying for climate adaptation planning funding, to implementation funding, especially going from TCR awards to other funding sources. All in all, a lack of funding poses a significant barrier towards Tribal Nations achieving climate resiliency.

Tribal staff capacity and turnover poses another significant barrier towards advancing climate resiliency. Tribal staff are overwhelmed and often wear "too many hats" in their respective departments. Tribes would benefit from full time, permanent staff dedicated to climate resiliency work to make their efforts more efficient and effective. Some of the Tribes interviewed in the BIA's Western and Northwestern regions contracted out their adaptation planning work due to a lack of permanent Tribal staff. For some Tribes, turnover is due to the uncertainty in job security associated with grant-funded positions. High turnover creates challenging knowledge gaps. For instance, one Northwestern Tribe lost their programmer halfway through their TCR-funded project. Thus, other staff had to fill in that role, causing delays. Some Tribes would like to hire seasonal student interns to close their gaps in capacity, but it also takes time and capacity to hire and retain interns. Due to high staffing turnover, several interviewees were not working with their respective Tribes during the time of the identified award. For some respondents this made it difficult for them to speak to the identified TCR-funded project or provide an honest assessment of the TCR Annual Award Program. Some Tribes also spoke to the difficulty of hiring qualified staff for the roles they require even when they have the capacity or financial means to expand their staff (NWTs 7 & 8). Especially for more rural communities, it is often difficult for Tribes to pay folks enough to relocate, live in the community and keep them there (NWT8).

Throughout this assessment, many Tribes spoke to the difficulty of the COVID-19 pandemic and the ways in which it stretched already thin capacity of their staff and community services. Some Tribal policies haven't allowed staff to work remotely so repeating quarantines, especially in areas where COVID-denial and anti-masking is prevalent, have slowed climate efforts (NWT8). For those who can work from home, barriers include internet connection, having a private place to work, lack of computer or other necessary tools, and complications of work-life balance and mental health impacts. During this time many Elders retired, and many lives have been lost to this disease. This has created knowledge gaps not only in Tribal departments and programs, but it has also been deeply felt by communities as a

wealth of cultural knowledge is also lost in the passing of their Elders. For many communities across the nation, the COVID-19 pandemic has brought up inter-generational trauma around pandemics and has made clear societal inequalities.

Conflicting perspectives on climate change and associated management actions, both within Tribal Nations and amongst the communities surrounding Indigenous lands, have resulted in delayed action or difficulty completing climate adaptation plans and enacting adaptation projects. Some Tribes interviewed shared that conflicting perspectives, such as whether climate change is anthropogenic or naturally occurring, led to a lack of buy-in from Tribal leadership to move forward with adaptation planning. Some Tribal members are concerned about the impacts of study sites on other cultural resources, which makes it difficult to establish sites to collect baseline data to establish resiliency metrics (NWRT4). One Tribe in the BIA Pacific Region spoke to struggling to get buy-in from the greater community surrounding their land, due to the patchwork of private land ownership throughout the greater region. This has led to difficulty in locating or accessing appropriate field sites for data collection and research. Another Tribe in BIA's Pacific Northwest region doesn't have decision making authority or access over all their ancestral lands, which is a hurdle for projects. Without direct jurisdiction, the Tribe relies on communications and outreach, which takes a lot of time. A Tribe in BIA's Western region shared that their resource management perspectives and objectives differ from those of the U.S. Forest Service, as the agency is cutting down a culturally significant tree species to help conserve an endangered bird. Yet the Tribe is trying to preserve and protect this same tree species, as they're an important food source for the Tribe and are fundamental to their cultural identity. Collectively, these opposing perspectives and management objectives have hindered climate adaptation planning and action for some of the Tribes interviewed.

Resiliency Metrics are Largely Not Yet Established

Most respondents shared that their Tribes have not developed resiliency metrics to measure the long-term success of adaptation actions. Metrics largely remain undeveloped due to a lack of baseline data, so there is little to no basis of comparison for Tribes to measure the relative success of adaptation projects. The lack of data and metrics made it difficult for respondents to adequately address interview questions regarding measuring the success of climate resiliency projects.

Ensuring Species, People, and Communities Remain Healthy is Paramount

Across BIA regions and Tribes interviewed, respondents acknowledged that ensuring culturally relevant plant and animal species remain healthy and accessible in the future is key to their personal and communal resiliency. Furthermore, respondents emphasized the importance of creating safe, comfortable community gathering spaces for their people, especially children and the elderly, to go to during extreme weather events, such as temperature extremes and poor air quality days. Ultimately, Tribal sovereignty is integral to the preservation of individuals and the species that they depend upon for cultural integrity and survival.

