

**FY 2020 Award Summaries for Tribal Wildlife Grants (Catalog of Federal Domestic Assistance Number: 15.639 / Funding Opportunity Number: F20AS00050)**

**ALASKA:**

**Hoonah Indian Association (\$96,095)**

*Restoring the Land and Building Land Stewards through the Hoonah Native Forest Partnership*

The Hoonah Native Forest Partnership study area is 205,000 acres and stretches over three land ownerships including a native village corporation (Huna Totem Corporation), a regional native corporation (Sealaska Corporation), and federal land (U.S. Forest Service). Project partners will work collectively to address the effects of past logging activities that altered 23,000 acres of timber lands and roads that have 520 stream crossings. Implementation of the stream restoration design, funded by the 2018 TWG award, will restore stream function, improve fish habitat, and promote wildlife habitat in 300 m of stream. The implementation and results of this project, as well as land-management concepts, centers around community involvement and education.

**Chenega IRA Council (\$137,992)**

*Understanding the Bottleneck for Recovery of Native Clams in Chenegas Subsistence Shellfish Use Areas*

Chenega, located in Prince William Sound, is an isolated community accessible only by air or water. Native shellfish populations, namely butter (*Saxidomus gigantea*) and littleneck (*Protothaca staminea*) clams, have been on the decline for over two decades in Prince William Sound. Butter clams and Littleneck clams were once common on local beaches and an important cultural component of diets of village residents. Shellfish populations have declined to the point where subsistence harvest opportunities are lost. The loss of this resource has had a dramatic effect on food security for Alaska native communities who heavily rely on shellfish as an integral part of their diet and traditional lifestyle. The objective of this project is to develop and refine hatchery culture and shellfish sanctuary techniques for two shellfish species found in Alaska, butter and littleneck clams, so they can be used to help population recovery to support traditional and subsistence food practices for Chenega and other villages, as well as coastal communities throughout Alaska.

**Seldovia Village Tribe (\$199,996)**

*Tribal Wildlife Habitat Management Plan*

Seldovia is an isolated community near the mouth of Cook Inlet that is only accessible by boat or aircraft. Seldovia Village Tribe seeks to improve food security, maintain subsistence traditions, and be better stewards of their lands by developing a comprehensive Tribal Wildlife Habitat Management Plan for approximately 11,722 acres of Seldovia Native Association Incorporated property. The project area encompasses diverse habitats ranging from salt water to alpine tundra

with moose (*Alces alces*), black bear (*Ursus americanus*), spruce grouse (*Falcapennis canadensis*), and coho salmon (*Oncorhynchus kisutch*) as species that are important for subsistence.

**Native Village of Eklutna (\$200,000)**

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

The Native Village of Eklutna (NVE) people historically thrived on abundant runs of all 5 species of salmon until 1929 when a hydroelectric dam was built near the village that severed fish passage on the Eklutna River and dewatered part of the river. NVE has been actively working since 2000 to restore the Eklutna River; removing vehicles and trash from the canyon, monitoring adult and juvenile fish, coordinating habitat assessments, performing water quality sampling, stream flow gauging, benthic macroinvertebrate bio-assessment and more. NVE intends to influence upcoming negotiations with three power companies to return water to the upper river with both scientific data and Traditional Ecological Knowledge. NVE is committed to collaborating to restore the water to the river that bears their name, the river they built their village on, the river that supported their people for thousands of years.

