Bureau of Indian Affairs Tribal Climate Resilience Program
2021 Funding Awards Summary

Total Number of Awards: 135 **Total Amount Funded: $13,848,873**

Category 1: Trainings and Workshops

Category 1 awards support the design and hosting of regional or national tribal climate training(s) or workshop(s) that will assist tribal leaders, program coordinators, planners, and managers in developing the skills necessary to address climate change impacts by developing tribal adaptation plans, or management options, through in-person and webinar trainings and workshops.

Number of Awards: 10 **Amount Funded: $1,116,832**

Tribe: Big Valley Band of Pomo Indians **Amount Funded:** $110,192
Title: *Anticipating Climate Change Impacts on Tribal Waterbodies and Beneficial Uses*

Project Description: Climate change-induced harmful algal blooms (HABs) are rising worldwide. California tribes and tribal communities fishing in naturally occurring water bodies, gathering aquatic reeds (tule, bulrush, sedge) for basketry and food, and conducting rituals or ceremonies within aquatic habitats (like the prayer ceremonies on the Klamath River and the annual tule festival on Clear Lake) are facing increasing health threats from cyanotoxins. The project will use the Tribe's expertise in water quality monitoring, multi-agency data-sharing and collaboration, advocacy work for culturally significant species, and the Tribe's citizen science training program to run two workshops for California tribes and tribal communities facing climate change-augmented HABs that threaten tribal beneficial uses of ancestral waters.

Tribe: Dry Creek Rancheria Band of Pomo Indians **Amount Funded:** $132,065
Title: *Fire Resilience Training*

Project Description: The Dry Creek Rancheria Band of Pomo Indians (DCR) will use the Category 1 award to develop a fire resilience training for management of DCR lands. Fire in California has become a major threat to communities and is expected to become a greater risk to rural landscapes in the future. A portion of Dry Creek Rancheria was burned during the 2019 Kincade Fire that burned over 77,758 acres in Sonoma County. As California heads into a critical dry year, the wildfire season may be the worst in history. Training for resiliency requires documentation of Traditional Ecological Knowledge (TEK) of historical landscape conditions and management from elders and incorporating these landscape management methods with the current landscape management science to become fire resilient.

Tribe: Pala Band of Mission Indians **Amount Funded:** $149,966
Title: *Tribal Health and Adaptation Advanced Training Project*

Project Description: This project will provide interactive trainings and other capacity-building resources to leverage and advance the health and adaptation knowledge of tribal-serving professionals throughout the United States that are facing extreme events and harmful environmental trends. The project will develop and administer peer-to-peer virtual tribal roundtables on advanced topics, a recognition training program, a summit, and presentations at three highly attended tribal conferences designed. To meet evolving needs of tribes at different stages of planning, PBMI will provide guidance through facilitated exchange of peer knowledge and best practices, instruction, tools, templates, case studies, and corresponding activities and other adult-learning techniques based on the latest science and literature.

Tribe: Red Lake Band of Chippewa Indians **Amount Funded:** $84,879
Title: *Continuous Monitoring Training*

Project Description: The project will provide training to all interested tribes in the Midwest Region in the construction, deployment, and data collection and analysis procedures necessary to implement continuous monitoring for dissolved oxygen, temperature, and water levels in lakes and streams. The training will include previously developed training modules followed by individualized guidance to assist programs with equipment setup, data collection, data QC and analysis, and troubleshooting. In addition to the training, supplies and equipment will be provided to participating tribes to a monitoring site, with a goal number of 10 new tribal continuous monitoring sites in the region.

Tribal Organization: Affiliated Tribes of Northwest Indians **Amount Funded:** $143,327
Title: *2022 National Tribal Leadership Climate Summit*

Project Description: ATNI and our partners will host the 2022 Summit and build upon the successes and partnerships of previous Summits and ATNI's related efforts. We will build off of the 2021 Summit successes and themes identified in the Tribal Review of the 2020 Congressional Action Plan for the Climate Crisis and the BIA's assessment of the unmet funding needs for Tribal infrastructure threatened by climate (2020). The 2022 Summit themes will include: Clean Energy and Jobs; Environmental Justice and Climate Resilience; Health, Well-being, and Traditional Knowledges; and Institutional Barriers to Tribal Resilience.

Tribal Organization: Eight Northern Indian Pueblos Council **Amount Funded:** $62,087
Title: *Southwest Tribal Climate Adaptation Menu: Engaging Capacity Building*

Project Description: The New Mexico Tribal Resilience Action Network & Eight Northern Pueblos Indian Council Office of Environmental Technical Assistance is proposing to initiate development of a Southwest Tribal Climate Adaptation Menu (SWTCAM) by engaging in capacity building and conducting scoping though FY2021 Tribal Climate Resilience Program funding. The SWTCAM will be modeled on the document developed by the Great Lakes Fish and Wildlife Commission, but specific to Southwest ecology and climate concerns. This phase of the SWTCAM project will identify potential partners, stakeholders and rights holders from Tribes/Pueblos, federal agencies, and relevant state, university, and non-governmental partners that will be invited to participate in meetings throughout the Southwest (for this project, New Mexico, Arizona, Utah, Nevada, and Southern California).

Tribal Organization: Intertribal Council of Arizona **Amount Funded:** $133,720
Title: *Climate Resiliency Workshops and Trainings*

Project Description: The Intertribal Council of Arizona, Inc. plans to execute workshops and trainings that focus on climate topics that are of prominent concern to Tribes in Arizona identified as drought, water quality and availability, outbreaks of pests, air quality, wildfires, soil health, and data needs and research priorities to support tribal data governance for climate resilience. The workshops will emphasize climate projections, climate impacts, vulnerability assessments, and climate adaptation strategy to provide recommendations for future actions to build capacity and improve tribal resilience.

Tribal Organization: Navajo Technical University **Amount Funded:** $149,857
Title: *Climate Adaptation Workshop: Combining Indigenous Knowledge with Scientific Tools to Address Water Quality and Woodland Landscape Challenges*

Project Description: Indigenous communities of the Colorado Plateau and surrounding region are among those most threatened by climate change impacts because rising temperatures and reduced precipitation significantly reduce the availability of water for humans and livestock, while simultaneously reducing grassland and woodland productivity. This proposed workshop intends to bring together the perspectives of local community members, native environmental professionals, and state and tribal university researchers. Cost effective and widely available tools will be demonstrated to help identify, quantify, and address specific challenges. This workshop will also help indigenous leaders, tribal staff, and university personnel to resume their climate change mitigation planning which has been halted by COVID-19.

Tribal Organization: Northwest Indian College **Amount Funded:** $14,645

Title: *Technical Sessions to Design Renewable Energy Programs and Projects*

Project Description: The proposed trainings will build the knowledge (ex. case studies, best practices) and relationships (ex. Tribal leaders that can share examples of successful projects) needed to build capacity for project development. NWIC faculty are among the representatives on the Lummi Energy Planning Team, which has been developing funding proposals to implement Lummi Nation's Strategic Energy Plan, where the NWIC main campus is located. Training participants will utilize these trainings to pursue best practices in developing programs and projects at all NWIC campuses, as well as with the Lummi Energy Planning Team. Training participants will include NWIC faculty and research assistants. The participants will capture notes from these trainings and compile into a report that will be presented to NWIC administration and Lummi Energy Planning Team.

Tribal Organization: United Southern and Eastern Tribes, Inc. **Amount Funded:** $136,094

Title: *Tribal Nations Forests and Wetlands Climate Resilience Series Project*

Project Description: The USET OERM Climate Change Resilience Team will host a seven-part webinar series to highlight major climate impacts on forests and wetlands. Forests and wetlands are connected by their hydrological, ecological, and cultural functions within their respective landscapes. Tribal natural resource managers at the local level are tasked with managing these ecosystems and cultural resources while adapting to the impacts of climate change. With no singular solution existing for adapting to this complex issue of climate change, workshops, and trainings- this work will help to bridge the gap between science and practice. In doing this work, USET will also be training the next generation of environmental professionals working with and for Tribal Nations and Tribal organizations.

Category 2: Adaptation Planning

Category 2 awards support the development of adaptation plans, vulnerability assessments, and development of data analysis efforts (including supplementary monitoring) to address climate changes that impact tribal treaty and trust resources, economies, infrastructure, and human health and welfare.

Number of Awards: 50 **Amount Funded: $6,825,074**

Tribe: Aleut Community of St. Paul Island **Amount Funded:** $149,996
Title: *Data Analysis and Product Development: Climate Adaption Planning*

Project Description: The project addresses the need for Alaska Native Tribes and rural communities to properly assess and measure the impact of environmental changes on their communities. The goal of the project is to develop an adaptation plan for St. Paul Island, including vulnerability assessments where needed and data analysis of existing data to address extreme events and harmful environmental trends impacting our resources, economies, infrastructure, human health and welfare. Additionally, deliverables will be shared broadly with other Alaskan Tribes.

Tribe: Big Pine Paiute Tribe **Amount Funded:** $149,995
Title: *Water Resiliency Management Plan*

Project Description: The Big Pine Paiute Tribe of the Owens Valley and its members have faced many challenges in their ability to manage water resources. The redirection of surface and groundwater by the Los Angeles Aqueduct led to degradation of the natural ecosystem and the Tribe's traditional access to water and resources. Climate change is further threatening the Big Pine Reservation's water, future resulting in changes to water availability to people, plants and animals. The objectives of this Water Resiliency Management Plan are to: 1) evaluate current Tribal water resources; 2) assess threats to water security from climate change; 3) engage the community to develop adaptation strategies that improve water resiliency; and 4) produce a planning document that directs strategy implementation.