SYNTHESIS AND CONCLUSIONS

Lessons Learned

Interviewees had varied responses regarding the TCR Annual Award Program. Overall, Tribes were satisfied with the awards and the application process but had differing opinions on aspects of the Annual Award Program that worked well for them and areas that could use improvement. Numerous lessons can be acquired to improve the Annual Award Program moving forward.

Best Practices

Some respondents reported satisfaction with TCR staff and the overall flexibility of the program. The BIA regional POCs and CASC Tribal Liaisons have been largely helpful in providing support for TCR Annual Awards applications over the years. Respondents reported having great experiences with the regional liaisons and other TCR staff, finding them incredibly helpful. One Tribe even went as far to say that they use the TCR Annual Awards Program as an example when training new staff as the Tribe received four TCR awards for climate adaptation in the middle of a Federal administration that, in their words, denied the very existence of climate change (NWT3). Alternatively, some Tribes stated that they struggled most with the limited communication and capacity of the TCR Branch and BIA Regional POCs. This suggests that the TCR Branch should continue to expand its capacity and invest in its staff through appropriate training and resources to promote further successful exchanges between Tribes and TCR. Tribes also recommend more Federal focus on building these relationships with Tribes. These best practices, alongside the additional recommendations provided by Tribes below, will be useful for improving the TCR Annual Awards Program and technical assistance.

Improvements to TCR Annual Award Program

NWT6 summarized their experience with the TCR Annual Awards Program: “This program is invaluable to the Tribe. We’ve been able to shape our whole climate program around it, but there is room for improvement.” One example is the need for further consistency between the NOFO and the application and reporting requirements, as respondents have noted inconsistencies in the past (NWT6). The awards platform was one of the main topics of discussion for most Tribal respondents. Multiple Tribes recommended processing awards through 638 contracts rather than Grant Solutions and providing additional trainings on how to navigate the awards process regardless of which web platform or method is utilized (PRT1). One Tribe noted that they found Grant Solutions much easier than other state grants they have applied for (NWT3). Another Northwest Tribe shared that they had to assign a new administrator from the Tribe in Grant Solutions, and it took about four to six months for this process while still trying to work on the grant itself (NWT4). Multiple Tribes reported that they were dissatisfied with Grant Solutions and that comparatively, the 638 process provides additional flexibility and furthers Tribal sovereignty and self-determination (PRT1/NWTs). Overall, respondents shared that the Annual Award Program application process is well laid out and its proposal scoring system is straight forward compared to other BIA programs (PRT1). The interface for some of these platforms is more difficult than others and Tribes have varying experiences and preferences based on their experience level and staff training capacity across Federal, state, non-profit, and private grant opportunities (NWT6). Though nearly all agreed that they would like to see Federal agencies work together more on climate adaptation funding to streamline the process and lessen the burden on applicants (PRT1). In particular, the switch between interfaces for the Annual Awards Program is difficult to navigate and causes additional capacity

constraints as applicants need to learn new systems and may lose log in information or other vital information with staff turnover (NWT7).

Expanding the Annual Award Program funding periods and categories was a notable topic area for respondents. Creating an award category specifically for funding Tribal climate resiliency staff was suggested to create more robust Tribal staff capacity and ensure there is dedicated leadership that will direct efforts. Though there is also concern that without reliable funding year after year for such a position, and with a short performance period, it would become this individual's job just to keep their job (NWT5). An example NWT5 shared of a more successful program is the Clean Water Act 106/319, where there's a dedicated source of funds for developing, maintaining, and expanding water quality programs (EPA, 2022). They believe that following such a model would better benefit Tribes as it's easier to get Tribal council to approve a new position when there's a stronger guarantee of future funding (NWT5). Feedback on categories largely centered around increasing the number of awards or funding amounts for award categories. NWT1 noted that the funding amount should match effort put into the application as that capacity is taken away from other areas when applying for awards (i.e., travel grants are small but a lot of effort). Respondents frequently highlighted the need to grow an 'implementation' category in future award cycles (PRT1/NWTs). Several interviewees were pleased to see this new category added in Fiscal Year 2022 and suggested the Branch consider expanding it in the number of awards issued, especially as more Tribes move from the planning to implementation phase. Respondents also noted that TCR should consider offering TCR award funding to re-evaluate, update, or re-do Tribal climate adaptation plans (NWT4). As new science has developed, priorities change, and Tribal partnerships grow, some Tribes would like to make changes to their existing plans. Ultimately, the TCR award categories should be broadened to be as flexible as possible to account for varying Tribal needs, as each Tribe's priorities around addressing and adapting to climate impacts will differ (NWT3).