**ARIZONA:**

**The Navajo Nation (\$138,756)**

*Identifying disease threats and mitigation strategies for Navajo Nation's Desert Bighorn Sheep*

Respiratory disease spillover from domestic sheep seriously threatens the recovery of desert bighorn sheep on Navajo Nation. To identify potential management solutions that could mitigate disease threat, we need information on disease reservoirs and spatial distribution of both domestic and desert bighorn sheep. The Navajo Bighorn Sheep Recovery Program (hereafter Recovery Program) proposes to launch this effort by gathering detailed data on disease and movements of all 3 of the Nation's desert bighorn herds by intensively sampling *M.ovi* and *Pasteurella* infection status, habitat use, vital rates, and population growth. Funding will target the acquisition of GPS collars, conduct captures, sample for bacterial diseases and strain identification, and to contract a team of specialists to review and analyze population and collar data that the Recovery Program has collected over the last 17 years. Deliverables of the project include a detailed and published analysis of existing demographic data, resulting from the development of an Integrated Population Model. The team will also provide an updated disease status report on bighorn and assist in developing an improved survey protocol the Recovery Program can utilize for bighorn sheep monitoring in the future.

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

*Flash Creek barrier replacement to aid Apache Trout Recovery*

This project will directly support Apache Trout recovery by eliminating non-native trout impacts to a relict population of Apache Trout in Flash Creek. Project will separate an Apache Trout recovery population from managed sportfish downstream and increase the availability of high-quality, protected, Apache Trout recovery habitat by 10.5 km. Specifically, the project will replace an existing gabion structure which no longer functions as a barrier to upstream movement of non-native trout under all streamflow conditions with a barrier designed for a 50-year performance life. This protected habitat would benefit several native fish species including Apache Trout (threatened), Speckled Dace, and Desert Sucker. Other native species, including frogs and snakes, are also expected to benefit.

**The Navajo Nation (\$59,831)**

*Assessing the status of a federally threatened cactus to support land use planning on the Navajo Nation*

This project will fill much-needed monitoring gaps in assessing the current status of the Federally-Threatened and Navajo Nation-Endangered Mesa Verde cactus (*Sclerocactus mesae-verdae*), which occurs primarily on tribal land in the four corners area of the Southwestern U.S. Mesa Verde cactus habitat overlaps significantly with the city of Shiprock, New Mexico, and, consequently, this species has been severely impacted by anthropogenic activities associated with highway expansion, housing development, off-road vehicle use, illegal collection, etc. In addition, Mesa Verde cactus populations suffered a severe decline as a result of extended drought occurring in 2002 and 2003. The primary objective of this project is to follow the methodologies of a 2004 range-wide survey of this species to get an up-to-date picture of current cactus distributions and population trajectories on the Navajo Nation over the past 16 years. Post-2004 monitoring data collected by the Heritage Program suggests that populations have not been able to recover from the 2002/2003 drought, but a systematic resurvey of this species following 2004 methodologies has yet to occur. The second objective of this project is to assess the distribution of Mesa Verde cactus within four conservation areas established by the Heritage Program in 2007 for the purpose of protecting this species from development.

**CALIFORNIA:**

**Tule River Tribe (\$200,000)**

*Beaver and Meadow Restoration Project*

This project involves completing tasks for reintroduction of beaver on the Tule River Reservation. Project objectives include: 1. Coordinate beaver reintroduction planning and implementation with federal, state, and non-governmental partners; 2. Plan, implement, and

adaptively manage process-based restoration at the South Fork Tule River and Pigeon Creek confluence and Eagle Meadow; 3. Provide wildlife restoration and management training and capacity building to Tribal members; and 4. Conduct documentation, outreach and data sharing to support the integration of beaver and process-based restoration on tribal and other lands in California.

**Karuk Tribe (\$200,000)**

*Elk, Porcupine and Beaver Population Recovery Through Adaptive Research, Monitoring and Habitat Enhancement in Karuk Aboriginal Territory Project*

The efforts aims to reduce the decline and improve habitat for elk, porcupine and beaver which are all cultural keystone species, that are, culturally and ecologically significant species for the Karuk community and landscape. Specific objectives include: 1. Restore resilient elk herds and habitats in Karuk Aboriginal Territory: Continue, refine and expand elk habitat and population research and monitoring for adaptive management of elk winter range habitat; 2. Elk collaring, habitat use and movement/migration analysis efforts; 3. Restore porcupine populations and habitats in Karuk aboriginal territory; 4. Recover beaver populations and habitats along Klamath mainstem and lower tributary mouths in Karuk aboriginal territory; 4. Outreach, internships and workforce development.