Tribe: Big Sandy Rancheria Band of Western Mono Indians **Amount Funded:** $139,307
Title: *Advancing Climate Change Adaptation for Big Sandy Rancheria through Wood Energy Development and Workforce Training*

Project Description: Big Sandy Rancheria experiences vulnerability to climate change through heightened wildfire risk from overstocked forests, as well as unstable and inadequate grid energy due to de-energization events and power outages during extended wildfire seasons. Renewable energy assessments laid the groundwork to investigate biomass energy as a potentially viable renewable energy resource well-suited for BSR. Big Sandy Rancheria will complete a feasibility assessment and preliminary design of an advanced biomass combined heat-and-power system as a climate change adaptation strategy for BSR, which will support tribal efforts to mitigate extreme wildfire risk, increase energy resilience, provide training, education and employment opportunities in forest management and renewable energy for the community.

Tribe: Big Valley Band of Pomo Indians **Amount Funded:** $130,927
Title: *Adobe Creek Habitat Suitability and Flow Requirement Assessments for the Clear Lake Hitch*

Project Description: This project will use science-based analysis techniques to quantify Clear Lake hitch habitat suitability and flow requirements to support recovery of the species and climate resilience. This will be accomplished by developing a 2D hydrodynamic model of Adobe Creek and using the velocity and depth results along with species habitat criteria to develop habitat suitability curves. The habitat suitability curves will identify habitat within the creek

at a variety of flows and identify the minimum flows required to support hitch migration and spawning habitat. Tribal members and elders will be engaged in the process of defining habitat needs for the hitch in Adobe Creek, and their TEK will be integrated into the final technical memorandum for the project.

Tribe: Chevak Native Village **Amount Funded:** $148,312
Title: *Permafrost Vulnerability Assessment*

Project Description: Chevak is a Yup'ik community of 1,014 residents located in the Yukon Kuskokwim Delta on a bluff that is subject to the rapid erosion of the Ninglikfak River. Rapid erosion of the bluff and permafrost degradation throughout the community threatens homes, power lines, and subsistence practices. Chevak will develop a permafrost vulnerability assessment to predict and address expected severe environmental impacts in the community. This project will increase Chevak's capacity to develop recommendations for near-term actions and inform long-term planning to protect the community. This project is a critical step in Chevak's efforts to protect their people, lives, livelihoods, and cultures.

Tribe: Chickaloon Native Village **Amount Funded:** $142,692
Title: *Nay'dini'aa Na' Kayax U'el 'stestniic: Starting to be Aware of Vulnerability Project*

Project Description: Chickaloon Native Village will develop a Vulnerability Assessment (VA) that identifies and prioritizes Tribal assets and includes maps and supporting documentation in the forms of traditional knowledge and scientific data. The VA will also identify asset exposure risks, sensitivity, and adaptive capacity through interviews with culture-bearers and community members, literature review, data analysis, mapping, and numerous meetings. The process will be guided by a Tribal Climate Advisory Team consisting of Tribal citizens and Western scientists. The resulting VA will benefit multiple Tribes and communities in Southcentral Alaska.

Tribe: Chignik Bay Tribal Council **Amount Funded:** $147,680
Title: *Climate Resiliency Action Plan*

Project Description: The community of Chignik Bay is located on the south shore of the Pacific side of the Alaska Peninsula. This project will combine and summarize the findings of past and current studies and/or data collections related to the climate, erosion, and flooding in our community, as well as identify important data gaps in currently available data. At risk commercial and residential infrastructure will be identified and mitigation strategies will be developed along with a high-level cost analysis for each strategy. All information collected, community goals, recommendations and next steps will be presented in a 'Climate Resiliency Action Plan' for Chignik Bay.

Tribe: Chinik Eskimo Community **Amount Funded:** $145,690
Title: *Permafrost Assessment for Advancing Adaptation*

Project Description: Golovin, a remote Tribal community, is highly susceptible to devastating damage from permafrost degradation. The Tribe- Chinik Eskimo Community- is pursuing a migration plan and mitigation strategies. The Tribe plans to migrate a significant portion of the community's infrastructure that sits on the lower part of the coastal spit to an adjacent elevated bluff. Both the integrity of the current infrastructure and the ground area of the new subdivision site must be professionally assessed for feasibility, risks, and options analysis. This project will conduct a Permafrost Assessment to improve and increase baseline data and inform the Tribe's decisions.

Tribe: Coeur D'Alene Tribe **Amount Funded:** $149,832
Title: *Climate Resilience Project*

Project Description: The Tribe will develop a Tribal Climate Adaptation Plan for the Coeur d'Alene Reservation. The Tribe will form a Tribal Climate Work Group with members from across the Tribe's government departments and entities to develop actions to address and mitigate climate impacts on the Coeur d'Alene Reservation. The Tribe will calculate its carbon footprint and develop strategies to reduce its contribution of carbon to the atmosphere. The Tribe's Culture Department will be a member of the Climate Work Group and will integrate Tribal cultural actions throughout the Tribe's Adaptation Plan (Traditional Ecological Knowledge). The Tribal public will be asked to participate in the development of the Climate Adaptation Plan.

Tribe: Dry Creek Rancheria Band of Pomo **Amount Funded:** $149,650
Title: *Northern California Tribal Climate Adaptation, Science Integration & Leadership Project*

Project Description: This project is a collaboration between Dry Creek Rancheria and California Indian Environmental Alliance, working in partnership with four Northern California Tribes: Manchester Band of Pomo Indians, and Kashia Band of Pomo Indians, Blue Lakes Rancheria, and the Amah-Mutsun Land Trust / Tribe. The project aims to facilitate collaboration among the 52 federally and non-federally recognized Tribes within the North Coast, San Francisco Bay Area, Central Coast, and Sacramento River hydro-regions. Project efforts support the development of Tribal climate resiliency plans, and regional planning alignment at a watershed and sub−regional level and engage Tribes in California Climate Resiliency planning policy development.

Tribe: Fallon Paiute Shoshone Tribe **Amount Funded:** $72,700
Title: *Climate Resilience Adaptation Plan*

Project Description: The Fallon Paiute-Shoshone Tribe will research, plan and develop a Tribal Climate Resilience Adaptation Plan to address current risks and threats from extreme events and harmful environmental trends that impact the Tribe's water resources, air, fish and wildlife, ecosystems, land use, infrastructure, human health, cultural resources and traditions, economy and emergency management.

Tribe: Fort Belknap Indian Community **Amount Funded:** $135,994
Title: *Climate Preparedness and Adaptation Planning*

Project Description: This project updates the Fort Belknap Indian Community's 2019 climate change draft plan, with a focus on expanding participation and outreach to the community, refining sector chapters, and incorporating TEK to produce an internal version of the plan. The proposal also provides funding to plan for conservation and access to first foods and medicines in the Little Rocky Mountains, an area identified as high priority for cultural and ecological reasons. We will accomplish these objectives through community meetings, sector meetings, elder interviews, and a preliminary assessment of first foods and medicines in the Little Rocky Mountains. The project advances both planning capacity and awareness of climate change in the broader community, in order to mitigate climate change impacts.

Tribe: Fort Independence Indian Community of Paiutes **Amount Funded:** $149,999
Title: *Water Resources Adaptation Planning to Appropriate and Reduce the Identified Vulnerabilities in Providing More Resiliency*

Project Description: The development of a Water Resources Adaptation Plan (WRAP) was the most significant recommendation identified in a Climate Vulnerability Assessment (CVA) conducted for the Fort Independence Reservation (FIIR) with a Category 6 Tribal Climate Resilience award in 2019. The WRAP will provide the FIIR with a

comprehensive understanding of threats to surface water and groundwater supplies and help chart a course of action to implement climate resilience projects for better water management in the future.

Tribe: Hopland Band of Pomo Indians **Amount Funded:** $147,381
Title: *Climate Change Warriors Vulnerability Study and Adaptation Plan*

Project Description: Hopland Band of Pomo Indians Climate Change Warriors Adaptation Plan will provide the framework for the residents of the Hopland Reservation to become more resilient in the face of a changing climate. The project will create a plan utilizing scientific data and Hopland TEK for identifying at risk foods, fibers and medicines, and other natural resources, and for teaching community how to become Climate Change Warriors in order to adapt the changing climate. Hopland Tribe is currently experiencing extreme drought, contributing to catastrophic wildfires, extreme smoke events including days of hazardous air quality, loss of traditional foods, fibers, and medicines, and decreasing availability of potable water for sanitation and consumption.

Tribe: Knik Tribe **Amount Funded:** $143,897
Title: *Climate Change Planning: Assessment of Paralytic Shellfish Toxins in Alaska Salmon*

Project Description: Rising ocean temperatures in Alaska are resulting in life-threatening harmful algal blooms by a single-celled microscopic plant, *Alexandrium catenella*, in the Gulf of Alaska and Bering Sea. We are finding toxicity levels in bivalves (clams, mussels, scallops) exceeding federally safety levels exceeding 100 times. Recently, we began testing other species and found that Alaska salmon among other species, had detectable paralytic shellfish toxins in their tissues. This project is an assessment of the toxicity of Pacific salmon, an important commercial and subsistence resource in Alaska. The data from this project will be used by members of multiple coastal Tribes in Alaska and public health agencies. There is a critical need to substantiate these findings.

Tribe: La Jolla Band of Luiseno Indians **Amount Funded:** $147,549
Title: *Fire-Bringing Balance Back to the Land*

Project Description: The La Jolla Band of Luiseno Indians are actively exploring pathways for bringing cultural burning back to the land and advancing a model for co-management of ancestral homelands that are managed by non-tribal entities. This project will build off La Jolla's recent climate adaptation and natural resource conservation planning efforts and the Tribe's long-standing commitment to intertribal collaboration and that identified fire as a missing element needed to advance conservation and climate adaptation strategies. The project will also leverage an existing large-scale regional intertribal effort aimed at bringing cultural knowledge holders and Tribal fire managers to the forefront of western fire management efforts and identifying barriers to honoring our sovereign rights to steward the land.