As for resiliency metrics, most Tribes have not developed them due to a lack of baseline data. The TCR Branch should take this reality into consideration when developing future funding categories. Currently, TCR funding supports 'supplemental monitoring' to address climate change impacts to Treaty and Trust resources. This refers to monitoring which is *not* included in baseline programmatic monitoring and/or resource inventory (Bureau of Indian Affairs, 2022). This could pose a barrier to Tribal Nations in advancing resiliency efforts, as collection of baseline data is essential to establish resiliency metrics and measure progressive success towards adaptation goals outlined in adaptation plans. Moving forward, TCR should consider expanding the definition of 'monitoring' in future award cycles to further support of Tribal monitoring efforts.

Ideally, the TCR awards, as well as other award programs, would provide Tribes with funding for three-to-five-year periods. Longer funding timelines would help free up Tribal staff capacity, and Tribes could reserve their limited time and staff capacity for planning and implementing projects, and advance climate resiliency efforts at a faster pace. There is currently a gap between planning and implementation funding that needs to be addressed. The TCR Branch should consider not instituting funding limits for the 'implementation' category in the future and allow Tribes to apply for this category of funding over multiple, consecutive years. Longer funding timelines would help free up Tribal staff capacity, and Tribes could reserve their limited time and staff capacity for planning and implementing projects, and advance climate resiliency efforts at a faster pace. In addition, Tribes would like to see additional flexibility in

how funds are applied, knowing that plans may need to change as projects evolve (NWT1). Based on this Tribe's experience with other grant processes, they believe this would create better outcomes. NWT1 expressed how the Meyer Memorial Trust has an intuitive, though still labor-intensive process, but it's very thoughtfully applied, and makes their application better following their application process (Murthy 2022). This grant opportunity is broad set to allow application of Tribal priorities and provides a great model for grants progress (NWT1).

Another vital improvement suggested was to provide additional flexibility when Tribes face climate emergencies. NWT4 struggled for an award extension while facing a climate emergency on top of the pandemic. The Annual Award Program was not flexible enough to meet the Tribe's needs and they would like to see TCR create a framework to navigate such situations in the future (NWT4). Though another Tribe appreciated that during the pandemic, TCR detailed the no-cost extension request process in the grant agreement (NW3). Due to capacity constraints, some Tribes struggle with the 10-step no cost extension especially since past iterations required only an email.

Reporting Requirements

Tribes recommended that the TCR Branch should consider making changes to its awards reporting requirements for Tribes. One Tribe in BIA's Pacific Northwest Region suggested TCR provide a standard template for quarterly and final reports. Standardization could help create certainty around what's required and help reduce the time dedicated to framing these reports and free up Tribal staff capacity to work on implementing resiliency projects. There was split feedback on whether reporting was overly burdensome. Many would like to see a reduction of reporting frequency, as the current Annual Award Program is asking too much of limited Tribal staff. One interviewee from the BIA Pacific Northwest region shared that in Nation-to-Nation funding, there aren't quarterly reporting requirements. They don't believe the current program is respectful of Tribal sovereignty nor does it instill trust between groups.

Improvements to Technical Support

Interviewees provided insights on how aspects of the technical side of the TCR Annual Award Program could be improved for the Branch to take into consideration. Multiple respondents in the BIA Northwest Region suggested TCR expand its staff capacity to improve communication with Tribes regarding TCR application feedback and notifying Tribes early and often about NOFOs and annual changes to them, as well as changes to the TCR website. Some respondents found the technical aspects of past iterations of the Annual Award Program easier. One example of this is how from 2014-2016, Tribes could simply email regional project officers to turn in grant proposals for BIA TCR (NWT6). The ability to call BIA representatives and email grants information made it feasible, especially when just getting started, to apply for climate resilience funding opportunities (NWT6). Multiple Northwest Tribes note that this gave the program more of a Tribal perspective in that sense and focused on human-to-human connection and relationship building between Tribal and Federal agency staff. They also want to see the NOFO POCs' email information directly and clearly visible on TCR's website as well as be able to make changes if, for example, they have minor disallowed costs or budget errors that would prevent them from otherwise receiving funding for that fiscal year (NWT1 & 6). Tribes whose TCR applications had been denied did not always get feedback on ways to improve their applications for the next fiscal year (NWT1). The TCR Branch should be proactive in reaching out to offer Tribes such feedback. Instituting these

recommendations would improve applicants' ability to navigate the Annual Awards Program application process efficiently and effectively.

