

**U.S. Fish and Wildlife Service  
FY 2022 Tribal Wildlife Grants Awards Summaries**

**ALASKA:**

**Chickaloon Native Village (\$200,000)**

*Matanuska Watershed Adult Salmon Research Project*

This project proposes to describe the run timing, enumeration, and species composition of adult Alaska salmon in Moose Creek using video monitoring equipment and a fish weir, collect baseline water quality data on Moose Creek and other tributaries of the Matanuska River, and build program capacity for additional fisheries projects in the future. This project will benefit several anadromous species, including culturally significant Alaskan Chinook, Coho, Chum, and Sockeye salmon.

**Tyonek Tribal Conservation District (\$200,000)**

*Overview of Freshwater Stream Resources Important for Chinook Salmon Spawning/Rearing in the Tyonek Tribal Conservation District*

This two-year project will identify priority watershed and aquatic resource issues, key habitats within distinct aquatic systems, establish baseline water quality, temperature, and flow monitoring on a total of eight freshwater systems important for Chinook salmon spawning and rearing within the District, complete a comprehensive Overview of Freshwater Stream Resources of the Tyonek Tribal Conservation District, increase the Native Village of Tyonek's capacity to collect aquatic data and manage their freshwater resources, and disseminate data in a widely accessible manner using meetings, conferences, and web-based data sharing.

**Eklutna Native Village (\$199,209)**

*Upper Eklutna River Salmon Habitat Assessment and Lower Eklutna River Fish Count*

The Native Village of Eklutna (NVE) proposes to continue river assessment work in the upper sections of the Eklutna River for salmon spawning habitat. The work will expand upon previous work on the lower river but use different methods to define and evaluate spawning bed potential in the upper river. NVE also proposes to continue spawning surveys, redd counts, and minnow trapping, begin collecting baseline genetic information on Eklutna River salmon, and to gather more data on water inputs into the lake by measuring the discharge from the Upper East and West Forks. Interagency working group meetings will continue to consider the results and recommend types of fish passages that will correspond to the flow recommendation from previous projects. The data gathered in this 2-year study will be used to support ongoing advocacy efforts for the implementation of a fish passage at the existing lake dam and to further advocate for restoration of water to the lower Eklutna River.

**Aleut Community of St. Paul Island (\$199,999)**

*Marine habitat use by seabirds of the Pribilof Islands Marine Ecosystem (PRIME) during the non-breeding season: distribution, phenology, and environmental correlates*

This project will study two key seabird species that are important cultural and ecological components of the avifauna that nest at St. Paul Island, Alaska – black-legged kittiwakes (*Rissa tridactyla*) and

thick-billed murres (*Uria lomvia*) – to address the following objectives: (1) Quantify their spatial and temporal pelagic movements during nonbreeding season using light-level geolocation; (2) Calculate sex-specific, seasonal utilization distributions; (3) Examine their oceanic habitat use during non-breeding season in relation to in-situ and remotely sensed physical and biological environmental covariates; (4) Determine the overlap of the PRIME Initiative’s core region, with seasonal utilization distributions; and (5) Train the next generation of seabird ecologists, and conduct data science focused outreach events to St. Paul Island students and other students.

**Qawalangin Tribe of Unalaska (\$198,716)**

*Develop a Restoration Plan and Pilot Study for Blue Mussel Habitat in Unalaska Bay: A Natural Resources Conservation Plan (NRCP)*

The purpose of this project is to develop a Natural Resources Conservation Plan to restore the blue mussel habitat within Unalaska Bay to increase cultural and tribal subsistence food security, reduce paralytic shellfish poisoning in wildlife and people, and implement a nature-based technique for improving water quality and aquatic ecosystem health.

**Central Council Tlingit & Haida Indian Tribes of Alaska (\$200,000)**

*Invasive Species on Native Allotments in Southeast Alaska Management Plan*

The research conducted through this project will; obtain an accurate scope of the invasive and recolonizing species on Native allotment lands, create an Invasive Species on Native Allotments Report and an Invasive Species on Native Allotments Management Plan, and ultimately conduct habitat restoration to the extent possible. The goal of this project is a Healthier Southeast Alaska by conducting Research, Spatial Analysis, Management Planning, Habitat Restoration, and Reporting on Invasive Species on Native Allotments in Southeast Alaska.