**Washoe Tribe (\$199,954)**

*Washoe Resiliency Garden*

The goal of the Resilience Garden is to combat the loss and degradation of habitat and wildlife species impacted by extreme weather events related to climate change and other events impacting Tribal lands. The Resilience Garden pilot project will be implemented over a two-year period and has two distinct parts. The first will be to build a native plant nursery. This is where we will grow plants to be used in the second part of the project which is restoration of Washoe lands. Hoop houses will be acquired and built to propagate a variety of native and culturally significant plants necessary for wide scale restoration. The development of a Resilience Garden would provide an opportunity for the Tribe to grow critical habitat plant species such as Pinyon pine, several species of sagebrush, bitterbrush, and other local native species essential to the wildlife species. The second part of the Resilience Garden pilot project is the use of these propagated plants in large scale restoration projects of tribal lands to provide habitat for increased nesting success, ground cover, and food sources.

**Big Valley Rancheria (\$200,000)**

*Kelsey Creek Fish Passage Improvement*

The aim of this project is to advance the Kelsey Creek fish passage critical for the recovery of the Clear Lake Hitch. Project Objectives include; Landowner outreach to ensure successful implementation and monitoring of the project; Complete a geotechnical assessment of the Kelsey

Creek Bridge; CDFW design review; Environmental compliance - including: cultural resource survey, special status species surveys, CEQA documentation (mitigated negative declaration), USACE 404, CDFW 1600, and Lake County permits; Design modification to satisfy permits and specifications for a bid package; Funds for implementation.

**Bear River Band of Rohnerville (\$190,766)**

*Focal Species Habitat Mapping and Focal Species Reduction*

This project will develop a geographic assessment and report indicating relative importance and suitability of habitats throughout Humboldt County and identify sources of lead in potential Condor, raptor, and other sensitive wildlife habitats. The resultant map layer and the species - based background research will assist the Tribe's Natural Resources Department, Tribal Council, and County and State with updating land development and environmental regulations based on current and potential natural resources and species habitat information.

**FLORIDA:**

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

*Implementation and Advancement of Wildlife Conservation Plan*

The main objectives are to continue to monitor habitat, and to survey for threatened, endangered, and culturally significant species. The project will continue to develop the Tribe's wildlife GIS geodatabase with the most current data to analyze species distribution, fecundity, geospatial patterns and relationships. The guidance of the Tribe's Wildlife Conservation Plan will ensure the use of conservation alternatives and best management practices. The project will continue to build capacity for Tribal Staff by attending trainings to broaden skill sets. The project will foster a sense of community involvement and awareness by implementing outreach and education for the Tribal Community and youth.

**MAINE:**

**Passamaquoddy Tribe, Pleasant Point (\$199,791)**

*St. Croix Sea-run Fish Passage Project*

Conservation management actions for native fish, specifically sea run fish that include alewives, shad and eels.

Objectives:

1. Increase sea-run fish passage connectivity in the St. Croix watershed
  - Work with Federal Partners to conduct a preliminary assessment Nash's and Howard lake dam located at the Moosehorn National Wildlife Refuge

- Develop a new fish-way at Alaska Steep pass site
- 2. Implement new fish monitoring technologies at fishways
- 3. Determine repeat alewife spawners in the St. Croix watershed
- 4. Conduct eel migration monitoring to enhance eel passage
- 5. Observe shad presence, abundance, and movement

**Penobscot Indian Nation (\$199,759)**

*Factors Effecting Moose and Black Bear Population Dynamics on Penobscot Nation Tribal Lands*

Monitoring the populations of black bear and moose to make informed management decisions

Objectives:

1. Measure the distribution and density of winter ticks
2. Estimate the population density and sex ratio of moose using aerial surveys
3. Estimate the density of black bears using noninvasive genetic sampling

**Aroostook Band of Micmacs (\$146,403)**

*Evaluating mercury and lead exposure risk in Bald Eagles and Common Loons in northeastern Maine*

Evaluate mercury and lead exposures and potential impacts to bald eagles and common loons in northern Maine.