By and large, Tribes reported minimal interaction with the TCR website. Some respondents noted that they had never used it before or were unaware of its existence. Many respondents found it to be ineffective or difficult to navigate and therefore seek TCR awards information from the websites of other Tribal organizations or other Federal webpages, such as the Affiliated Tribes of Northwest Indians, Northwest Indian Fisheries Commission, EPA's Tribal Consultation Opportunities, and Grants.gov (NWTs 1, 5 & 7) (Environmental Protection Agency, n.d.; GRANTS.GOV, n.d.; Jones, 2021; Northwest Indian Fisheries Commission, n.d.). While it's positive that other entities direct prospective applicants to the TCR website, the TCR Branch should consider determining additional means of informing Tribes of the site's existence, such as through direct, multiple forms of communication, including phone calls, written notice, and email, with all Tribes the Branch intends to serve. However, there is Tribal concern that staff turnover causes a barrier for TCR to maintain their Tribal contacts (NWT1). Maintaining an up-to-date internal Tribal staff contact list and expanding outreach with Tribal organizations could improve communication around TCR resources and increase visibility of the TCR website.

Beyond increasing awareness of the TCR website, it was recommended that the Branch could better serve Tribes by updating aspects of the website, such as the staff directory including TCR staff, BIA POCs, and regional Tribal Liaisons with full contact information, including emails and phone numbers. Many Tribes reported confusion around who to go to for support with their applications for the TCR Annual Awards Program and other assistance needs and that they would like to see images and bios for current staff on the website (NWT6). One Northwestern Tribe shared that the current website is not meeting their needs, even with the recent update (NWT6). They would like to see it updated to allow for more Tribal input and access. This could include adding Tribal tools and more success stories that utilized TCR Awards to clearly demonstrate how the awards are making a tangible impact for Indigenous communities (NWT6).

Additional recommendations included expanding TCR internal capacity to give TCR staff the time to regularly update Tribal staff contacts and improve overall communication and relationship building. When TCR capacity is stretched, it causes additional delays and more work on behalf of Tribes (NWT4). Importantly, additional TCR staff could allow the Branch to meet with Tribes in person to build relationships and improve the BIA's understanding of what communities need to adapt to climate change. Tribal communities would like to see additional technical assistance offered, including resources and trainings on how to write effective applications (NWT4). Early and frequent communication regarding the availability of training and award-writing resources would further benefit Tribes.

NEXT STEPS

Moving forward, utilizing the recommendations within this report will help TCR address the various areas for improvement within TCR's Annual Awards Program and technical assistance. In addition, the TCR Branch could consider learning from other climate awards that have met Tribal climate adaptation needs. Several respondents provided recommendations for improvement based on other awards or grant processes that worked well for them. For instance, NWT6 shared that they created a unique

partnership with the Northwest Climate Adaptation Science Center which allowed them to receive funding to the Tribe through 638 contracts that ran through BIA Self Governance. The process respected Tribal sovereignty and didn't require quarterly reports. This partnership more closely resembled a Nation-to-Nation funding experience rather than treating a sovereign Nation as another agency. In their words, “BIA is a Federal program, but Tribes are not, we are sovereign Nations. We should be acting as if we are another country. This isn’t the protocol for funding another Nation. There is Nation-to-Nation trust. And that is true Tribal sovereignty” (NWT6).

As the TCR Branch changes and improves upon the Annual Awards Program, it would be valuable to consistently communicate directly with Tribes on what changes have been made in a timely manner. Particularly, Tribes could benefit from receiving timely updates regarding BIA TCR staffing changes, including changes in Climate Resilience Liaison contacts and new staff as new regional BIA TCR Liaisons are onboarded. Furthermore, TCR should inform Tribes when their feedback from this assessment is incorporated into future operations. For instance, interviewees were informed of the addition of the new ‘implementation’ award category during interviews. As the TCR Branch’s capacity expands, it should build upon and strengthen relations between Tribes and TCR staff, the BIA Regional points of contact, and Climate Resilience Liaisons to improve the awards process and ultimately better serve Tribal communities in their climate adaptation efforts.

Overall, respondents in this pilot assessment have provided valuable insight to the TCR Branch. This feedback may inform other Tribal, Federal, state, and local leaders working towards climate resilience. In the future, TCR should consider expanding upon this pilot assessment to include all BIA regions across the country. Such an expansion could improve the Branch’s understanding of how Tribes beyond these four western regions perceive and benefit from the TCR Annual Awards Program and technical assistance and would generate further Tribal input on how TCR services can be improved. With these lessons learned, the BIA TCR Branch aims to address these areas for improvement and further fulfill its trust responsibility to support and build Tribal capacity for climate resilience efforts. The assessment Team appreciates the time, effort, trust, and dedication of the Tribes and Tribal respondents who have participated in this assessment and for the partnership of the U.S. Geological Survey and CASC throughout this project.

Disclaimer

Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

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