Tribe: Native Village of Deering **Amount Funded:** $141,931
Title: *Preliminary Engineering Report to Address Erosion Impacts*

Project Description: This project addresses erosion impacts to Utica Road, which is used to access the airport, water withdrawal point, and subsistence areas. The road runs parallel to the Inmachuck River and is threatened by accelerating riverine erosion. This project will complete a Preliminary Engineering Report with recommendations for improving and protecting the road. After this project is completed, the Village will be able to access funding from state and federal agencies to construct our community's preferred alternative. This project will preserve access to water, subsistence, and benefit every resident in Deering, Alaska.

Tribe: Native Village of Eek **Amount Funded:** $140,740
Title: *Permafrost Risk Assessment*

Project Description: This project will engage science and engineering consultants to complete a long-term permafrost assessment to forecast what infrastructure will be impacted, when, and support us in developing solutions to mitigate the threats. This project will form the foundation of the Village's long-term adaptation plan, which will guide efforts to protect the safety, security, and sustainability of our community. It will benefit 100% of the residents in the small, remote, Tribal community.

Tribe: Ekuk Village Council (Native Village of Ekuk) **Amount Funded:** $79,750
Title: *Beach Erosion Protection Feasibility Study*

Project Description: Ekuk, Alaska has a deep history of fishing salmon from the Village's beaches. Salmon fishing is central to the Village's subsistence practices, cultural identity, and economic activity. The beach and bluff are critical community infrastructure, where they gain access to the water. Today, however, the Village's fishing practices are in jeopardy due to accelerating coastal erosion and flooding of the Ekuk beach. The Village of Ekuk will complete a feasibility study to evaluate mitigation strategies to address erosion along the beach. The study will evaluate historic and predicted erosion rates, engineering and environmental considerations, cultural and economic impacts, mitigation alternatives, and provide project cost estimates.

Tribe: Native Village of Kongiganak **Amount Funded:** $143,050
Title: *Permafrost Vulnerability Assessment*

Project Description: The Native Village of Kongiganak is a traditional Yup'ik community in Southwest Alaska located about 80 miles South of Bethel and approximately three miles from the Bering Sea. Critical community infrastructure including homes, boardwalks, and the bridge to the landfill are imminently threatened by erosion, permafrost degradation, and flooding. The Native Village of Kongiganak will develop a permafrost vulnerability assessment to predict and address expected severe permafrost degradation impacts in the community. The project will increase the Native Village of Kongiganak's capacity to develop recommendations for near-term actions and inform long-term planning to protect the community. This project is a critical step in the Native Village of Kongiganak's efforts to protect the people, lives, livelihoods, and cultures.

Tribe: Native Village of Kwigillingok **Amount Funded:** $149,765
Title: *Riverine Erosion Risk Assessment*

Project Description: Kwigillingok, Alaska is a Yup'ik community of 374 people located on the Western shore of the Kuskokwim Bay near the mouth of the Kuskokwim River. Severe shoreline erosion threatens a critical community bridge and several homes. Due to the severity of the threats, the community is unsure if they will be able to remain in their current location. The Native Village of Kwigillingok will develop an erosion risk assessment to predict and address expected severe environmental impacts in the community. This project will increase Native Village of Kwigillingok's capacity to develop recommendations for near-term actions and inform long-term planning to protect the community. This project is a critical step in Native Village of Kwigillingok's efforts to protect their people, livelihoods, and culture.

Tribe: Native Village of Napakiak **Amount Funded:** $141,880
Title: *Managed Retreat Plan and Coordinator*

Project Description: Due to extremely aggressive erosion, the entire community of Napakiak is being forced to retreat to a safer location. Native Village of Napakiak's Managed Retreat Coordinator will plan and implement the managed retreat and train four key managed retreat staff members in grant management, financial management, land management, and other areas for the purpose of building capacity. The Coordinator will also engage Summit Consulting Services for technical support to update the Managed Retreat Plan based on the results of the current river morphology study.

Tribe: Native Village of Nunapitchuk IRA **Amount Funded:** $149,541
Title: *Resilience Coordinator to Advance Adaptation*

Project Description: The Native Village of Nunapitchuk is among the most vulnerable of communities to climate change in the United States. Rapidly warming temperatures have increased the rate of erosion and the frequency of flooding has resulted in a rapid loss of permafrost underlying the community. These environmental hazards threaten community infrastructure in the near-term and the Native Village of Nunapitchuk's way of life and ability to live in their current location long-term. This project will hire a Community Resilience Coordinator to coordinate the community's response to climate change impacts. Further, it will provide funding toward engaging an engineering contractor for technical assistance to advance top community climate adaptation priorities. This project protects community life, health and safety.

Tribe: Native Village of Shaktoolik **Amount Funded:** $150,000
Title: *Coastal Resilience Planning and Design*

Project Description: Native Village of Shaktoolik will hold meetings with community leaders, travel to interagency planning meetings, and have their engineering consultant support technical components of planning and engineering design. This project will create a long-term resilience plan with prioritized projects for their solutions and begin engineering design and planning for the Native Village of Shaktoolik's highest priority solution.

Tribe: Native Village of Shishmaref **Amount Funded:** $124,960
Title: *Site Expansion Planning*

Project Description: A November 2020 storm caused $6.5 million in damage to our sanitation road. In some areas, the road and the land beneath it were eliminated. This project will provide the community with a Local Coordinator who will collaborate with State and Federal agencies on behalf of the community. The Local Coordinator will maintain and coordinate grant strategies and submit quarterly reports in all progress to ensure the community continues to pursue and maintain protection strategies.

Tribe: Nooksack Indian Tribe **Amount Funded:** $149,999
Title: *Develop a Watershed Hydrology Climate Adaptation and Resilience Plan for the Upper Nooksack River Watershed*

Project Description: The Tribe will apply the results of their DHSVM/VELMA forest hydrology modeling in the Skookum Creek watershed to the rest of the upper Nooksack River watershed to assess the influence of forest stand age on late summer streamflows, a time most sensitive to salmon. With this information, the Tribe plans to develop forest management prescriptions and a climate resiliency plan that can be voluntarily implemented by public and private forest management entities to increase late summer streamflow as an offset to the impacts of continued climate change. This information will also be used to support the development of the Stewart Mountain Community Forest in the watershed, which will facilitate the Tribe exercising its right to harvest natural resources from the watershed as a climate resiliency tool.

Tribe: Pala Band of Mission Indians **Amount Funded:** $133,430

Title: *Threading through California Intertribal Resilience Data Development Project*

Project Description: This project will support tribes locally, state-wide, and nationally in developing, analyzing, and monitoring epidemiological and other datasets for adaptation planning and resilient decision-making. The Pala Band of Mission Indians will work collaboratively with five other California tribes, leading California state agencies, and health, epidemiology, climate and indigenous science experts across the country to identify and develop datasets and best practices that help tribes more easily compile and thread meaningful data through the adaptation planning process from early vulnerability assessments to strategy selection and ongoing resilience decision-making and supplementary monitoring. The project also will survey California tribes on high-priority resilience data needs.

Tribe: Pit River Tribe **Amount Funded:** $108,874

Title: *Climate Vulnerability Assessment and Adaptation Plan*

Project Description: The Pit River Tribe in Northeastern California is proposing to complete a Climate Vulnerability Assessment and Adaptation Plan for the 11 Bands. The Tribe has seen first-hand the effects of climate change such as increased fires, changes in medicinal plant and tree production, warmer springs and shifting redband trout, and changing deer herd migrations. The Tribe anticipates an adaptation plan that will be aligned with existing programs, that will support adaptation pilot projects, and that will produce guides and templates for incorporation of climate change into future programs and projects. The proposed project will build capacity by collecting and incorporating traditional Indigenous knowledge, providing training tools and documents, and partnering with previous BIA funded work.

Tribe: Pueblo de San Ildefonso **Amount Funded:** $149,995

Title: *Supporting Traditional Agricultural Knowledge by Developing a Resilient Farm Plan*

Project Description: The history, culture and traditions of the Pueblo revolve around the four seasons because the Tribe's people have always been agricultural. However, several factors have affected the community's ability to practice traditional agriculture. As a result, knowledge about how to grow and make traditional foods, youth interest in farming, and language have been fading. Today, many of the Pueblo elders retain the traditional agricultural practices that they learned as children, but this knowledge has not been documented for future generations. This project proposes to document traditional agricultural knowledge, including climate-resilient traditional agricultural practices, and develop a Resilient Farm Plan that includes knowledge from elders for today's Pueblo youth and future generations.

Tribe: Qawalangin Tribe of Unalaska **Amount Funded:** $148,032

Title: *Climate Vulnerability Assessment*

Project Description: The Qawalangin Tribe will continue to build their Climate Resilience program by preparing a Climate Vulnerability Assessment of key priority areas as identified through the process of updating their Climate Adaptation Plan. The Tribe will evaluate the likelihood of impact or hazard to each of these priority resources (exposure), how these hazards may affect the resource and how the resource might respond (sensitivity), and the ability of the community to deal with these potential impacts (adaptive capacity). Considering these components will allow the Tribe to complete a Climate Vulnerability Assessment that will be an important tool in planning for potential future actions that might help mitigate these impacts and increase Climate Resilience as a whole community.