Objectives:

1. Assess Hg and Pb exposure and toxicological risk in adult common loons and adult bald eagles in the study area
2. Ensure that Tribal members and the local community understand issues related to Hg and Pb exposure and health risks in fish, wildlife and humans through effective outreach.
3. Substantially build capacity of the Tribe to independently conduct boat-based fish and wildlife survey work through training, mentorship, career development and equipment expansion.

**MINNESOTA:**

**Leech Lake Band of Ojibwe (\$199,833)**

*Snowshoe Hare (*Lepus americanus*) Research and Management on the Leech Lake Reservation*

Project Summary: Snowshoe hare populations have remained low for several decades on the Leech Lake Reservation. The reason for their decline was unknown and concern for the species

led to conducting a study funded by a Tribal Wildlife Grant that studied the effects of forest composition and structure on snowshoe hare (*Lepus americanus*) habitat use. Results from the study concluded snowshoe hares select areas of high visual cover for protection from predators. Much of our forest lacks this key component and restricts snowshoe hare populations to northern white cedar stands where the old growth forests provides structure for snowshoe hares. Under this proposal the staff from the Fish and Wildlife Program of the Leech Lake Division of Resources Management will continue conducting research on snowshoe hares, as well as, enhance and manage snowshoe hare habitat. Research will focus on snowshoe hare habitat use during the night, predator densities, and effects of management activities on snowshoe hare. Enhancement and management of snowshoe hare habitat will be achieved by implementing forest management techniques around existing populations of snowshoe hare across Leech Lake tribal lands. These stands will receive treatments that will create and increase stand structure and diversity. In addition, other wildlife species, such as the federally threatened Canada lynx (*Lynx Canadensis*), American marten (*Martes americana*), northern goshawk (*Accipiter gentilis*), and fisher (*Martes pennanti*), will benefit from an increase in snowshoe hare populations, their primary prey, as well as increased stand structure and diversity we aim to achieve.

## **MONTANA:**

### **Nakoda and Aaniih Nations of Fort Belknap (\$199,706)**

#### *Restoration of Native Prairie Carnivores*

The Fort Belknap Fish and Wildlife Department (Department) is creating a legacy of restoring imperiled prairie wildlife to the Fort Belknap Reservation (Reservation) in Montana. The Department is not only leading the way in advancing recovery of the endangered black-footed ferret (*Mustela nigripes*) on Tribal lands but is also embarking on an exciting endeavor to return the charismatic swift fox (*Vulpes velox*) to their native homeland.

The Department respectfully seeks financial assistance during June 2021 – June 2023 to monitor and protect its black-footed ferret population and reintroduce and monitor swift foxes on the Reservation. The goals of the *Restoration of Native Prairie Carnivores on the Fort Belknap Reservation* project are to improve the status of black-footed ferrets, reintroduce swift foxes, and enhance Tribal wildlife management capacity on the Fort Belknap Reservation. To achieve these goals, the objectives of this two-year project are to: (1) increase the number of breeding adults by 10%; (2) increase the number of breeding pairs of swift foxes from 0 to 10; and (3) increase the number of Tribal biologists from 0 to 1 and interns from 0 to 2.

Objective 1 will be accomplished through annual sylvatic plague mitigation of black-footed ferrets and their prairie dog (*Cynomys ludovicianus*) prey, population surveys of both species, and evaluation of different black-footed ferret detection techniques (spotlighting, forward-looking infrared cameras, and scent dogs). Objective 2 will be achieved by securing source population(s); identifying and preparing release sites; capturing, transporting, and releasing swift foxes; monitoring swift foxes post-release; and assessing reproductive and survival rates.