**Port Graham Village Council (\$139,946)**

*Moose Composition of the Southern Kenai Peninsula; A Collaborative Effort*

This project will work towards the following objectives: 1) By the end of January 2023, Port Graham Village Council (through CRRC) will have local Port Graham field technicians and contract staff with ADF&G secured and field training has begun. 2) By the end of December 2023, Port Graham Village Council (through CRRC) will have conducted 1 aerial moose composition survey. 3) By the end of August 2024, Port Graham Village Council (through CRRC and ADF&G) will have developed an alternative moose monitoring program. 4) By the end of August 2024, Port Graham Village Council (through CRRC and ADF&G) will have conducted and completed focus group interviews with Port Graham residents and have analyzed the data into a report. 5) By the end of December 2024, Port Graham Village Council (through CRRC) will complete a report detailing all results from the moose surveys and focus group interviews.

**ARIZONA:**

**White Mountain Apache Tribe (\$200,000)**

*Crooked Creek Barrier Replacement to Aid Apache Trout Recovery*

Crooked Creek, above a constructed barrier, is home to one of the largest relict populations of Apache Trout. The existing non-native trout barrier was installed in 1995 to separate this population of Apache Trout from non-native trout downstream. This barrier no longer functions as intended at all stream flows and is in danger of failing. We completed eradication of Brown Trout in this system in 2015 and upstream habitats remain free of non-native trout. Replacing the barrier before it fails entirely is a high priority to secure 7.8 km of high-quality recovery habitat and allow the Apache Trout population to continue to expand following eradication of Brown Trout.

## **CALIFORNIA:**

### **Yurok Tribe (\$200,000)**

#### *Outreach and Education to Reduce Mortality Factors for California Condors in the Northern California Population*

The proposed project will provide substantive benefits to northern California wildlife and species of Tribal cultural importance, principally the critically endangered California condor, through activities designed to improve habitat conditions, reduce the prevalence of anthropogenic environmental contaminants, and minimize incidence of mortality. The goal of this project is to equip the Yurok Tribe and surrounding community with the knowledge and capacity to reduce potential impacts to California condors in the Greater Yurok Ancestral Region from anthropogenic environmental contaminants, thereby promoting resilience within the Northern California Condor Restoration Program. This goal will be met via three objectives: (1) increase Yurok Tribe Wildlife Department capacity through the development of an Outreach Coordinator position; (2) Reduce lead ammunition use through outreach and education, thereby improving habitat conditions and reducing the potential for condor mortality; and (3) investigate rodenticide use in the project area and conduct outreach and education to reduce prevalence. Meeting this goal will improve habitat conditions for wildlife on tribal and nontribal lands, build capacity and self-sufficiency in tribal wildlife management, contribute to conservation of the California condor with implications for down-listing, advance high-priority tribal initiatives, promote intergovernmental management of condors, and through outreach and education build community capacity to support condor conservation through their actions.

### **Round Valley Indian Tribes (\$197,101)**

#### *Anadromous Fisheries Sonar Monitoring on the Middle Fork of the Eel River by the Round Valley Indian Tribes*

This project seeks to continue efforts on multiple priority management issues identified by the Strategy that are best achieved via the direct leadership of the Round Valley Indian Tribe (RVIT). Because of geography, location in reference to tribal lands, and the potential to inform future management actions on 2 tribal lands and beyond, the establishment of a fisheries monitoring station on the Middle Fork Eel River by the RVIT will assist the tribe in better understanding the state of fishery resources on and near tribal lands, while also taking a lead role in Eel River wide monitoring and recovery efforts. This monitoring effort is also an important initial step in building fisheries recovery capacity within the RVIT.