Tribe: Redwood Valley Little River Band of Pomo Indians (Redwood Valley Rancheria) **Amount Funded:** $149,999

Title: *Climate Change Adaptation Plan*

Project Description: The Redwood Valley Rancheria Climate Change Adaptation Plan addresses the need to properly assess, measure, and respond to the impacts of climate change upon the Tribal community, its infrastructure, and its ecological assets. The Project Coordinator will update the Vulnerability and Risk Assessment to address issues that became evident after the near catastrophic 2017 Redwood Valley Complex Wildfires. Additionally, the Project Coordinator will develop a comprehensive climate adaptation plan containing strategies and action items that will be developed and tracked using the using the Exposures, Impacts, and Strategies Inventory (EISI) tool, scientific literature, and community input.

Tribe: Robinson Rancheria Citizens Council **Amount Funded:** $115,776

Title: *FY 2021 Xha Go'im (Stand up for Water): Drought and Climate Change Planning Project*

Project Description: Dry conditions and recurring droughts are becoming increasingly common in the community's area. Science tells the community that the source of these conditions are due to human caused climate change. The ongoing droughts cause a host of serious problems for the community, including unprecedented wildfires, impacts to native plants and animals, and instability of water resources. The Tribe's main focus for this project is the effect climate change has on their water resources. Robinson Rancheria's ultimate goal is to produce a "Climate Change Groundwater Model", which will enable the Tribe to navigate water usage and security. The model will be developed by incorporating a historic groundwater model developed for the Tribe, and updating it to reflect current trends and conditions to create a "Drought Management Plan".

Tribe: Round Valley Indian Tribes **Amount Funded:** $149,381

Title: *Climate Vulnerability Assessment for the Fisheries and Water Resources of the Eel River*

Project Description: Eel River fisheries critical to the Round Valley Indian Tribes have been declining for the last century, caused by past and present basin wide challenges. Climate change further threatens the fisheries for the RVIT. The Round Valley Indian Tribes propose to assess the fisheries vulnerability to climate change by developing a fish productivity model that uses water temperature and riparian scenarios to evaluation mitigation strategies.

Tribe: Samish Indian Nation **Amount Funded:** $147,257

Title: *Using GIS to Map Cultural Use Plant Habitats for Development of and Access to Resiliency Strategies*

Project Description: Samish Indian Nation was a recipient of the FY 2016 BIA Tribal Climate Resilience Program capacity building grant. This funded Phase I of the Samish Adaptation and Resilience Initiative, which included outreach to Samish Tribal citizens, inventory of culturally important plant and animal species, the identification of Tribal concerns related to environmental trends, and laid the groundwork for future adaptation planning work. This project will expand on the previous (and ongoing) work of the Samish Adaptation and Resilience Initiative, by mapping traditional use plant gathering areas and habitats so that Samish can develop access and resiliency plans specific to cultural keystone habitats containing traditional resources with public and private landowners.

Tribe: Seldovia Village Tribe **Amount Funded:** $150,000

Title: *Visualizing Climate Change*

Project Description: One of the SVT's ultimate goals is to foster regional partnerships with all the neighboring entities. SVT will share all documents and data from this project with the bordering Tribes of Port Graham and Nanwalek. All the habitats to be defined, and the terrestrial resources associated with those habitats, share boundaries and natural ranges with all Tribal entities and municipalities on the lower Kenai Peninsula. These communities all share the resources that sustain them, and SVT intends to share valuable data in the ongoing effort to manage those resources in the best possible way. Additionally, landowners like the Department of Natural Resources will also benefit from this project as their lands are adjacent to the native-owned lands.

Tribe: Spokane Tribe of Indians **Amount Funded:** $150,000

Title: *Climate Change Vulnerability Assessment and Adaptation Plan*

Project Description: The Spokane Tribe of Indians is striving to sustainably manage the natural resources that support many tribal recreational, cultural, sustenance and economic activities. However, the impacts of climate change will make that effort even more challenging. To preserve and protect the characteristics, cultural elements, and resources that contribute to and sustain the vision for the community, the Tribe will undertake an adaptation planning process in which they will (1) conduct a series of in-person workshops to articulate a community vision and identify vulnerable aspects of that vision, (2) use a combination of a literature reviews and hold meetings to conduct a vulnerability assessment, and (3) identify measures to adapt to the impact for each of the prioritized climate change vulnerabilities.

Tribe: Stillaguamish Tribe **Amount Funded:** $108,341

Title: *Beaver Dam Analogs as a Climate Change Mitigation Tool*

Project Description: The Stillaguamish and Sauk-Suiattle Tribes will design and construct beaver dam analogs (BDAs) as a clima change mitigation tool to improve hydrology, reduce wildfire risk, create complex wetland habitat, and assist beavers with recolonizing historic habitat in the Stillaguamish watershed. Specifically, the Tribes will research and develop effective means c BDA installation, monitor their success and utility, and determine whether BDAs can be used to strategically guide the dispersa and successful recolonization of beavers into historic habitat. Results will be used to update and refine the tribes' Climate Change Adaptation Plans and review, assess, and adjust adaptation practices at the program level. Results will also provide broad benefits to other tribes and agencies.

Tribe: Tolowa Dee-ni' Nation **Amount Funded:** $149,902

Title: *Shaa-xu' -xat Fisheries Restoration Planning Project*

Project Description: The proposed Shaa-xu-xat (Rowdy Creek) Fisheries Restoration Planning Project (Project) will analyze restoration needs for the greater Rowdy Creek sub-basin, the largest basin described in the Smith River Plain Stream Restoration Plan (2018). The basin encompasses 34.08 square miles and contains an estimated 17.45 miles of potential anadromous stream habitat. Rowdy Creek, the second largest coastal tributary in the Smith River Plain, provides important spawning and rearing habitat for multiple salmonoid and lamprey species. This analysis would provide a tool for prioritizing and funding future restoration projects in the Rowdy Creek sub-basin. Historical accounts, including Traditional Ecological Knowledge, indicate that Rowdy Creek sustained large runs of anadromous fish.

Tribe: Upper Mattaponi Tribe **Amount Funded:** $141,600

Title: *Holistic Climate Change Vulnerability Assessment*

Project Description: UMIT is seeking to understand how climate change might affect the Tribe's homeland and the natural resources by completing a climate change vulnerability assessment, particularly one that seeks to

integrate Traditional Ecological Knowledge (TEK). This project will make results of the assessment more useful to Tribal members and other Virginia Tribes, as well as strengthen the Tribe's understanding of how the environment may respond to climate change, and identify the culturally significant terrestrial and aquatic species and habitats that will be the most impacted climate change. This effort is critically needed for the Tribe to effectively engage in environmental management programs as it would facilitate strategic planning for climate change and provide context for resiliency planning.

Tribe: Village of Chefornak **Amount Funded:** $131,470
Title: *Environmental Threat Planning and Capacity Building*

Project Description: The community of Chefornak is facing increasing impacts from permafrost degradation, erosion, and flooding. Chefornak are addressing immediate threats and planning a new safe, subdivision site to which the community will replace and relocate homes and infrastructure. To increase community capacity to achieve their vision for a safe and healthy community, Chefornak will hire an Environmental Threat Coordinator position at the Tribal office and engage the engineering consultant to provide technical support. This project benefits all residents in the small, financially disadvantaged community.

Tribe: Village of Kotlik **Amount Funded:** $111,180
Title: *Adaptation Strategy Development*

Project Description: This project will conduct the following activities: 1) Build the capacity of the Kotlik Resilience Coordinator and 2) Contract with CRW Engineering for technical and planning assistance. This project will immediately benefit the entire community of 655 people and address urgent threats to the health of the people and the sustainability of the community.

Tribe: Yurok Tribe **Amount Funded:** $97,068
Title: *Food Sovereignty Resiliency Project*

Project Description: The Yurok Food Sovereignty Resiliency Project consists of 1) creating a Yurok Traditional Foods Calendar to predict and plan for seasonal shifting due to global climate change and 2) to conduct cultural burning to evaluate the short-term effects on soil quality and the pervasiveness of invasive species as part of the ongoing traditional food system restoration projects. The combination of Yurok Traditional Ecological Knowledge (YTEK) and contemporary science methodology will inform the Yurok Tribe on how to utilize cultural burning as a land management practice and how to prepare for further seasonality shifting by evaluating historical data and creating a baseline for future analysis.

Tribe Organization: Kodiak Area Native Association **Amount Funded:** $149,314
Title: *Kodiak Tribal Climate Action Plan*

Project Description: KANA proposes to support the development of Kodiak Tribal Climate Adaptation Plan (The Plan) and Kodiak Tribal Climate Adaptation Template (The Template) under Category 2: Adaptation Planning. The Plan will document climate hazards for Kodiak Tribes, assess vulnerabilities of key concerns, outline climate change data sets and monitoring efforts, and review the ways to reduce climate-related risks as a regional. The Template will be used by Kodiak Tribes, and customized to meet their individual needs and community conditions. KANA will work with Kodiak Tribes to identify and prioritize current and future challenges that our region and people encounter, determine which environmental areas have the highest probability of impact, and establish monitoring and mitigation plans to address them.

Tribe Organization:	Northwest Indian College	**Amount Funded:**	$72,000
Title:	*Microgrid Feasibility Study*		

Project Description: Northwest Indian College (NWIC) proposes conducting a student driven feasibility study that will assess the financial and technical requirements of a microgrid, designed to support student learning in the Pre-Engineering Program and expand opportunities in Workforce Development. Student involvement in designing, and eventually building, a campus-sized microgrid will provide hands-on, real world experience that will enable them to be the future designers and builders of technologies that will move tribes toward energy sovereignty. This project will also help the NWIC campus move toward energy independence, which will pave the way for the entire Lummi Reservation to follow. Lessons learned will be shared with neighboring Tribal communities and presented at student conferences.