Objective three will be addressed by securing funding for a Tribal biologist, and training interns from Aaniiih Nakoda College interested in learning about wildlife biology by providing shadowing opportunities and hands-on experience with black-footed ferret, prairie dog, and swift fox field work. During and beyond the term of this grant period, the Department will be assisted by myriad federal and non-federal partners.

**The Confederated Salish and Kootenai Tribes (\$83,353)**

*An Assessment of Existing and Potential Future Mitigation Measures Related to Grizzly Bears*

US Highway 93 traverses the Flathead Indian Reservation, located on the west side of the Rocky Mountains in western Montana. Mountains and valleys, with the broad Flathead Valley to the North and the majestic Mission Mountains to the East. The area is home to a wide variety of wildlife, including grizzly bear. Extensive work to reconstruct US 93 through the Reservation has been an ongoing safety improvement effort and includes wildlife mitigation measure to protect cultural and natural resources. CSKT work with federal and state agencies in the region on grizzly bear recovery and monitoring. Many of the highway projects are complete, but grizzly bears are still being hit and injured or killed on the highway. One of the last remaining sections of highway is in a frequently crossed area for grizzly bears. CSKT, Montana Department of Transportation and the Federal Highway administration agreed on mitigation measures, conceptually, for the remaining sections in 2008. Since that time, what researchers have learned about size and type of structures used by grizzly bears has been refined. The CSKT propose to compile known grizzly crossing locations (from an unattached grizzly monitoring project), known grizzly vehicle collision locations, installed crossing structure camera monitoring, literature review, interviews with involved transportation agencies, biologists and adjacent land owners; to produce a recommendation on types, size and location of crossing structures for the project area on US 93 that is yet to be designed and reconstructed. Wildlife are an extension of our Tribal culture. Protecting them speaks to wildlife management as well as cultural preservation. These recommendations will be used to negotiate appropriate sized and located crossing structures along US 93. Recommendations from this project would be introduced to a larger collaborative group that would include transportation agencies, with a goal of making US Highway 93, and other highways impacting grizzly bears and the traveling public safer.

**NEVADA:**

**Pyramid Lake Paiute Tribe (\$200,000)**

*Recovery of Bighorn Sheep to Historic Lake Range*

The goal of this proposal is the recovery of the recently reintroduced, and highly vulnerable, California bighorn sheep in the Lake Range. Objectives include: implementation of Lake Range wildlife water supply and vegetation monitoring; address long-term wildlife water resource

concerns; develop and implement public outreach opportunities; monitor reintroduced ungulate dispersal, density and health in accordance with established standard operating procedures; develop Bighorn Sheep Population Growth Model, including program and population sustainability; develop specific regulations and ordinances for forecasted ungulate harvest; provide education opportunities for tribal youth, share project results with interested tribes; form partnerships with outside agencies and foundations to improve habitat conditions and bighorn sheep conservation on the PLPR.

**Summit Lake Paiute Tribe (\$200,000)**

*Restoration of Mahogany Creek to Protect Lahontan Cutthroat Trout and Greater Sage-Grouse*

The Summit Lake Paiute Tribe Natural Resources Department will conduct a thorough habitat assessment of Mahogany Creek, which provides in-stream habitat for the federally threatened Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*) and wet meadow habitat for greater sage-grouse (*Centrocercus urophasianus*). A riparian habitat assessment will supplement hydrogeomorphic information gained through an existing partnership with the US Fish and Wildlife Service. Utilizing the results of this assessment, the Natural Resources Department will then develop a comprehensive restoration plan to address habitat and stream morphological problems along the creek. The focus of this plan will be stream connectivity for Lahontan cutthroat trout spawning, enhanced riparian vegetation for water quality, and increased native forbs in associated wet meadow areas for sage-grouse. Finally, the department will strategically implement a pilot restoration project, using actions detailed in the restoration plan, with the goal of treating no less than 10 acres.