### **Wiyot Tribe (\$200,000)**

#### *Implementation and Expansion of the Eel River Lamprey Research and Monitoring Plan*

The Wiyot Tribe shares its name with its ancestral river, Wiyot, which translates as abundance. A significant aspect of that abundance was the gou'daw, Pacific lamprey (*Entosphenus tridentatus*) – commonly called “eels”, which inspired the river’s English name, Eel River. The Eel River watershed is the third-largest in California and was once home to abundant runs of salmon, steelhead, sturgeon, and Pacific lamprey. Numerous impacts, including water diversions, invasive predators, logging, and sedimentation, have led to significant ecological and habitat degradation and diminished native fish populations that are important to the Wiyot Tribe. The Tribe is renewing its traditional role as active stewards of the natural resources in its Ancestral Territory, and in recent years has been a driving force for activities aimed at restoring populations of Pacific lamprey and other native fishes. Herein, the Tribe proposes to build on its work and the work of others to begin understanding the needs and status of Pacific lamprey in the Eel River. This project will restart the Wiyot Tribes Lamprey monitoring program and incorporate recent technological advances to ensure efficient use of funds and to inform managers for effective ecosystem restoration.

### **Pala Band of Mission Indians (\$199,985)**

#### *Pala Wildlife Management Plan*

The Pala Wildlife Management Plan (PWMP) intends to assess current habitats and vegetation health throughout the Pala Reservation and provide specific recommendations for restoring and maintaining the health of the many ecosystems on Tribal lands. This project will also establish a Pala Tribal Nursery, which will cultivate native and culturally important plant species for future restoration needs found by the PWMP. The project duration is anticipated to be 18 months and involve performing new riparian habitat and oak health surveys. Inventories of native and invasive species will be compiled into a database and mapped. Information from these activities will be used to inform the Wildlife Management Plan and the seeds and plant cuttings that will be collected for the Tribal nursery. Information from these activities will inform workshops between the Pala Environmental Department (PED) and other tribes in the San Luis Rey River valley.

### **Robinson Rancheria of Pomo Indians (\$191,488)**

#### *Robinson Rancheria Clear Lake Hitch and Population Assessments Projects*

The project proposal is to complete habitat assessment of spawning and rearing habitat of native fishes; genetic analysis of native fishes, hydrologic survey of spawning creeks of the Clear Lake hitch (CLH) and otolith sampling on major tributaries to Clear Lake. The project also aims to inform Clear Lake communities about the importance of preventing habitat loss and how traditional ecological knowledge can improve water quality and habitat for fish and wildlife. This would continue until Robinson Rancheria and collaborating agencies have a better understanding of habitat use throughout the Clear Lake Basin by all life stages of CLH and other native fishes.

### **Shingle Springs Band of Miwok Indians (\$177,748)**

#### *Shingle Springs Band of Miwok Indians- Indian Creek Ranch*

The need for the Shingle Springs Band of Miwok Indians (SSBMI) project is to identify target species and habitats of endangered and cultural fauna and animals on the SSBMI newly acquired property. The newly acquired “Indian Creek Ranch” (property) contains 180 acres of undeveloped land, zoned for housing development. The property contains a large pond (included property maps in H. Project

Location) approximately 600 yards in length and 82 yards in width. This pond and surrounding 180 acres/habitats may contain California Red-Legged Frog (CRLF), Valley Elderberry Longhorn Beetle (VELB), other target aquatic, riparian, fauna, and animal species. The need for the Tribe to conduct targeted species and habitat studies on the property is critical to the Tribes conservation efforts and promises to their Tribal members. The SSBMI project will include hiring a professional consultant to conduct CRLF, VELB, riparian, aquatic, fauna and animal species assessments/studies of the property and map out key habitat areas for conservation efforts. The consultant shall provide training and mentoring to a Tribal environmental intern during assessment and mapping of the project. The project is estimated to be completely finalized within 12 months of the project start date.

## **FLORIDA:**

### **Seminole Tribe of Florida (\$200,000)**

#### *Seminole Tribe of Florida Tribal Wildlife Grant Program*

The Seminole Tribe of Florida lands span across 88,143 acres of the Florida Everglades and contain a diversity of habitats and sensitive wildlife species. In 2012, the Seminole Tribal Council worked with multiple federal agencies to develop and approve a Tribal Wildlife Conservation Plan (WCP) that balances tribal and federal natural resource management objectives. Funds from this grant award will be used for continued implementation of the WCP, which includes monitoring of threatened and endangered species and culturally significant species, early detection and eradication of non-native species, collation of species and habitat data in a GIS geodatabase, and community-based education regarding natural and cultural resource management. Tribal execution of the WCP ensures conformity to federal regulations without placing an undue burden of resource protection measures on the Tribe and provides an effective tool for protecting federally listed and culturally significant species that reside within tribal lands.