Tribe Organization:	Tanana Chiefs Conference	**Amount Funded:**	$150,000
Title:	*Mainstreaming Climate Change Resilience in Village Planning and Service Provision to Villages*		

Project Description: Three to seven tribes in the Tanana Chiefs Conference region of Interior Alaska will be selected to mainstream climate change into their village plans. Other tribes are expected to benefit indirectly by participating in monthly phone calls regarding the planning update process. Still other indirect benefits come to tribes whose citizens are on the Climate Change Task Force that this project supports. Finally, we expect all 42 tribal villages in the region to have some benefit from TCC's mainstreaming climate change concerns into the services it provides, including housing construction.

Tribe Organization:	Tulalip Foundation	**Amount Funded:**	$144,957
Title:	*Food Sovereignty Resilience Climate Adaptation Plan*		

Project Description: This project will lay a foundation for unifying and then working towards a vision of food sovereignty and security for the Tulalip Tribes in the face of climate change. The Tribe will work through three objectives: 1) organizing staff and program coordination across several Tulalip tribal departments and programs; 2) conducting and completing a food system assessment; and 3) developing a Tulalip Climate Food Sovereignty and Security Strategy Plan. This project will build capacity within various Tulalip tribal government departments and community programs to help grow the Tribes' commitment to securing food systems and lifeways such that the community can meet the growing pressures of climate change and ecological instability with a plan for sustainability and security for generations to come.

Tribe Organization:	Yukon River Intertribal Watershed Council	**Amount Funded:**	$148,408
Title:	*Creating Climate Change Water Adaptation and Action Plan for the Yukon River Watershed*		

Project Description: Climate change is impacting important water resources that rural Alaska Native Tribes depend on for drinking water, household use, and subsistence. A series of Water Resilience Workshops would be convened in all major Alaskan regions (Yupik, Koyukon, Athabascan, Gwich'in) of the Yukon River Watershed involving Alaska Native leaders, Tribal planners, Tribal environmental staff and interested youth and elders. A Water Adaptation and Action Plan will be drafted from these Workshops that will identify opportunities in water governance as well as on-the-ground actions. This project will address impacts of climate change to water resources through tribal planning efforts to explore strategies, and provide actionable ways forward to elevate water protection.

Category 3: Travel Support for Climate Adaptation Planning

Category 3 awards are designed to provide access to training and technical workshops that help maintain or build adaptation knowledge and skills for climate resilience. Awards support for tribal leaders and staff to attend training(s) or workshop(s) or to participate in cooperative resilience and adaptation efforts.

Number of Awards: 15 **Amount Funded: $203,420**

Project Description for All Category 3 Awards: Funding will provide travel support and access for tribal leaders, tribal members, and tribal staff to attend workshops, trainings, or meetings associated with building adaptation knowledge and skills for climate resilience to protect treaty and trust resources, economies, infrastructure, human health and tribal welfare. This may include training and technical workshops to ensure tribal voices are included and other practitioners benefit from tribal participation in training, research, and cooperative implementation. This does not include salary costs or international travel.

Tribe:	Chickasaw Nation	**Amount Funded:**	$14,994
Tribe:	Cow Creek Band of Umpqua Tribe	**Amount Funded:**	$15,000
Tribe:	Iowa Tribe of Kansas and Nebraska	**Amount Funded:**	$13,210
Tribe:	Pascua Yaqui Tribe	**Amount Funded:**	$7,158
Tribe:	Qawalangin Tribe of Unalaska	**Amount Funded:**	$13,859
Tribe:	Quapaw Nation	**Amount Funded:**	$8,385
Tribe:	Salamatof Tribe	**Amount Funded:**	$14,350
Tribe:	Shoalwater Bay Indian Tribe	**Amount Funded:**	$14,222
Tribe:	Standing Rock Sioux Tribe	**Amount Funded:**	$15,000
Tribal Organization:	Affiliated Tribes of Northwest Indians	**Amount Funded:**	$14,807
Tribal Organization:	Chugach Regional Resources Commission	**Amount Funded:**	$15,000
Tribal Organization:	Eight Northern Indian Pueblos Council	**Amount Funded:**	$15,000

Tribal Organization:	Kodiak Area Native Association	**Amount Funded:**	$13,645
Tribal Organization:	Tanana Chiefs Conference	**Amount Funded:**	$13,830
Tribal Organization:	Yukon River Inter-Tribal Watershed Council	**Amount Funded:**	$14,960

Category 4: Ocean and Coastal Management

Category 4 awards support ocean and coastal management planning, marine spatial planning, coastal adaptation/resilience analysis, and cooperative marine resource plans. Funding builds tribal capacity and can be used to assist with a tribe's efforts to restore and provide resilience of coastal resources, perform inventories or vulnerability assessments, identify monitoring protocols and critical indicator species, or implement a unique pilot study or project that would advance tribal resilience, adaptation, or ocean and coastal management knowledge.

Number of Awards: 15 **Amount Funded: $2,055,709**

Tribe: Federated Indians of Graton Rancheria **Amount Funded:** $140,800
Title: *2021 Ocean Coastal Site Adaptation Plan*

Project Description: The Federated Indians of Graton Rancheria (the Tribe) from Northern California consists of 1,400 tribal citizens of Coast Miwok and Southern Pomo peoples. Since political restoration in 2000 (P.L. 106-568, Title XIV (114 Stat. 2939), the Tribe has worked to educate its citizens and surrounding communities of the unique cultural heritage within the Tribe's ancestral lands of Marin and Sonoma County, California. The Tribe's 24-month project will (1) conduct a vulnerability assessment of at-risk cultural sites along the Sonoma Co. coastline; (2) share assessment results for citizen and cultural feedback to (3) develop a Coastal Sites Adaptation Plan in response to changing environmental threats. The Tribe is requesting $145,000 in federal funding and will supply $40,006 in leveraged funds.

Tribe: Hoonah Indian Association **Amount Funded:** $149,606
Title: *Capacity Building to Sustain Tribal Citizen Voices in Fisheries Management*

Project Description: This project advances tribal citizens and HIA to the next steps of fisheries management by addressing the historic inequity of Indigenous peoples in marine science and ocean and coastal management planning through two key strategies: developing culturally relevant career technical education pathways in fisheries management and supporting grassroots fisheries management in Hoonah and across the state of Alaska. The objectives listed in this project build tribal government and tribal citizen capacity and will enable tribal citizens and HIA to better engage with the fisheries management regulatory process in the State of Alaska.

Tribe: Lummi Indian Business Council (Lummi Nation) **Amount Funded:** $149,960
Title: *Vulnerability Assessment of Intertidal Shellfish Habitat on the Lummi Nation Tidelands*

Project Description: Treaty protected intertidal fishery resources, that coastal communities like the Lummi Nation rely on for their health, well-being, and livelihoods, are particularly vulnerable to climate change impacts. Potential adverse impacts to shellfish habitat suitability, productivity and access for harvest are expected where changes in the rate, composition, and quality of sedimentation are upset by climate and land use change. To build resiliency this project will model coastal habitat change under future climate conditions to create a vulnerability assessment of tribal tidelands to erosion with predicted seal level rise and storm/wave energy with USGS Coastal Storm Modeling System (CoSMoS) coupled with intertidal shellfish habitat suitability to guide adaptation planning.

Tribe: Makah Indian Tribe **Amount Funded:** $143,760

Title: *Management and Monitoring of Emerging Threats to the Makah Tribe's Marine Resources*

Project Description: The Tribe will conduct four primary objectives: 1) Restore and provide resilience of Makah waterways by trapping and removing invasive European green crab in nearshore and estuarine waters and assessing offshore dispersal of European green crab in previously undocumented areas; 2) Monitor the health of intertidal and subtidal sea urchin populations in the Makah U&A to determine the extent of and identify emerging urchin barrens; 3) Continue monitoring of the culturally and ecological important indicator species, the purple olive snail, on the Makah Reservation; 4) Incorporate ecological data into GIS shapefiles and map products that can incorporated into the Makah Tribe's Marine Spatial Plan and Oil Spill Response Plan.

Tribe: Native Village of Diomede **Amount Funded:** $147,252

Title: *Monitoring and Assessment of Changing Ocean Conditions on Traditional Harvest of Bering Strait King Crabs*

Project Description: The Native Village of Diomede (NVD) proposes to implement a robust environmental monitoring program to generate critical environmental data and information on changing ocean conditions that will be used to establish adaptation and mitigation strategies for traditional harvest of Bering Strait king crabs: Paralithodes platypus (blue king crab) and Paralithodes brevipes (Hanasaki crab or brown king crab). NVD has a vested interest in protecting traditional and subsistence natural resources and the health of tribal citizens in their traditional tribal territory. Bering Strait king crabs are a key subsistence food source for NVD tribal citizens. yet warming ocean conditions, changes in sea ice dynamics, and shifts in ocean chemistry may be contributing to the decline in subsistence catch off Little Diomede Island.

Tribe: Point No Point Treaty Council **Amount Funded:** $147,041

Title: *Flooding Susceptibility to 15 Maritime Watersheds using Improved Climate Models and Vulnerability Assessment of Salmon and Shellfish Habitat for Adaptation Planning*

Project Description: The Jamestown and Port Gamble S'Klallam tribes rely on fisheries and shell fisheries for economic, subsistence, and cultural means. Flooding and sediment movement during large storm and snowmelt events can scour riverbeds, harm fish eggs, impact shellfish beds, and alter water chemistry. These events also impact our roads and property. Changes in the timing and frequency of heavy storm events due to a warming climate are likely to make high streamflow events even more severe. Using a detailed modeling framework, PNPTC will provide natural resources managers with extreme flow projections through the end of the 21st century and use these results for vulnerability assessments for select ESA species in 15 watersheds and associated estuaries.