**NORTH CAROLINA:**

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

*Development of Non-Invasive Resource Management Techniques*

The main objectives are to inventory, monitor, manage, and research species of federal and cultural concern. The expectation is to increase inventory scale spatially through a randomized block design, and temporally through automated detection efforts. Monitoring efforts will be bolstered by indirect, non-invasive assessments that will not inadvertently have negative influences on conservation efforts. Through new analysis methods, the Tribe will gain important skills to evaluate wildlife populations and communities in response to a variety of pressures, natural and manmade.

## **NEW MEXICO:**

### **Pueblo of Santa Ana (\$199,773)**

*Identifying migration corridors and winter range used by Rocky Mountain Elk on Tamaya Kwii Kee Nee Puu.*

The Pueblo of Santa Ana is proposing to: 1) capture and collar elk on TKKNP; 2) map their migration corridors, winter range, and preferred habitats; 3) identify water sources used by resident and wintering elk; 4) quantify annual elk survivorship and causes of mortality; and 5) enhance habitats by increasing the number of perennial water sources available to elk.

### **Pueblo of Laguna (\$182,583)**

*Planning for success: wildlife planning for the Pueblo of Laguna.*

The Pueblo of Laguna Environmental and Natural Resource Department is proposing to fund the development of a comprehensive wildlife management plan comprised of twelve (12) individual management units including five wildlife units and seven range management units covering nearly 438,000 acres of tribal trust land. Plans will center on habitat population management for three culturally important species; mule deer, pronghorn antelope and wild turkey. The wildlife management plan will benefit the Pueblo of Laguna people by integrating management efforts among land uses (wildlife, recreation and livestock production), improve ecological conditions of Pueblo resources and protect important cultural and religious activities. Additionally, the plan will provide a platform in seeking external funding to fully implement the plan.

## **OREGON:**

### **Burns Paiute Tribe (\$199,532)**

*A study of the propagation and expansion of the rarest grass in Oregon*

Oregon semaphore grass (*Pleuropogon oregonus*; PLOR) is one of the rarest species of grass in Oregon and the United States. In 2018, the Burns Paiute Tribe Wildlife Program obtained an Oregon Department of Agriculture permit to expand the population at Logan Valley, through propagation and planting. The first year of propagation was successful, and this project will continue expanding the Logan Valley population over the next three growing seasons (2021 through 2023) with volunteers from Portland Audubon. The Tribe is also planning to conduct research on this species. In partnership with scientists from the Eastern Oregon Agricultural Research Center (EOARC), the Tribe will study what factors affect successful establishment of PLOR transplants in the field and a rain-out shelter. The Tribe will also partner with the United States Geological Survey to assess the genetics of PLOR. Results from this research will help guide future plantings and management decisions. The goal is to double the number of plots of

PLOR at Logan Valley and expand the population into new drainages. Results of this research will be shared through conference presentations and publications.

**Confederated Tribes of the Umatilla Indian Reservation (\$183,766)**

*Restoration of bighorn sheep in the Lookout Mountain herd of Oregon through assisted clearance of *Mycoplasma ovipneumoniae**