## **IDAHO:**

### **Nez Perce Tribe (\$180,000)**

#### *Evaluation and Planning for Sockeye Salmon Reintroduction to Wallowa Lake*

In this project, the Nez Perce Tribe Department of Fisheries Resources Management (DFRM) will evaluate critical uncertainties related to the reintroduction of Sockeye Salmon to Wallowa Lake, Oregon. Sockeye Salmon were extirpated from Wallowa Lake in the early 1900s. Progress toward reintroduction has been challenging, but the potential for a full reintroduction is becoming a reality due to a number of recent events, including funding approval for the reconstruction of Wallowa Lake Dam. Renovating the dam will restore fish passage to and from the lake. However, important information gaps remain. In this project, the Tribe will research: 1) migration corridor conditions for adult and juvenile Sockeye Salmon; 2) impacts of non-native species in Wallowa Lake; 3) effects of lake productivity on juvenile Sockeye growth and recruitment; and 4) existing spawning habitat in the lake and its tributaries. Results will be disseminated directly to resource managers and provide a baseline for future adaptive management. The proposed research and planning will significantly aid the Tribe in accomplishing their long-term goal of returning a population of Sockeye Salmon to Wallowa Lake.

## **MAINE:**

### **Houlton Band of Maliseet Indians (\$116,698)**

#### *Aquatic Habitat Restoration Program: Phase VI - Continuing Instream Restoration*

Houlton Band of Maliseet Indians Aquatic Habitat Restoration Program works toward improving opportunities for traditional uses of the Meduxnekeag River with a focus on sustenance fishing. This Project, Phase VI of our program would be the third Tribal Wildlife Grant restoration project on the main stem of Meduxnekeag watershed. Funding will improve fish habitat along another stretch (0.75-mile) of the main stem of the Meduxnekeag River, with a focus on monitoring long term results of our aquatic habitat restoration program and increasing awareness, knowledge, and understanding among Houlton Band of Maliseet Indians and the wider watershed communities of instream restoration in the Meduxnekeag watershed.

### **Passamaquoddy - Indian Township Tribal Government (\$63,770)**

#### *Build and Maintaining 10 Water Control Devices “Beaver Deceivers” on Passamaquoddy Reservation and Trust Lands*

The Passamaquoddy Tribe holds over 130,000 acres in Reservation, Trust, and Fee lands across Maine. Beaver structures block road culverts and can cost the Tribe thousands of dollars in repairs. Managing beavers and road conflicts on Tribal lands is an economic, cultural, and biological concern that needs to be addressed with long term solutions. This grant will fund the construction of 10 water control devices built over two summers by department staff and Tribal youth and will be installed and monitored in critical road crossings on Passamaquoddy Reservation and Trust Lands. This grant will engage Passamaquoddy Tribe youth in this project while educating the public on the importance of beavers to our ecosystem and the Passamaquoddy culture.

## **MICHIGAN:**

### **Pokagon Band of Potawatomi Indians (\$199,000)**

#### *Lepidopteran and Floral Diversity Surveys in Tallgrass Prairie Habitats on Tribal Land*

The Pokagon Band Department of Natural Resources have planted 750 acres of warm-season grass and forb habitat over the past two decades. Native tallgrass prairie once comprised a vast biome across much of North America, covering over 165 million acres; unfortunately, almost 99% of these prairies have been lost and prairie-specialist butterflies have declined dramatically. This project proposes to conduct vegetative and butterfly surveys in these restoration areas to help determine the presence and species composition of lepidopterans, with a focus on searching for threatened and endangered species, particularly regal fritillary and monarch butterflies. Butterflies (mémégwé) are culturally significant to the Pokagon Band, and stories in the Potawatomi oral tradition highlight butterflies’ role in the balance of creation. This project will also provide a framework for estimating the impact of woody encroachment on lepidopteran diversity on tribal lands. Objective 1: Survey for lepidopterans on tribal properties annually for three years. Objective 2: Complete flowering plant surveys on tribal properties to determine blooming floral diversity composition along survey transects and the degree of woody encroachment. Objective 3: Conduct thinning and prescribed fire and monitor lepidopteran response. Objective 4: Raise awareness among the tribe of endangered and threatened lepidopteran species that may be found on tribal properties.