Tribe: Resighini Rancheria **Amount Funded:** $150,000

Title: *Building Resighini Rancheria Expertise and Data Capacity for Climate Resiliency Analysis and Future Planning*

Project Description: The proposed project seeks to address vulnerability to climate change of important ecological and cultural keystone species of the Resighini Rancheria (Tribe). The project does this by providing training and data development to build the skills and capacity of the Tribe specific to the rocky intertidal areas within our ancestral territory. Partnering with leading marine academic institution, Scripps Institution of Oceanography, and the Tribal Intertidal Digital Ecological Surveys (TIDES), the Tribe will use cutting-edge digital technology to develop 3-D models of the rocky intertidal to advance climate resiliency analysis and future planning. Research goals and species will be based on the tribal community's Indigenous Traditional Knowledge and priorities.

Tribe: Shinnecock Indian Nation **Amount Funded:** $100,936

Title: *Heady Creek Shoreline Management Plan Development*

Project Description: The proposed project will provide funds to develop a comprehensive shoreline management plan for the eastern shoreline of the Shinnecock Indian Nation Reservation. The shoreline at risk for sea level rise, flooding and erosion. The plan will help preserve tribal cultural and economic activities.

Tribe: Sitka Tribe **Amount Funded:** $149,013

Title: *Klag Lake Limnology and Productivity Study*

Project Description: The STA Klag Lake Limnology and Productivity Study will assess the vulnerability of sockeye salmon by developing and implementing monitoring protocols of zooplankton and freshwater environmental parameters of Klag Lake on Chichagof Island in Southeast Alaska. From May to October STA will inventory zooplankton (genus, abundance, and density), once a month and temperature, dissolved oxygen, and euphotic zone depth biweekly at two locations on Klag Lake. This information, in combination with STA's 20-year ongoing stock escapement and in-season subsistence harvest data, will expand management knowledge and subsistence users' preparedness in an important system that is in decline. Trainings and protocols will be presented at the Southeast Environmental Conference for all Tribal partners.

Tribe: Squaxin Island Tribe **Amount Funded:** $150,000

Title: *Future Conditions of Salmon and People; Where Fresh Water Meets Salt Water*

Project Description: The Squaxin Island Tribe is engaged in ongoing efforts to improve and protect Treaty-reserved resources and improve the lives of tribal members. Climate change is projected to result in lower low flows, higher peak water temperatures, and bigger and more frequent floods, due to both changes in peak flows and sea level rise. These changes could have significant impacts for salmon and other fish populations, while also putting key Tribal properties and enterprises at risk. For example, low flows in 2015 dramatically decreased the amount of space that juvenile salmon could occupy in creeks. The late onset of rains in fall 2019 left chum salmon spawning in the thalweg of channels, leaving eggs vulnerable to scour. The purpose of this project is to quantify future changes in streamflow.

Tribe: Swinomish Indian Tribal Community **Amount Funded:** $149,659

Title: *Promoting Adaptive Management and Resiliency in the Salish Sea Dungeness Crab Fishery: Development of a Genetic and Morphological Population Assessment Model*

Project Description: The Swinomish Indian Tribal Community (SITC) propose to undertake a unique research project examining genetic and phenotypic variability of larval sources and adult stocks of Dungeness crab in the Salish Sea. It is widely thought that the region's crab fishery may be composed of multiple genetic populations. In developing a better understanding of the spatial and temporal contributions of these hypothesized larval sources, SITC will be better able to evaluate current fisheries management strategies from a biologically-based framework. The ultimate goal of the project is to strengthen the exiting fishery and benefit the SITC community by using the best available science to work towards the development of more adaptive management strategies that promote long-term resilience of the fishery.

Tribe: Tulalip Tribes of Washington **Amount Funded:** $89,825

Title: *Phase III: Building Resiliency through Sovereign Leadership, training, and Partnership*

Project Description: The Tulalip Tribes propose to establish a self-sustaining Puget Sound Juvenile Fish Monitoring Program that continues the systematic annual offshore marine fish sampling program. The goal is to improve the Tribes' understanding of relationships between climate and prey availability, the early marine growth and survival of juvenile salmon, and better inform understandings of community dynamics of zooplankton and forage fishes throughout the Puget Sound. To do this, the Tribes will lead the effort to conduct offshore marine fish sampling across the Puget Sound and Hood Canal, and work with leading researchers to train Tribal staff in laboratory fish sampling methods, analysis, and reporting.

Tribe: Yakutat Tlingit Tribe **Amount Funded:** $144,664

Title: *Intertidal Shellfish Assessments to Inform Subsistence Harvest and Climate Change Adaptation Planning*

Project Description: The Yakutat Tlingit Tribe (YTT) proposes to expand upon its ongoing ocean acidification, water quality, harmful algal bloom (HAB), and Traditional Foods programs to include an intertidal ecosystem assessment of three beaches that are actively used for shellfish subsistence harvest near Yakutat. Through these efforts, the YTT will build internal capacity to assess shellfish population trends and develop a robust baseline monitoring program to inform subsistence harvest and climate adaptation planning.

Tribe: Yurok Tribe **Amount Funded:** $113,850

Title: *Coastal Riparian Restoration and Stewardship Planning in the Blue Creek Salmon Sanctuary*

Project Description: The Yurok Tribe will be the primary acting entity for completion of grant deliverables, and work will be conducted on Yurok Tribal lands to benefit a variety of Yurok fish, native plant, and wildlife species. A total of 3,383 local tribal members will benefit from improved conditions, with an additional 2,982 tribal members who may return home to receive these benefits. The benefits to the Chinook and coho salmon, sturgeon, pacific lamprey, eulachon, steelhead, and trout populations will extend to both the Karuk Tribe further upriver in the Klamath River, and the Hoopa Tribe, along the Trinity River, as a major tributary to the Klamath.

Tribal Organization: Southeast Alaska Indigenous Transboundary Commission **Amount Funded:** $129,343

Title: *Southeast Alaska Ocean Fish Consumption Rates*

Project Description: Southeast Alaska Tribes and communities gather 80% of their foods from the surrounding waters. Water Quality Criteria (WQC) is set by Alaska to assure water is drinkable and fishable. The WQC for over 90 toxins are considered Human Health Criteria since they bioaccumulate in the seafoods. Climate change has increased the levels of these toxins. The WQC are based on estimates of the average fish consumption or value (FCV). Alaska's FCV is set at 6.5gpd. EPA recommends for subsistence populations the FCV be at 142.4gpd. EPA recommends that the FCV be based on local data. The FCV in Oregon and Washington was recently updated to 170gdp. Only 1 survey has been conducted in Alaska, and estimates a FCV of 250gdp. No surveys have been conducted in SE Alaska.

Category 5: Travel Support for Ocean and Coastal Management

Category 5 awards are designed to support travel for tribal leadership or staff participation in, coordination, or training for interagency ocean and coastal spatial planning, including the Great Lakes. They provide support for tribal representatives to attend organizational meetings, working sessions, or official meetings of: Regional Ocean Partnerships (ROP), technical workshops or trainings, or targeted pilot studies or projects.

Number of Awards: 3 **Amount Funded: $44,958**

Project Description for All Category 5 Awards: These funds will support direct travel costs for tribal leaders or staff participation in, coordination, or training for interagency ocean and coastal management and planning, including meetings of Regional Planning Bodies.

Tribe: Hoonah Indian Association	**Amount Funded:** $15,000
Tribe: Qawalangin Tribe of Unalaska	**Amount Funded:** $14,958
Tribal Organization: Chugach Regional Resources Commission	**Amount Funded:** $15,000

Category 6: Capacity Building

Category 6 awards support tribes with limited technical and staffing capacity to carry out risk scoping activities that can lead to more detailed future adaptation planning proposals. The effort highlights risks and options that may support ways to begin to plan and build greater capacity for resilience, particularly by identifying tribal vulnerabilities and adaptation planning needs. Tribes in this category have not previously received larger awards in award years 2014 through 2020.

Number of Awards: 8 **Amount Funded: $494,386**

Tribe:	Cow Creek Band of Umpqua Tribe of Indians	**Amount Funded:**	$58,810
Tribe:	Craig Tribal Association	**Amount Funded:**	$60,713
Tribe:	Eastern Band of Cherokee Indians	**Amount Funded:**	$65,000
Tribe:	Ketchikan Indian Community	**Amount Funded:**	$64,941
Tribe:	Pascua Yaqui Tribe	**Amount Funded:**	$57,000
Tribe:	Salamatof Tribe	**Amount Funded:**	$62,500
Tribe:	Standing Rock Sioux Tribe	**Amount Funded:**	$65,000
Tribal Organization:	Chugachmiut	**Amount Funded:**	$60,422

Category 7: Relocation, Managed Retreat and Protect-in-Place Planning

Category 7 awards support tribes facing questions and decisions regarding managed retreat, expansion, protect-in-place, and relocation options due to climate threats from intensifying coastal or riverine erosion, flooding and permafrost degradation impacts, sea level rise, and similar impacts.

Number of Awards: 17 **Amount Funded: $2,374,694**

Tribe: Chevak Native Village **Amount Funded:** $145,071
Title: *Riverine Erosion Assessment*

Project Description: Chevak is a Yup'ik community of 1,104 residents located in the Yukon Kuskokwim Delta on a bluff that is subject to the rapid erosion of the Ninglikfak River. Several homes and community buildings are imminently threatened by erosion of the bluff and current mitigation measures are not enough to prevent future damages and keep residents safe. The tribes plans to develop a riverine erosion assessment to predict and address expected climate change impacts in the community. This project will increase the Native Village of Chevak's capacity to develop recommendations for near-term actions and inform long-term planning to protect their community. This project is also a critical step in the effort to protect the people, lives, livelihoods, and cultures of the Native Village of Chevak.