Once common, bighorn sheep (*Ovis canadensis*) populations are now reduced to relatively small populations living in isolated habitats. Despite efforts to minimize contact and disease spread between domestic livestock and wild sheep, contact between species does occur, often resulting in die-offs of wild sheep populations. The Lookout Mountain herd was the largest, most productive, and healthiest group of bighorn sheep in the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) traditional use area. During the winter of 2020, a die-off began, reducing the herd by at least 50%. The bacteria *Mycoplasma ovipneumoniae* (*Movi*) was detected in every sample from dead bighorns. Genetic strain-typing pointed to a new strain of the bacteria introduced to the herd from a domestic sheep source. The CTUIR, in cooperation with the Oregon Department of Fish and Wildlife (ODFW), plans to help restore the Lookout Mountain herd using a recently developed method to clear the herd of *Movi*. Through live-capture and disease testing nearly all of the remaining population, *Movi* will be eliminated by removing individual sheep that test positive in at least 2 of 3 serial tests (i.e., persistent carriers). Persistent carriers of *Movi* have been shown to be primarily responsible for prolonging *Movi* circulation after the initial die-off event. The overall goal of this project is to prevent decades-long suppressed recruitment and population loss that typically follow the first phase of a die-off event in a pneumonia outbreak. This project will help restore and recover the Lookout herd with an efficient and minimally invasive strategy utilizing the best available science.

**WASHINGTON:**

**Colville Confederated Tribes (\$175,000)**

*Restoring Canada lynx to North central Washington; an augmentation implementation project*

The primary goal of this grant is to implement a Canada lynx population augmentation project. This project will assist in an international effort to identify source populations of lynx in British Columbia to live-trap and release on the Colville Reservation. Coordination with Okanogan Nation Alliance, BC Ministry and BC trappers will be an important component of the project. Project biologists, trappers and veterinarians will work together to ensure that the best available science and techniques are used during processing and transport. Participating universities will assist in the design and implementation of monitoring protocols and data collection. An extensive monitoring effort will record habitat use, daily and seasonal movement, territory establishment, breeding success and mortality. The Tribes anticipate regional increases in both distribution and occurrence of lynx throughout the Kettle Range as well as evidence of lynx

reproduction in the area. Utilizing multiple media outlets will assist in the dissemination of project information to the membership and youth of the Reservation as well as entities and individuals on a regional scale.

**Cowlitz Indian Tribe (\$177,157)**

*Beaver Habitat Inventory in Southwest Washington*

Through this project, the Cowlitz Indian Tribe will survey habitat segments within the tributary subbasins of the Lower Columbia River of Southwest Washington for potential strategic relocation of beaver into large areas of Southwest Washington. Potential sites will be evaluated to ensure they can support relocated beaver, and that suitable sites are not already occupied. The Tribe will emulate techniques developed by experienced groups that offer the greatest chance of successfully relocating beaver into appropriate areas in Southwest Washington. This project will serve as the Tribe's foundation to increase the dispersion of beaver populations within the Cowlitz Indian Tribe's ancestral lands. This effort will enhance the Tribe's ability to participate effectively in the management of beaver; build the capacity of the Tribe's Natural Resources Department and enhance its stature among professional organizations and agencies of the region. Just as important, the project will increase regional awareness of the cultural significance of beaver to the Cowlitz People.

**Swinomish Indian Tribal Community (\$199,300)**

*Life on the Edge: Large Mammal Populations on a Wolf Recolonization Frontier*

This project seeks to assess the status of gray wolf recovery in the western Greater North Cascades Ecosystem (GNCE). Using camera traps, the Swinomish Indian Tribal Community will collect data regarding the number and distribution of wolves in the western GNCE to better understand how wolves are recolonizing the landscape and what factors may be hindering their recovery. This research will result in estimates of the minimum number of wolves occurring in the region, as well as the geographic extent of their recovery – important data directly associated with the management and regulatory status of this keystone species. This project will also collect population-level data for the current assemblage of large mammals in the western GNCE, including Columbian black-tailed deer, Roosevelt elk, cougars, and American black bears, which may be dramatically influenced by recolonizing wolves. As these species already face conservation issues surrounding emerging diseases, climate change, and habitat alterations, in addition to the shifting predation and competition regimes wolves will bring, the baseline data for relative abundance and spatio-temporal distributions collected will be vital for the continued conservation of these ecologically and culturally important species. Using a grid of camera traps, the Tribe will collect and deliver relative abundance indices and multi-species/multi-season occupancy models to wildlife policymakers so that these large mammal populations can be responsibly managed into a future rife with conservation challenges.