## **MONTANA:**

### **Blackfeet Nation (\$200,000)**

#### *Moose Abundance and Calf Recruitment on the Blackfeet Indian Reservation and Glacier National Park*

The Blackfeet Fish and Wildlife Department is concerned that given the trends in key moose demographics in Montana and its neighboring states and provinces, the moose population within the reservation may also be experiencing declines. The Blackfeet Indian Reservation has no population monitoring efforts for moose, which provide a significant source of revenue for the Blackfeet Fish and Wildlife Department through the sale of hunting permits. Cameras will be deployed in four different areas and camera data will be analyzed to estimate the abundance and recruitment rate of moose within the study area. Successful implementation of this project will help the Tribe determine the status of the population. This will in turn help wildlife managers implement crucial conservation practices and support increases in moose numbers.

## **NEVADA:**

### **Pyramid Lake Paiute Tribe (\$175,000)**

#### *Pyramid Lake Cui-ui and LCT Improvement Project*

This proposal includes two objectives of the PLF production that are critical components to the continued success of fishery production at Pyramid Lake. One project objective involves the replacement of two 36-foot and four 32-foot pools, and the second project objective involves increasing the well water output of the Cui-ui Big Bend hatchery from 30 gallons per minute to 60 gallons per minute. Each intends to contribute directly to spawning and rearing benefits for annual production goals. Both goals involve work that has already been conducted on the facilities, so the work is unachievable.

## **NEW MEXICO:**

### **Pueblo of Santa Ana (\$165,526)**

#### *Monitoring Mountain Lion Predation Patterns and Wildlife Corridor Use on the Pueblo of Santa Ana*

The proposed project involves building the Pueblo's capacity to 1) provide for the benefit and protection of wildlife and 2) educate the community about mountain lions on their land. Lastly, the proposed project will contribute to improving local and regional management plans for mountain lion and ungulates by contributing science-based information on kill rates and prey composition of mountain lions in New Mexico.

## **NORTH CAROLINA:**

### **Eastern Band of Cherokee Indians (\$200,000)**

#### *Evaluating the Success of Non-invasive Methods for the Management and Restoration of Cherokee Natural Resources*

The Eastern Band of Cherokee Indians will implement multiple non-invasive sampling techniques to inventory and monitor wildlife and aquatic biota on Tribal lands. Non-invasive sampling techniques are intended to reduce cultural and socio-political conflicts associated with the potential harm to biota that traditional sampling techniques may cause. The Tribe will use automated camera traps, guided drones, underwater camera probes, and acoustic sampling to collection information about abundance, distribution, and habitat use of protected and culturally significant species and invasive species. The Tribe will also employ genomic techniques to evaluate white-tailed deer restoration efforts, black bear population dynamics, and survey at-risk aquatic species such as sicklefin redhorse, southern strain brook trout, hellbender, Junaluska salamander, and bog turtle. Information gathered from these non-invasive techniques will be used to inform management and restoration strategies for wildlife and aquatic resources on Tribal lands.

## **OKLAHOMA:**

### **Choctaw Nation (\$200,000)**

#### *Choctaw Nation Wildlife Conservation Management Plan*

The Choctaw Nation of Oklahoma is seeking funding from the US Fish and Wildlife Tribal Wildlife Grant (TWG) for \$200,000 for the proposed period of one year starting December 2, 2022 and concluding December 1, 2024. The anticipated funding will be utilized to develop a (1) Tribal Fish and Wildlife Management Program comprised of development of a Wildlife Conservation Management Plan (WMP) for white-tailed deer in order to effectively manage the species (2) implementation of wildlife management software to monitor the harvesting data for white-tailed deer, and (3) consultation with federal, state, local and tribal communities.

## **OREGON:**

### **Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians (\$198,423)**

#### *Tribal Conservation and Management Plan Development Project*

The Tribe will work in partnership with consultants, local partners, other tribes, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service to develop a Tribal Conservation and Management Plan that will tier to the Tribes' Forest Management Plan. It will provide a framework for managing tribal forest lands while promoting science driven management principles for sensitive fish and wildlife species. The plan will be developed using the best available scientific and commercial data in addition to traditional ecological knowledge.