Tribe: Chinik Eskimo Community **Amount Funded:** $132,922
Title: *Resilience Coordinator for Adaptation Planning*

Project Description: Chinik Eskimo Community (CEC) is currently not safe. Due to increasingly severe flooding and erosion, the community of Golovin, AK must relocate all community infrastructure to a site of elevated land adjacent to the community. CEC will hire a full-time Resilience Coordinator that will focus on exclusively on coordinating efforts to protect the community infrastructure and the community. This project will build the Tribal capacity to plan for a safer and healthier future. The Resilience Coordinator will significantly advance adaptation planning and implementation. It will benefit every single member of the community as well as all Tribal programs, all community entities, as well as State and Federal partners.

Tribe: Kasigluk Traditional Elders Council (Native Village of Kasigluk) **Amount Funded:** $145,071
Title: *Erosion Risk Assessment*

Project Description: Kasigluk, Alaska is a Yup'ik community of 627 residents located on the Johnson River in the Kuskokwim River Delta. Permafrost degradation, flooding, and erosion threatened homes, businesses, and boardwalks. Due to the severity of the threats, we are unsure if we will be able to remain in our current location. We request funding to develop a permafrost vulnerability assessment to predict and address expected severe environmental impacts in our community. This project will increase our capacity to adapt to climate change by developing community-specific data and informing our near-term actions and long-term planning efforts. This project is a critical step in our efforts to protect our people, lives, livelihoods, and culture.

Tribe: Native Village of Deering **Amount Funded:** $149,975
Title: *Preliminary Engineering Report Data Collection*

Project Description: This project addresses erosion impacts to Utica Road, which is used to access the airport, water withdrawal point, and subsistence areas. The road runs parallel to the Inmachuck River and is threatened by accelerating riverine erosion. Native Village of Deering plan to complete data collection and analysis to develop the

best long-term solution to the erosion threat. The results of this project will inform the creation of a Preliminary Engineering Report (PER), that will provide recommendations for improving and protecting the road. After this project is completed, the Tribe will be able to access funding from state and federal agencies to construct the community's preferred alternative. This project will preserve access to water and subsistence resources and benefit every resident in Deering, AK.

Tribe: Native Village of Eek **Amount Funded:** $147,711

Title: *Riverine Erosion and Flood Assessment*

Project Description: This project will engage science and engineering consultants to complete a long-term erosion and flood assessment to forecast what infrastructure will be impacted, when, and support us in developing solutions to mitigate the threats. This project will form the foundation of our long-term adaptation plan, which will guide the community's effort to protect the safety, security, and sustainability of our community. It will benefit 100% of the residents in the small, remote, Tribal community.

Tribe: Native Village of Hamilton **Amount Funded:** $126,919

Title: *Erosion Protection Final Design*

Project Description: Intensifying riverine erosion threatens the viability of the Native Village of Hamilton (NVH) in its current location. All infrastructure located along the riverbank is threatened including up to 120 structures in the long-term. In order to protect the infrastructure and community, the NVH urgently needs to plan erosion mitigation measures. This project will contract with an engineering consultant to finalize the design of erosion and protection measures that will protect the community's infrastructure. This project builds upon a previous BIA award to the NVH to complete preliminary planning and schematic design. This project will immediately and directly benefit the health, life, and safety of NVH residents by building Tribal capacity to address erosion impacts.

Tribe: Native Village of Hooper Bay **Amount Funded:** $137,550

Title: *Permafrost Risk Assessment*

Project Description: This project will engage science and engineering consultants to complete a permafrost vulnerability assessment to forecast what infrastructure will be impacted, when, and support us in developing solutions to mitigate threats. This project will form the foundation of the community's long-term adaptation plan, which will guide their effort to protect the safety, security, and sustainability of the community. It will benefit 100% of the residents in the small, remote, Tribal community.

Tribe: Native Village of Kivalina **Amount Funded:** $141,440

Title: *Erosion Protection Analysis and Design*

Project Description: This project will complete engineering planning and design to construct a rock sea wall to protect the community landfill from eroding into the Chukchi Sea. This project addresses a critical public health issue that benefits 100% of Tribal residents. The community is one of the most threatened by coastal hazards in all of Alaska.

Tribe: Native Village of Kongiganak **Amount Funded:** $145,071

Title: *Riverine Erosion Assessment*

Project Description: The Native Village of Kongiganak is a traditional Yup'ik community in Southwest Alaska located about 80 miles south of Bethel and approximately three miles from the Bering Sea. Critical community infrastructure including homes, boardwalks, and the bridge to the landfill are imminently threatened by erosion, permafrost

degradation, and flooding. Native Village of Kongiganak plans to develop a riverine erosion assessment to predict and address expected severe environmental impacts in the community. This project will increase their capacity to develop recommendations for near-term actions and inform long-term planning to protect the community. This project is a critical step in their efforts to protect the Village's people, lives, livelihoods, and cultures.

Tribe: Native Village of Kwigillingok **Amount Funded:** $144,352
Title: *Preliminary Engineering Report and Hazard Mitigation Plan*

Project Description: Kwigillingok, Alaska is a Yup'ik community of 374 people located on the western shore of the Kuskokwim Bay near the mouth of the Kuskokwim River. Severe shoreline erosion threatens a critical community bridge and several homes. The project will 1) develop a preliminary engineering report to develop solutions to protect the bridge and 2) complete a Tribal Hazard Mitigation Plan to understand the environmental threats facing our community. This project will increase Tribal capacity to develop recommendations for near-term actions and inform long-term planning to protect our community. This project is a critical step in the community's efforts to protect their people, lives, livelihoods, and culture.

Tribe: Native Village of Kwinhagak (Quinhagak) **Amount Funded:** $147,880
Title: *Threatened Infrastructure Structural Engineering Assessments*

Project Description: Subsidence due to permafrost degradation impacts virtually every piece of infrastructure in the community. It is the Native Village of Quinhagak's highest priority to address this threat. This project will address the most threatened community infrastructure – the multipurpose building and the Head Start facility – by completing structural engineering assessments of the buildings. The final report will assess the current condition of the building and recommend a long-term solution to protect or relocate infrastructure. This project will benefit all members of the community and develop long-term adaptation strategies for Quinhagak's highest resilience priorities.

Tribe: Native Village of Nelson Lagoon **Amount Funded:** $148,505
Title: *Relocation Site Suitability Assessment*

Project Description: The Tribal community of Nelson Lagoon may be forced to relocate to another distant site due to increasingly severe coastal erosion caused by climate change. The Native Village of Nelson Lagoon lost 90 feet of land in a November 2020 storm. All of their erosion monitoring stakes and the time-lapse camera used to monitor erosion were claimed by the ocean. This project will engage geotechnical, civil, and hydrogeological engineering experts to evaluate the potential habitability of three potential sites that the community could pursue for long-term relocation. All future planning will be based on the results of this project. All community residents and all Tribal programs benefit from this project.

Tribe: Native Village of Shaktoolik **Amount Funded:** $112,818
Title: *Storm Surge Monitoring and Rock Source Investigation*

Project Description: This project will conduct an as-built survey of the Native Village of Shaktoolik's storm surge berm to monitor damages from storms, and engage a geologist to assess the feasibility of developing a local rock source, which the community could use to construct a rock sea wall. This project benefits 100% of Tribal members and all Tribal programs.

Tribe: Native Village of Shishmaref **Amount Funded:** $149,988
Title: *Erosion Protection Design and Planning*

Project Description: A November 2020 storm caused $6.5 million of damage to the Native Village of Shishmaref's sanitation road. In some areas, the road and the land beneath it were eliminated. This project will complete, design, planning, permitting, and analysis for a rock revetment structure to protect road and critical facility. If erosion and flooding continue, solid waste, hazardous waste, and sewage will be released into the water. This imminent threat to public health.

Tribe: Pilot Point Tribal Council **Amount Funded:** $135,000
Title: *Coastal Erosion and Flood Study Protection*

Project Description: Coastal erosion and flooding threaten critical infrastructure essential to the economy, culture, and livelihoods of the communities of Pilot Point, Port Heiden, and Ugashik, Alaska. The community of Pilot Point has one "pseudo" natural harbor located in Dago Creek. Dago Creek is located 4 miles north of the community. This project will complete a study of the long-term coastal erosion and flooding impacts on existing infrastructures located at or near Dago Creek. This study will build upon historical erosion and flood data by engaging civil, structural, and coastal engineers to complete data collection, analysis, and generate a report that provides recommendations to sustain transportation infrastructure that is essential for the three Tribal communities.

Tribe: Tulalip Tribes of Washington **Amount Funded:** $143,525
Title: *Coastal Managed Retreat Plan*

Project Description: The Tribe will develop a Tulalip Reservation Coastal Managed Retreat Plan using recently completed retrospective and prospective coastal erosion data along the Tulalip Reservation shoreline. This project will use modeled predictions of coastal erosion to plan for future effects on infrastructure, housing and habitat on the Tribe's coast. This plan will reflect Tulalip Tribal interests by identifying which buildings need to be protected in place, where retreat must happen and where habitat for treaty reserved resources can be protected and restored. The project will benefit multiple departments within the Tribal Government as well as non-tribal coastal residents.

Tribe: Village of Kotlik **Amount Funded:** $93,896
Title: *Erosion Protection Final Design*

Project Description: This project will finalize the design of erosion protection at the community's landfill. The landfill is threatened by riverine erosion. If impacted, it could spill human and hazardous waste, contaminating Village of Kotlik's subsistence resources and drinking water. This project will benefit every resident in Kotlik and protect community health.

Category 8: Internships

Category 8 awards are designed to support college students, or recent graduates (within one year of at the start of the internship), employment opportunities working within tribal programs or tribal organizations. Internships support integration of tribal climate adaptation planning or ocean and coastal management into programs for the benefit of Tribes.