**Lower Elwha Klallam Tribe (\$199,998)***Camera Sampling to Establish Abundance Estimates in Traditional Use Area*

This project will allow the Lower Elwha Klallam Tribe to develop and test an extensive camera-based monitoring program over two years, across the Tribe's treaty-reserved historic use area on Washington's Olympic Peninsula. Long-term, the Tribe's plans to develop cost-effective, repeatable, monitoring methodologies for numerous wildlife species under their treaty-reserved jurisdiction. In partnership with Olympic National Park and the U.S. Geological Survey, the Tribe will use this funding to assist in tracking populations of key game species and their dominant predators. It will also monitor wildlife species and ecosystem process restoration associated with the economically and culturally significant restoration of the Elwha River following removal of two hydroelectric dams and dewatering of two reservoirs. Implementation of this project will: 1) gather baseline abundance estimates for six wildlife species, establish written protocols for long-term monitoring of these species, and assist four Tribes in setting appropriate harvest levels; 2) continue wildlife research and monitor wildlife recolonization in the Elwha restoration area as floodplain habitats develop, salmon are restored to the Elwha, and ungulates, bears, and predators respond; and 3) develop a broad vision and specific methodologies for an integrated camera network across the north Olympic Peninsula, allowing other agencies and entities on the Olympic Peninsula to follow suit within their respective jurisdictions.

**Makah Tribe (\$199,970)***Exploring inter- and intra- specific interactions of culturally important wildlife species for management of populations and habitat considerations*

The Makah Tribe is dependent upon several species of wildlife for cultural, spiritual, and subsistence purposes. The Tribe needs to collect scientific data on these wildlife populations to make informed management decisions as landscapes and environments continually change. Through this project, the Tribe will: 1) capture and use GPS collars to monitor cougar, elk, and deer, to better understand interactions between and among these important species and how they utilize the landscape and conditions that currently exist on and around the Makah Reservation; 2) coordinate with the Lower Elwha Klallam Tribe, Panthera, and the Washington Department of Fish and Wildlife to accomplish project objectives and contribute to a greater Olympic Peninsula-wide effort to a) evaluate the genetic status, movements and distribution of cougar populations, and b) develop long-term monitoring strategies for wildlife populations using camera trap methodology; 3) Increase tribal capacity by providing 2 to 4 tribal youth and 2 tribal internship opportunities and improve self-sufficiency through training tribal staff, 4) provide education and outreach through a series of presentations, newsletter articles, and online postings, and 5) integrate previous research with new data to develop a multispecies adaptive wildlife management plan.

## **WISCONSIN:**

### **Forest County Potawatomi (\$194,594)**

#### *Conservation of Myotis Species in and Around Tribal Lands*

Project Summary: The proposed project aims to identify and conserve northern long-eared (*Myotis septentrionalis*) and little brown (*Myotis lucifugus*) bat roosting habitats in and around tribal lands by implementing a modified, noninvasive field protocol. The data obtained from this project will be used to develop an Adaptive Tribal Bat Conservation Plan, which will be applied towards future development and conservation initiatives. We are currently in the process of contacting potential partners, such as Partners for Fish and Wildlife, and hope to create partnerships with the US Forest Service and the Wisconsin Department of Natural Resources. The data collected during this investigation will be used to develop models that can be applied locally and regionally. The objectives of this project are therefore to:

1. Investigate roost and foraging characteristics of *Myotis* species.
2. Generate population estimates of target bat species within Tribal lands.
3. Create Habitat Suitability Index (HSI) Models to determine the probability of bat presence or absence on Tribal lands.
4. Create an Adaptive Tribal Bat Conservation Plan based on the results of Objectives 1-3.
5. Disseminate project results.