### **Coquille Indian Tribe (\$196,376)**

#### *Coquille River Sub-basin Plan Review & Update*

The Coquille Indian Tribe will coordinate and conduct a comprehensive review and update to the Coquille River Subbasin Plan (Subbasin Plan) prepared for the National Marine Fisheries Service in 2007. The Subbasin Plan was originally prepared by the Tribe over 15 years ago and since then has effectively served to guide prioritization of project-scale restoration activities for the benefit of native fishes in Southwestern Oregon's Coquille River watershed. Grant funds will enable the Tribe to update



this important document. Successful completion of this project will result in an up-to-date planning tool for the benefit of restoration practitioners and fisheries managers in the Coquille River watershed and ultimately will benefit fish and wildlife resources of the watershed and their users.

## **SOUTH DAKOTA:**

### **Cheyenne River Sioux Tribe (\$196,546)**

#### *Cheyenne River Sioux Tribe Black-footed Ferret Recovery Project*

The goal of this Cheyenne River Sioux project is to enhance and ensure the continuation of a Black-Footed Ferret recovery project, resulting in a permanent self-sustaining population. This is to be accomplished on ~5,000 acres of prairie dog colonies throughout the Cheyenne River Reservation with approved backup sites secured as well. Objectives include: surveying potential ferret habitat sites; submitting a proposal to the National Black Footed Ferret Conservation Center for an allocation of ferret kits; treating prairie dog colonies to prevent plague; releasing and recording ferret kit identification with the use of GPS/GIS technologies; conducting spotlight surveys on ferret release colonies to evaluate short-term survival; and attending conservation and ferret seminars/workshops. A result of this proposal is the continued data collection via ferret monitoring surveys which can guide recovery management. Management plans and activities regarding the ferret population are coordinated with and approved by the Black-Footed Ferret Recovery Implementation team.

## **WASHINGTON:**

### **Confederated Tribes of the Colville Reservation (\$200,000)**

#### *Supporting the Return of Canada Lynx to North Central Washington*

The Colville Confederated Tribes will use these funds to support the continued implementation of the Canada Lynx Augmentation project. This project is an international effort to live-trap populations of lynx from British Columbia to release on the Colville Indian Reservation. The Tribe anticipates increases in both distribution and occurrence of lynx throughout the Kettle Range as well as in British Columbia and the Cascades. The true realization of this project lies in the evidence of lynx reproduction in the area. Funding of this project will allow Tribal biologists, along with partners, to continue this significant work to return the endangered Canada lynx to the Kettle Range in Northcentral Washington. Carrying out this project allows the Tribe to manage a culturally significant species across state, federal and international boundaries, strengthening tribal sovereignty.

### **The Tulalip Tribes of Washington (\$190,240)**

#### *Adaptive Salmon Restoration via Beaver Relocation within Tulalip Tribes Ancestral Lands*

The Tulalip Tribes is utilizing a nature-based approach to restore salmon populations and their habitat within their Usual and Accustomed Hunting and Fishing Area. Through the Tulalip Beaver Project, 'nuisance' beavers are live-trapped from urban areas around Puget Sound. These beavers are then relocated to remote streams in the Snohomish and Stillaguamish Watersheds on United States Forest

Service land. By building dams at relocation sites, beavers will protect, create, and restore vital aquatic, riparian, and wetland habitat for salmon and other native wildlife. Tulalip Beaver Project staff monitor the beaver relocation sites for beaver activity, changes in habitat, wildlife presence, and salmon spawning and rearing. The beaver dams help to increase salmon habitat and salmon populations all while making these watersheds more resilient to the effects of climate change.

**Lummi Nation (\$197,220)**

*South Fork Nooksack Cavanaugh Island Restoration Project*

The Lummi Nation will restore instream and side channel habitat in the South Fork (SF) Nooksack River, west of Hwy 9, in Skagit County. The goal is to restore SF Nooksack early Chinook spawning, rearing, and holding habitat to recover self-sustaining runs to harvestable levels by addressing limiting factors of temperature, habitat diversity, and lack of key habitat. Restoration elements include the construction of engineered log jams and other habitat structures and the planting of 7.3 riparian acres. The project enhances benefits of the SF Chinook Rescue Program and a native broodstock hatchery program supporting recovery, and addresses high water temperatures on a river threatened by climate change. The project will also benefit ESA-listed steelhead and bull trout; coho, sockeye, and pink salmon; and the Southern Resident Killer Whale.