Number of Awards: 8 **Amount Funded: $348,608**

Tribe: Blue Lake Rancheria **Amount Funded:** $44,517
Title: *Climate Resilience Internships*

Project Description: Interns will each compile a critical portion of a Climate Adaptation Plan with research and input from key sources. Two internships will be offered each summer for college students or recent college graduates, supervised by the Environmental Director. They will have the opportunity to work with different departments within the tribal government and be introduced to other regional tribal climate planning workgroups and efforts.

Tribe: Hopland Band of Pomo Indians **Amount Funded:** $49,451
Title: *Climate Change Warrior Interns 2021*

Project Description: The Youth Climate Warrior interns will contribute to achieving the Tribal EPA Program mission of "Preserving and Protecting the Natural Resources of the Hopland Band of Pomo Indians for This and Future Generations" by adding a climate change adaptation element to the program mission. This will be a train the trainer opportunity for the interns, who will both learn about the Tribes' Climate Change Vulnerability and Mitigation Plan, and share the information with the community during outreach events a and online through the Tribes' social media.

Tribe: Iowa Tribe of Kansas and Nebraska **Amount Funded:** $49,840
Title: *Baxóje Climate Resilience Internship Program*

Project Description: Interns will learn from working on the current efforts of the tribal entities, and also add value by conducting an independent research project on how climate resilience strategies can be incorporated into those efforts. The interns would add capacity to the current scope of work of the tribal entity, who may not currently have climate resilience as a core focus of current staff capacity. They will also infuse a Climate Resilience lens into the following tribal entities: Ioway Tribal National Park, Ioway Bee Farm, Ioway Farms, Soje, and White Cloud Health Center.

Tribe: Qawalangin Tribe of Unalaska **Amount Funded:** $49,401
Title: *Climate Resilience Internship*

Project Description: The intern will work with the program managers to understand guiding Unangan values and the goals of each program and to identify future projects for collaboration to support climate resilience priorities across programs. The intern will also conduct youth outreach activities to encourage awareness of locally important climate impacts.

Tribe: Shinnecock Indian Nation **Amount Funded:** $18,600
Title: *Shinnecock Indian Nation Internships*

Project Description: The funded intern(s) will work to update the existing Shinnecock Nation Climate Change Adaptation Plan (2013). The new plan will incorporate data that has been collected by Shinnecock Environmental Department over the past 2 years, as well as lessons learned from previous climate adaptation efforts on the reservation.

Tribal Organization: Affiliated Tribes of Northwest Indians **Amount Funded:** $49,999
Title: *Internship Program for Tribal Early Career Professionals*

Project Description: The two interns funded by this grant will work with ATNI's Tribal Liaison to increase resilience to climatic impacts through adaptation. Interns will work on efforts aligned with their interests helping to build ATNI's network of partners; plan Tribal climate events; participate in site visits to Tribes involved in climate projects, develop skills in Tribal relations, and collaborate with Indigenous youth. They will co-author research and associated literature reviews and more.

Tribal Organization: United South and Eastern Tribes, Inc. **Amount Funded:** $46,280
Title: *Office of Environmental Resource Management Interns*

Project Description: The United South and Eastern Tribes Inc. (USET) Climate Resiliency Program under the Office of Environmental Resource Management (USET-OERM) will host two student interns. The student interns will contribute to the Program's mission to provide scientific information and technical support on climate change adaptation to the Tribal Nations and work closely with USET's Tribal Climate Science Liaison, Forest Adaptation Technical Assistant, and Water Technical Assistant Specialist. The interns will keep UET's Tribal Climate Adaptation Resources web page current and assist in providing remote technical support to Tribal Nations working on climate change vulnerability assessments and adaptation plans. The interns will do reporting on Tribal-based climate change resiliency actions and climate change policies impacting Tribal Nations.

Tribal Organization: Yukon River Intertribal Watershed Council **Amount Funded:** $40,520
Title: *Tribal Resilience Internship*

Project Description: This intern would be hired from YRITWC's partner organization, the University of Alaska's Alaska Native Science and Engineering Program (ANSEP). They would work as a Project Assistant on YRITWC's BIA TCRP Category 3 project, Creating Water Adaptation and Action Plans for the Yukon River Watershed, for two years. They would gain skills in environmental sampling, community-based monitoring, coordination/facilitation of workshops, in addition to travelling to rural regions and networking with Alaska Native leaders.

Category 9: Youth Engagement

Category 9 awards are designed to support the integration of climate resilience or ocean and coastal management challenges into new or existing youth programs. Awards support tribes or tribal organizations with activities for primary or secondary school-age youth and their engagement in science, technology, engineering or in traditional ecological knowledge education as they relate to and address climate resilience or ocean and coastal management challenges.

Number of Awards: 9 **Amount Funded: $412,192**

Tribe: Blue Lake Rancheria **Amount Funded:** $49,985
Title: *Native Youth STEM: Climate Change Restoration Project*

Project Description: Youth will learn about impacts of invasive species and help locate and remove them, replanting Indigenous flora. Participants will learn the scientific method, follow data gathered, and learn reporting methodologies established by the Environmental Services Dept. The data and specimens collected by the students will help inform ongoing plans for restoration, and monitoring the health of tribal lands and waterways, including several creeks and the Mad River.

Tribe: Coeur d'Alene Tribe **Amount Funded:** $50,000
Title: *Climate Resilience Youth Engagement Camp*

Project Description: 30% of the CLIMATE Explorers internship will focus on providing a political and environmental history of the two project sites within the reservation, including the southern Coeur d'Alene Lake and the alpine Crystal Lake; the remaining 70% for the project will focus on climate-focused STEM activities that will help establish community observation sites at these two locations. There will be 10 Tribal youth who will learn about water quality and data collection methods; map and distribution of water potato, a key traditional food; map distribution of invasive species; and learn about the overall ecology of each site.

Tribe: Hoonah Indian Association **Amount Funded:** $49,601
Title: *Establishing Youth Climate Stewardship in Hoonah, Alaska*

Project Description: Hoonah Indian Association's project follows recommended steps for building youth's ability to adapt to climate change and be stakeholders in the process. The project brings in new partners and leverages previous partnerships, as well as builds on existing programs and establishes some new programming for youth. This grant will result in products and new capacity that the Tribe can leverage into new opportunities, and increase the ability of their Tribal youth and citizens to cope with climate change in the community.

Tribe: Karuk Tribe **Amount Funded:** $50,000
Title: *Uumkun Pa'Aavkam Vuraheesh (future leaders) Project: Strengthening the Next Generation of Karuk Environmental Leadership in Climate Adaptation Planning*

Project Description: This project will provide 250 K-12 youth with knowledge & skills needed to be the next generation of Tribal leaders addressing climate change impacts. To do this, youth will learn to identify & monitor Cultural Indicator Species and assess the Tribe's ecosystem stewardship and restoration efforts. Youth learning will be 25% in-class, 50% in-field, and 25% communication & reflection.

Tribe: Manzanita Band of Diegueno Mission Indians **Amount Funded:** $49,946
Title: *2021 Tribal Resilience Project*

Project Description: To expand the ongoing program, Manzanita and the Climate Science Alliance seek to develop a Climate Kids Book Club to provide climate science materials and literary resources that can be equitably distributed to and accessed by Tribal youth. The Book Club will be enhanced by several engagement sessions and resource backpacks available for checkout to support approximately 100 students (ages 5-14) in exploring climate change impacts unique to their communities, and provide tools necessary to make educated decisions about how to protect our planet now and in the future.

Tribe: Qawalangin Tribe of Unalaska **Amount Funded:** $49,948
Title: *Youth Climate Mini-Camp Sessions*

Project Description: The Tribe will offer 2 "Climate Mini-Camp" sessions for youth prior to the annual Culture Camp, Camp Quangaayux. These sessions will focus on climate issues and resilience seen through a cultural lens. The Qawalangin Tribe respects their Elder's choice of subject matter, and hope to engage with 10-20 youth and two Elder mentors in each session.

Tribe: Shinnecock Indian Nation **Amount Funded:** $18,246
Title: *Climate Change and Culturally Relevant Shellfish Youth Project*

Project Description: This youth engagement project will focus on climate change and culturally relevant shellfish. The youth will learn about the Tribe's use of harvested shellfish and how their survival is threatened by water quality impairment influenced by warming water temperatures and potential ocean acidification. Additionally, the youth engagement will provide Shinnecock youth with the opportunity to help staff continue building the oyster reef, which is an ongoing Tribal project designed to mitigate shoreline erosion.

Tribal Organization: Northwest Indian College **Amount Funded:** $48,434
Title: *Summer Solar K-12 Youth Engagement Activities*

Project Description: We Share Solar (WSS) is a STEM unit that links the engineering behind solar energy to humanitarian service through building and sharing portable solar electric systems called Solar Suitcases. The program will enhance existing Lummi Nation School curriculum with hands-on activities related to solar energy. Interns recruited from the Pre-Engineering program at Northwest Indian College (NWIC) will present a half-to-full day program using Solar Suitcases as a platform for student learning. One will then be used in a school, youth home or community center where needed.

Tribal Organization: Yukon River Intertribal Watershed Council **Amount Funded:** $46,032
Title: *Sharing Climate and Watershed Education with Yukon River Tribal Youth*

Project Description: YRITWC will create two Climate & Watershed Education Activity Booklets in 54 Alaska Native villages to explore their watershed and learn about climate-related topics. Booklets will have education on watersheds, climate Traditional Knowledge, and activities to engage locally. 35% of the project will be climate-related and will have related careers. YRIWC aims to print 10,000 booklets, the same number of youth they hope to reach, ages 9-14 years old.