**Quinault Indian Nation (\$199,998)**

*Certain or Safe? Or Both? Testing a novel approach to elk abundance estimation using established methodology*

The Quinault Indian Nation needs a safe and effective method for estimating Roosevelt elk populations to make science-based management decisions. Roosevelt elk are a crucial component of the cultural, spiritual, and physical health of the Quinault community. Traditionally, elk populations in dense coastal temperate rainforest are monitored using direct capture and helicopter surveys. Newer, safer methods for estimating large mammal abundance via camera trapping have been developed but are untested for accuracy at estimating elk abundance in this environment. The Tribe proposes estimating elk abundance on the Quinault Indian Reservation using both an established, well-used aerial mark-resight survey approach and a novel, non-invasive camera trapping approach, then comparing the results for accuracy. Population estimates generated from the different methods will be compared and model performance will be evaluated. A determination of the appropriateness of the camera trapping methods for estimating elk abundance in coastal temperate rainforests will be made and a long-term monitoring protocol for elk on the Quinault Indian Reservation will be recommended.

**Snoqualmie Indian Tribe (\$115,385)**

*The Snoqualmie Indian Tribe Prairie Restoration Pilot Project*

Snoqualmie Prairie is an important to the Snoqualmie Indian Tribe, both from an ecological and cultural aspect. Today, approximately 390 acres of open former prairie remain, in a highly degraded state and fractured into smaller remnants. The Snoqualmie Prairie area currently has approximately 400 elk that are highly dependent on open meadows for survival. The Snoqualmie Indian Tribe is partnering with King County Parks, the City of Snoqualmie and City of North Bend, and Meadowbrook Farms to restore Snoqualmie Prairie habitat. The largest contiguous prairie remnant is Meadowbrook Farm, an area over 200 acres along Kimball Creek, jointly owned by the cities of North

Bend and Snoqualmie. The first phase of the project will be a pilot habitat restoration project including: (1) restoring of approximately 3.5 acres of native Garry oak meadow; (2) planting approximately 1.8 acres of native meadow grasses and forbs; (3) removing invasive species from approximately 2 acres; and (4) collecting critical data for successfully expanding meadow restoration to dozens of acres or more in later project phases. This will also provide an opportunity for Tribal members and community members to directly engage in restoring a landscape of great cultural importance to the Snoqualmie Tribe.

## **WISCONSIN:**

### **Bad River Band of the Lake Superior Tribe of Chippewa Indians (\$62,327)**

#### *Ecological Community Survey of Interior Open Water Wetlands*

The Bad River Band of the Lake Superior Tribe of Chippewa Indians is located on 125,000+ acres, primarily lowlands, in rural northern Wisconsin along 36 miles of the southern shoreline of Gichigumi (Lake Superior). The interior wetlands of the Bad River Reservation, which make up much of the surface area of the Reservation, historically have been under-studied by the Mashkiiziibii (Bad River) Natural Resources Department (MNRD) Wildlife Program when compared to the freshwater estuaries. Because of the relative lack of past study, and because these open water wetlands are integral over the lifespans of most of the known wildlife species in the area, the Bad River Band has identified wetlands as a prioritized resource of concern in its Seventh-Generation Climate Change Monitoring Plan (2016). Objectives of the program are to: 1.) Conduct three investigations for each of eight interior open water wetlands within the Bad River Reservation by collecting and analyzing data to establish measures of baseline diversity for fish and wildlife species within each identified open water wetlands; 2.) Conduct three investigations for each of eight interior open water wetlands by collecting and analyzing data to survey cultural and protected fish and wildlife species within each identified open water wetlands; 3.) Conduct three investigations for each of eight interior open water wetlands by collecting and analyzing data focused on fish and wildlife habitats in the identified open water wetlands, with specific emphasis on plant diversity as well as cultural and protected plant species; 4.) Produce one product by creating an herbarium of at least one representative for each major taxonomic group found in the eight identified wetlands to be used for outreach at events providing education about native plants to the area; and 5.) Participate in or sponsor three events.